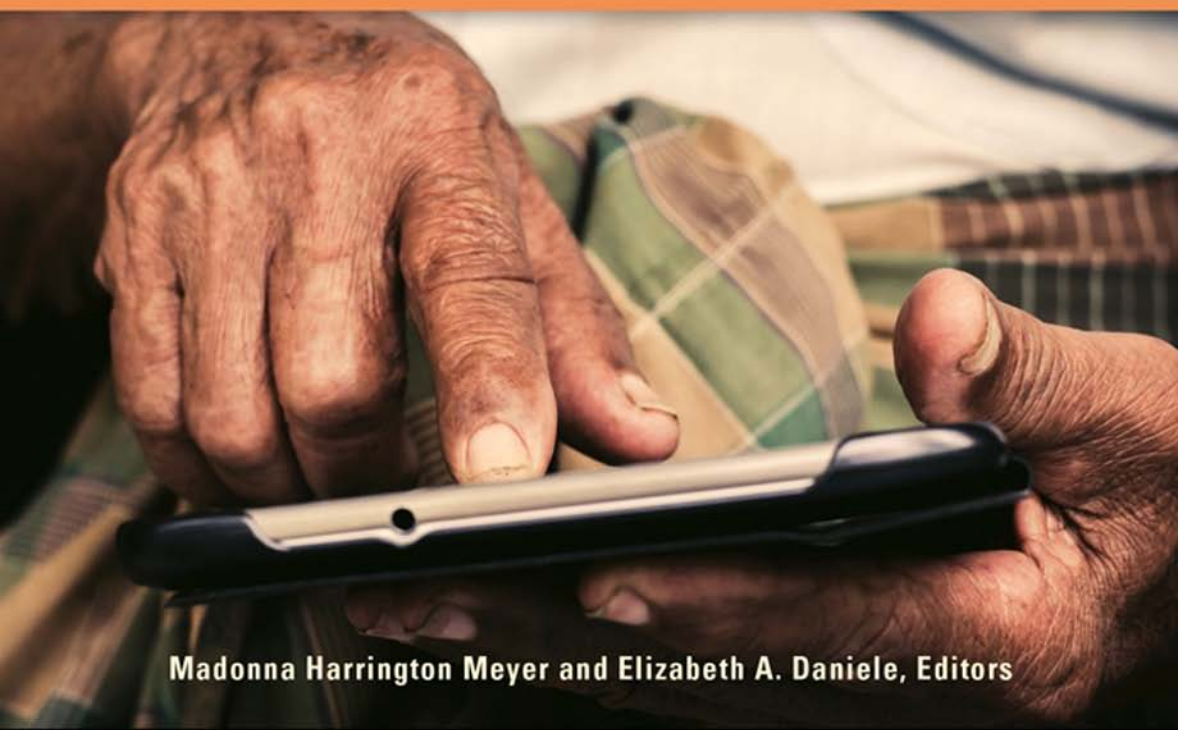


GERONTOLOGY

CHANGES, CHALLENGES, AND SOLUTIONS



Madonna Harrington Meyer and Elizabeth A. Daniele, Editors

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Gerontology

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Gerontology

Changes, Challenges, and Solutions

Volume 1: Social and Life Course Issues

Madonna Harrington Meyer and
Elizabeth A. Daniele, Editors



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To my family,
my greatest joy
M.H.M.

To my family,
my first teachers and greatest support
E.A.D.

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Introduction

Madonna Harrington Meyer

Volume 1: Social and Life Course Issues

Like most other nations, the population of the United States is aging and, in the process, reshaping demographic, social, economic, and health trends. Currently there are about 40 million people, aged 65 and older, comprising 13 percent of the U.S. population. By 2030 there will be over 70 million, comprising 20 percent of the U.S. population (Ortman, Velkoff, & Hogan 2014; Aging Stats 2012). Even then, however, the United States will not catch up to many other aging nations. In 2015, for example, 26 percent of Japan's population was aged 65 or older. Thus the United States is aging, but in moderation compared with many other nations. Nonetheless, the share of the U.S. population that is aged 65 or older is growing steadily and will continue to do so for the foreseeable future. What will the impact be? Given our changing demographics and a wide variety of other sociodemographic trends, many challenges and opportunities lay ahead.

Aging of the U.S. population is linked largely to the aging of the baby boomers. As the largest generation in U.S. history, they have played an enormous role in shaping U.S. traditions, programs, and policies. Born in the victorious post–World War II era between 1946 and 1964, boomers peaked at nearly 79 million in 1999 (Fry 2015). In the earlier years, communities scrambled to accommodate the windfall of babies. Like many American schoolchildren during the 1960s, I spent my childhood in overcrowded classrooms located in annexes in school parking lots. Now baby boomers are entering old age, and communities are scrambling to accommodate the windfall of older Americans. The oldest among them are now aged 69, and the youngest are now aged 51. These growing legions of older Americans are becoming grandparents, working, volunteering, planning retirements, traveling, and, increasingly, skyping and using social media. But some are also becoming ill, less mobile, and disabled; even dying. By 2050, the boomer population will dwindle to less than 17 million. In their

wake, the millennials, born between 1981 and 1997, will become the largest remaining generation (Fry 2015). In the decades to come, millennials are likely to play an enormous role in reshaping our aging society.

Understanding the impact of current old-age policies—and building new traditions, programs, or policies for the future—requires that we take the diversity of older Americans into account. At least 25 percent of people aged 65 and older have moderate to severe physical limitations, are widowed or divorced, have not completed high school, or are poor or near poor (Ortman, Velkoff, & Hogan 2014; Aging Stats 2012). Put differently, however, about 75 percent have good or excellent health, few if any physical limitations, are married, have completed high school, or report income substantially above the poverty line (Ortman, Velkoff, & Hogan 2014; Aging Stats 2012). The first group is not likely to have sufficiently good income and health to pursue comfortable lifestyles and leisure pursuits, while the second and much larger group most certainly will. Taken together these groups provide many challenges and opportunities that will reshape all aspects of American life.

The impact of an aging population depends on the impact of a multitude of other sociodemographic trends in the United States. The United States has undergone substantial transitions in recent decades, including the retreat from marriage, the rise of single parenting, increases in the proportion of working and in hours of work, rising education rates, increasing use of technology, growing inequality, retrenching welfare programs, declining savings, rising life expectancies, increasing disability rates, increasing race and ethnic diversity, increasing globalization, and increasing reliance on family members for care (see Harrington Meyer 2014). How these trends impact older people and their families, and how that impact varies by gender, race, class, and other key sociodemographic variables, is the subject of this two-volume set. Written by a mix of long-standing and emerging leaders in a broad array of disciplines, ***Gerontology: Changes, Challenges, and Solutions*** provides undergraduates, graduate students, scholars, professionals, and policy makers with an overview of the changing old-age landscape, as well as the key challenges and solutions in the field of aging.

Volume 1 focuses on socioeconomic disparities across the life course, linked to gender, race, ethnicity, immigration status, marital status, and other sociodemographic variables. These chapters demonstrate how millions reach old age having enjoyed a lifetime of cumulative advantages, including well-off parents, good schools, high-paying jobs, and multitudes of opportunities to develop a substantial nest egg for old age (Aging Stats 2012; Ferraro, Shippee, & Schafer 2009). They also demonstrate how millions reach old have having faced a lifetime of cumulative disadvantages, including poor or single parents, inadequate education, sporadic

or lower-paying jobs, and fewer opportunities to accumulate a nest egg to protect themselves during old age (Aging Stats 2012; Ferraro, Shippee, & Schafer 2009). The authors analyze these disparities and examine how our traditions, programs, and policies both minimize and maximize inequality in old age.

Diversity among older Americans is evident in a comparison of the situations of Sarah and Jamica, both of whom I interviewed for my book, *Grandmothers at Work: Juggling Families and Jobs* (Harrington Meyer 2014). Sarah is a 67-year-old married, white, mother of two and grandmother of four. She and her husband both have PhDs, a household income in excess of $200,000 a year, private pensions, and substantial assets. When I asked Sarah about their economic situation she reported that they had a lot more resources than most their age, a lot more than they need, and had no worries about money during their old age. They are both in excellent health and live very active lifestyles. She told me that she travels, swims, plays tennis, golfs, bikes, hikes, and walks regularly. Now that she is retiring she is focusing on her favorite hobby, watercolor painting. At the time of the interview they were busy planning trips that would allow her to paint throughout Europe.

By contrast, Jamica is a 48-year-old divorced, black mother of four and grandmother of three. She went to college on and off but was never able to complete her nursing degree. She completed a mortuary science degree but was never able to put it to use. She held a variety of mostly part-time jobs and then, 25 years ago, began cleaning houses. She appreciated the flexible work hours, which allowed her to care for her young children, and, more recently, her young grandchildren. But the income is low and there are no benefits such as paid vacation, paid sick days, health insurance, or private pensions. Her household income is less than $40,000 a year. When asked about her economic situation she reported that she has less than she needs, a lot less than most her age, and as a result, she is worried about having enough money for her old age. "I have no money put away for my retirement. I cannot stop cleaning, I would not have income." Her car recently broke, so she has been walking to her cleaning jobs. At the time of the interview, she had just been to the doctor for the first time in eight years. "And I am behind on the dentist. I am more worried about getting physicals for the kids and the grandkids. I make choices. I do not have dental insurance. So do I let my 16-year-old son lose a tooth, or do I lose a tooth." While she loves to read, knit, and crochet, it has been six years since she has been able to find the time and money to travel to the southern United States to see her extended family.

Given the degree of inequality among the aged, and the sweeping sociodemographic changes that are underway, this is a unique moment in

history. We are poised to make decisions that will impact not only those who are older today, but those who will be older in the years ahead. Old-age programs and policies can be strengthened or weakened. Inequalities among the aged can be fueled or quelled. To fully understand the dynamics of gerontology, experts from numerous disciplines should concentrate their attention on the causes, meanings, and implications of these sweeping changes. The chapters in this volume assess the life-course changes, challenges, and solutions that face our aging nation.

Overview of Chapters

The United States is an aging nation, but we are nowhere near the leaders. In Chapter 1, Janet Wilmoth locates U.S. sociodemographic patterns within worldwide patterns. She shows how some countries, mainly with greater economic and health parity than the United States, are already older than we ever expect to become, while other nations, mainly those plagued by economic, military, and health crises, may not age much at all. She concludes by reviewing the impacts of aging nations for families, health and health care, and economic productivity.

Why do some older people fare so much better than others? Over recent decades a wide variety of theories have emerged to explore the relationship between social factors and well-being in later life. In Chapter 2, Vern Bengtson and Marguerite DeLiema review and critique theories concerned with social stratification and the life course, social-psychological models of well-being, and interpretive or social constructionist perspectives on aging. They also discuss recent interdisciplinary perspectives on successful aging and the rise of micro- and midlevel theories. They conclude with a call for all scholars to pay greater attention to theories of aging.

If you are lucky enough to live long enough, you will most surely face age discrimination. You may have already practiced it, perhaps by avoiding a particular cash register because either the clerk, or the next customer, seemed too old. In Chapter 3, Meika Loe, Ariel Sherry, and Evan Chartier examine how ageism, a system of inequality that generally privileges the young at the expense of the old, is embedded in patterns of behavior and serves as a social organizing principle. The authors lay out the common definitions and stereotypes associated with ageism, the key social theories that help us to understand the causes of ageism, and the social and personal impacts of ageism. They conclude with strategies for countering ageism.

The U.S. old-age welfare state provides income and health security for the vast majority of older Americans, mainly through Social Security, Supplemental Security Income, Medicare, and Medicaid programs. These

programs effectively pull millions above the poverty line each year. But access to, and the impact of, old-age programs varies by gender, race, ethnicity, age, SES, and marital status. In Chapter 4, Debra Street and Sarah Desai provide a brief history of each program; review eligibility, benefit, and funding mechanisms; and assess current policy issues, many of which are hotly contested. They conclude by discussing future directions for old-age policies in the context of changing demographic and political climates.

With age, demographic groups grow increasingly unequal in terms of virtually all socioeconomic measures. Across the life course, growing disparities in education, employment, income, wealth, health, and well-being are linked to key sociodemographic variables, particularly gender, race, and ethnicity. These variables shape well-being through virtually every life-course event from birth until death. In Chapter 5, Jan Mutchler and Ceara Somerville review the literature on inequalities linked to gender, race, and ethnicity, focusing on key examples including economic security, health and health-care access, and long-term care and care work. They conclude by evaluating solutions to these persistent challenges.

Poverty rates among the elderly are among the lowest they have ever been in U.S. history. But pockets of poverty persist. Roughly 40 percent of older black or Hispanic single women fall below the poverty line (Aging Stats 2012). In Chapter 6, Andrea Willson and Nicole Etherington use a life-course perspective to explore why some have so much, and some so little, in their old-age nest egg. They then focus on the relationship between socioeconomic status and health across the life course. They conclude with a discussion of the changing dynamics of income, poverty, wealth, and inequality in later life and challenges to its study.

Older people are remaining in the workforce longer than they have in decades. But employment rates vary by age, gender, race, ethnicity, and nativity. When workers decide to retire, retirement is increasingly a process rather than event. Instead of retiring on a specific date, many workers convert to part-time work, become consultants, or enter entirely new encore careers. In Chapter 7, Jeanette Zoeckler and Michael Silverstein characterize the demographics of the workforce. They evaluate the links between employment and health and well-being, consider key accommodations for older workers, and explore the incentives, and disincentives, of accommodation for employers. Finally they describe the factors that shape retirement decisions and retirement satisfaction.

One group of older persons that many scholars and policy makers tend to overlook are aging veterans. Over the next few decades, older veterans will largely consist of those who served in Vietnam. In Chapter 8, Andrew London employs a cumulative inequality approach to explore the lifelong impact of military service by age, gender, race, and ethnicity. He describes

the Vietnam-era veteran population; reviews the life-course literature on Vietnam-era military service and socioeconomic, marriage/family, and health outcomes; and analyzes the 2009 American Community Survey data that compares Vietnam-era nonveterans, veterans with no service-connected disability, and veterans with service-connected disability on a range of life-course outcomes in late midlife. He concludes by discussing the implications, challenges, and directions for future research.

Immigration to the United States is steadily increasing. In Chapter 9, Ynesse Abdul-Malak and Rebecca Wang review the reasons why people migrate and the impact over the life course. Though historically most immigrants arrive during working-age years, in recent decades we have seen a substantial growth of immigrants arriving in later life. Using key theoretical perspectives, they analyze immigrants' socioeconomic circumstances and health outcomes, revealing substantial economic and health disparities between various groups of immigrants. They conclude by analyzing the capacity of U.S. social programs to alleviate those disparities.

As in many other nations, marriage has been on the decline in the United States for decades. Many are married for only short periods or skip marriage altogether. Living arrangements have become decidedly more complex. In Chapter 10, Judith Treas and Tanya Sanabria analyze family and household formation across the life course and reveal a wide variety of pathways. They analyze how partnerships have been redefined by cohabitation and same-sex marriage—and demonstrate how institutional living arrangements such as prisons and nursing homes have reshaped our understanding of living arrangements. They pay careful attention to how gender, socioeconomic status, race, and ethnicity shape living arrangements and the impacts on well-being for individuals and families.

Grandparenting is a particularly important role in middle and older ages for many, but certainly not all. By age 50, one-half of Americans are grandparents. While some have little regular contact with their grandchildren, many provide tremendous amounts of care and financial support. A small percent become custodial grandparents, raising their grandchildren in the absence of parents. In Chapter 11, Bert Hayslip and Heidemarie Blumenthal take a life span approach to exploring the grandparent-grandchild dyad. They examine how sociohistorical and cultural changes, combined with socioeconomic disparities, shape the experience for all generations. They look carefully at how grandparents pitch in during hard times, including divorce, sickness, disability, or death. They conclude with directions for future research that will take into account the dynamic nature of the grandparent-grandchild dyad.

As the number and proportion of older people change, so does their political clout. But not always in the ways you might expect. In Chapter 12,

Robert Hudson reveals how, after several decades of growing slowly and accompanied by little controversy, aging policies have more recently expanded dramatically and have yielded more highly charged politics. Will older voters—or younger voters—support old-age programs? He takes us on a historical journey ranging from the New Deal to the present, analyzing changes in political standing, presence in Washington, D.C., and constraints on old-age policies. He describes periods of expansion, retrenchment, and conflict, and concludes with a discussion of what may be in store for the future.

The chapters in this volume reveal changing trends, and enormous variation, in what it means to be an aging person in an aging country. They help us to understand why some face so many more challenges with so many fewer resources in the later years and what we, as a society, may, or may not, decide to do about those disparities.

References

Aging Stats. (2012). Older Americans 2012. Washington, DC: Federal Interagency Forum on Aging-Related Statistics. http://www.agingstats.gov/Main_Site/Data/2012

Ferraro, K. F., Shippee, T. P., & Schafer, M. H. (2009). Cumulative inequality theory for research on aging and the life course. In V. L. Bengtson, D. Gans, N. M. Putney, & M. Silverstein (Eds.), *Handbook of theories of aging* (2nd ed., pp. 413–433). Springer: New York.

Fry, Richard. (2015). This year Millennials will overtake Baby Boomers. January 16, 2015. PEW Research Center. http://www.pewresearch.org/fact-tank/2015/01/16/this-year-millennials-will-overtake-baby-boomers/

Harrington Meyer, Madonna. (2014). *Grandmothers at work: Juggling families and jobs*. New York: NYU Press.

Ortman, J. M., Velkoff, Victoria A., & Hogan, Howard. (2014). An aging nation: The older population in the U.S. U.S. Census Bureau. https://www.census.gov/prod/2014pubs/p25–1140.pdf

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CHAPTER ONE

Demographic Perspectives on Global Population Aging

Janet M. Wilmoth

Demographers are trained to be attentive to age given fertility, mortality, and migration among human populations are inherently age-based. However, the demography of aging did not emerge as a distinct subfield until the second half of the twentieth century, when low fertility and mortality rates were creating dramatic shifts in the age structure of developed countries (Wilmoth and Simpson 2013). Demographers studying aging are concerned with documenting changes in age structures and understanding cohort flow, identifying trends in mortality, morbidity, and disability, making connections between cellular/physiological processes and demographic processes, explaining the geographic distribution and migration of older adults, exploring living arrangements, care provision and retirement trends, and considering the economic and policy implications of population aging (Siegel 1980; Hardy and Skirbekk 2012; Schoeni and Ofstedal 2010; Uhlenberg 2009).

Much of what is known about population aging is based on national-level data collected by periodic censuses, vital statistics registries, and cross-sectional surveys, all of which provide information about individuals at one point in time. Consequently, our empirical understanding of variation in the aging across countries is primarily descriptive. But over the past 25 years there has been a concerted effort among social scientists to develop comparable, high-quality, nationally representative longitudinal surveys that track individuals as they age. These surveys, which were initially deployed in developed countries like the United States, Germany,

and Sweden, have now been launched in over 30 countries and more are under development. Consequently, our understanding of population aging is becoming more nuanced over time. This chapter provides an overview of what we know about aging from a demographic perspective, including variation in the rate of population aging, the factors contributing to the growth of the older adult population, the characteristics of the older adult population, the implications of shifting age structures for families, health and health care, and economic productivity, and ongoing advancements in survey research that inform our understanding of population aging. The focus is on highlighting global trends, with an emphasis on regional variation. Select country-specific examples are provided to demonstrate variation in population aging.

Global Population Aging

The rate of growth in the number and proportion of adults aged 60 and older has increased steadily across all regions of the world over the past 75 years. As shown in Figure 1.1, the total number of people aged 60 and older increased from 130 million in 1950 to more than 809 million in 2012 and is projected to be over 2 trillion by 2050 (Rowland 2009; United Nations 2012).[1] Currently Asia and Europe have the largest number of people aged 60 and older, but Asia will experience more growth in the number of older adults over the next 45 years than other regions.

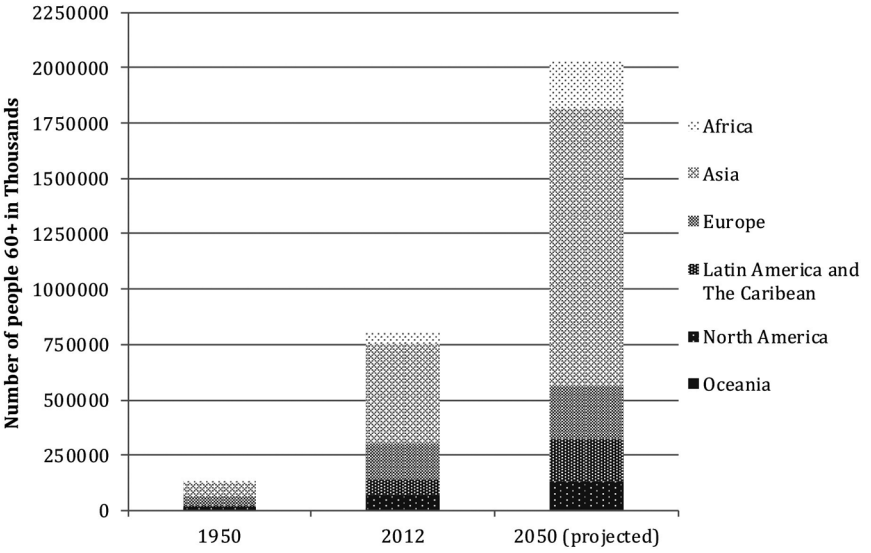


Figure 1.1 Population aged 60 years and over, total and by region, 1950, 2012, and 2050. (Data from Rowland [2009] and United Nations [2012])

Most countries within Africa have relatively small older adult populations, although many are growing at a rapid rate. Nigeria has the largest number of older adults, with nearly 9 million in 2012 and nearly 29 million expected in 2050. Egypt and Ethiopia also have relatively large older adult populations, with 7 million and 4 million respectively in 2012 and nearly 25 million and 17 million respectively expected in 2050.

The number of older adults in Latin American and Caribbean countries is relatively low but expected to grow rapidly over the next 45 years. This growth is exemplified most dramatically by Brazil, which had over 21 million older adults in 2012 but is expected to have nearly 65 million in 2050. Mexico also has a relatively large older adult population that is expected to grow from 11 million in 2012 to 37 million in 2050.

Within Asia, China and India have the largest share of older adults because both countries have the largest populations in the region. China and India currently have over 180 million and 100 million older adults, which is expected to increase to over 439 and 323 million in 2050, respectively. Japan also has a large number of older adults, almost 40 million in 2012, but that population is only expected to increase to 45 million by 2050. Rates of growth among the older adult population is also substantial in Bangladesh, which is expected to increase from 10 million in 2012 to 43 million in 2050, and in Indonesia, which is expected to increase from 20 million to nearly 75 million.

The size of the older adult population is relatively small in the countries of Oceania given many are island nations. Australia has the largest older adult population in the region, with 4 million in 2012 and a projected increase to 9 million in 2050. Within North America, the United States has 60 million older adults, which is expected to increase to 107 million by 2025. The older adult population in Canada is considerably smaller given the size of that country's population. Canada has 7 million older adults, which is expected to increase to over 13 million by 2050.

Several European countries with relatively large total populations also have high numbers of older adults. But the rate of growth over the next 45 years among older adults will be slower in European countries than Asian countries. For example, the Russian Federation has the largest number of older adults in Europe—26 million in 2012 and 39 million in 2050, followed by Germany—21 million in 2012 and 28 million in 2050, and Italy—16 million in 2012 and 22 million in 2050.

Although it is important to consider the number of older adults in a given country, the proportion of the population that is aged 60 and older is another relevant indicator of population aging. As shown in Figure 1.2, the percentage of older adults varies substantially across regions but has been systematically increasing over time for all regions.

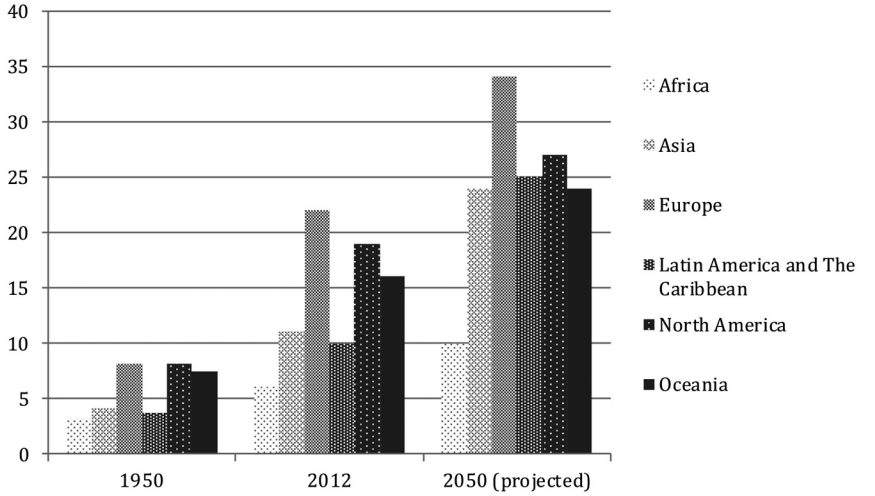


Figure 1.2 Percentage of the total population aged 60 years and over by region, 1950, 2012, and 2050. (Data from Rowland [2009] and United Nations [2012])

The region with the smallest percentage of older adults is Africa: approximately 3, 6, and 10 percent in 1950, 2012, and 2050, respectively. However, these percentages for the region mask substantial growth in the proportion of older adults in some countries. For example, 12 percent of the population was aged 60 and older in Mauritius and Reunion in 2012, and the percentage is expected to climb to 29 percent and 26 percent, respectively, by 2050. Tunisia is similar with 7 percent of the population being aged 60 and older in 2012 and an expected increase to 26 percent by 2050. Although Nigeria has a large number of older adults, their portion of the population is relatively low—5 percent in 2012 and 7 percent in 2050. The percentages in Ethiopia are similar—5 percent in 2012 and 12 percent in 2050. But Egypt is expected to have more of an increase—from 8 percent in 2012 to 20 percent in 2050.

The percentage of older adults in the Latin American and Caribbean region was slightly below 4 percent in 1950 but has been increasing more rapidly to 10 percent in 2012 and 25 percent in 2050. The countries with the highest proportions of older adults in that region are Martinique, Uruguay, Cuba, Guadeloupe, and Puerto Rico with 21, 19, 18, 18, and 18 percent of their respective populations aged 60 and older in 2012. Each of these countries is expected to have more than one-fourth to one-third of their population aged 60 and older by 2050. Brazil and Mexico, both of which are expecting large increases in the number of older adults, are also expecting dramatic increases in the percentage of the population aged 60

and older. The older adult portion was 11 percent of Brazil's population in 2012 but will be 29 percent by 2050. Similarly, the older adult population was 10 percent of Mexico's population in 2012 but will be 26 percent by 2050.

The Asian region has experienced a similar pattern of growth in the proportion of older adults in the population. Only 4 percent of the population in Asia was aged 60 and older in 1950 but that grew to 11 percent in 2012 and is expected to be 24 percent in 2050. This region is characterized by substantial differences across countries. The country with the highest proportion of older adults is Japan, with 32 percent of the population being aged 60 and older in 2012, which is expected to be 41 percent by 2050. In contrast, only 4 percent of the population in Afghanistan was aged 60 and older in 2012, and that is expected to increase to only 7 percent by 2050. Comparable percentages for Iraq are 5 percent in 2012 and 10 percent in 2050. There are numerous countries in the region that currently have a relatively low percentage of older adults but are expected to experience substantial increases in that percentage over the next 45 years. For example, among the Asian countries expecting large numerical increases in the older adult population—China, India, Bangladesh, and Indonesia—the percentages will increase from 13, 8, 7 and 9 percent in 2012 to 24, 19, 22, and 25 percent in 2050, respectively.

The countries in Oceania have a slightly larger percentage of older adults than Asia: over 7 percent in 1950, which increased to 16 percent in 2012 and 24 percent in 2050. However, there is substantial variation across this region also. The countries with the highest proportion of older adults in the region are Australia and New Zealand, which had 20 percent and 19 percent, respectively, in 2012, and both are expected to increase to 29 percent by 2050. Some island nations in the region will experience substantial change in the percentage of the population aged 60 and older, such as French Polynesia in which it will increase from 10 percent to 27 percent. Other island nations will continue to have a relatively low percentage of older adults, such as Papua New Guinea in which it will increase from 5 percent to 11 percent.

North America is similar to Oceania: 8.2 percent of the population was older adults in 1950, which increased to 19 percent in 2012 and is expected to increase to 27 percent in 2025. In North America, the United States has a slightly lower percentage of older adults compared to Canada—19 percent versus 21 percent in 2012 and 27 percent versus 31 percent expected in 2050.

Europe is similar to North America in the uniformity of the population that is aged 60 and older. Europe's population aged 60 and older which was 8.2 percent in 1950, increased to 22 percent in 2012, and is expected

to be 24 percent in 2050. Almost all the countries in this region currently have one-fifth to one-fourth of their populations aged 60 and older, and all of them will be near or above one-third by 2050. Albania, has the smallest proportion of older adults in the region; the percentage of the population age 60 and older was 14 percent in 2012 and is expected to increase to 34 percent by 2050. The countries with the largest numbers of older adults—Russia, Germany, and Italy—are currently at 17, 27, and 27 percent, respectively, and are projected to be at 31 percent, 37 percent, and 38 percent, respectively, by 2050.

Why Do Populations Age?

The process of population aging in the developed countries of western Europe was initially described by the Demographic Transition Theory, which states that fertility and mortality rates change predictably in response to economic development (Teitelbaum 1975). According to this theory, countries move through several distinct phases (see Figure 1.3).

During the pretransition phase, fertility rates are high and stable while mortality rates are high but fluctuating and life expectancy at birth is low. Consequently, the pyramid-shaped age structure of the population is young

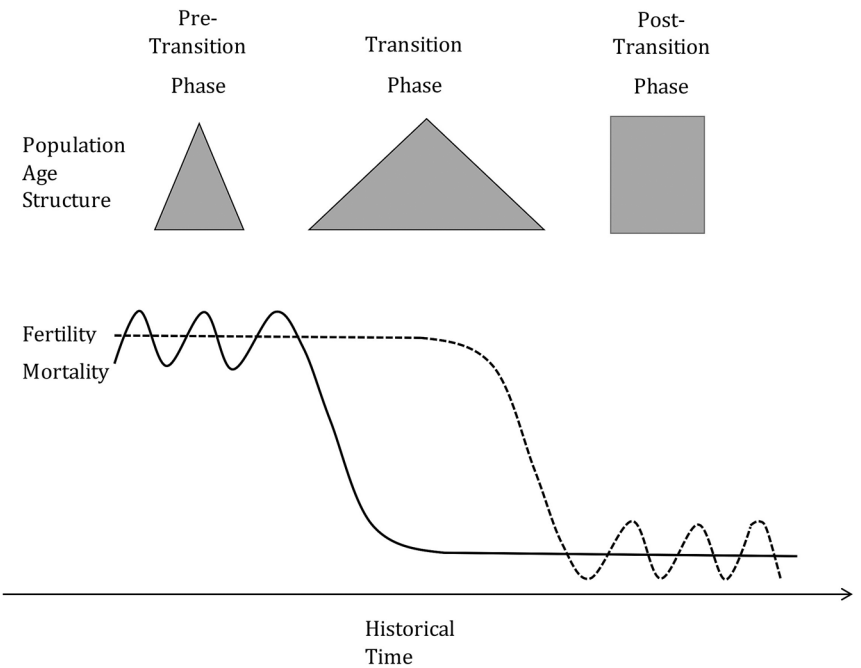


Figure 1.3 Stages of the demographic transition.

and relatively stable, as the number of births replenishes the population that has died at relatively young ages. During this stage the percentage of older adults in the population is very low. In the early parts of the transition stage, mortality rates begin to decline, particularly mortality due to infectious disease among infants, children, and childbearing-aged women, in response to improved sanitation. Life expectancy at birth begins to increase. Drops in fertility rates typically lag behind improvements in mortality, resulting in population growth. The age structure of the population becomes younger as more children survive to reproductive ages. Later during the transition stage, fertility rates continue to decline and eventually reach replacement levels of 2.1 children per woman. Mortality rates also continue to decline but at a slower rate. The population continues to grow, and the age structure remains relatively young. The population does not begin to age dramatically until the posttransition stage, when fertility rates remain at or below replacement level and mortality rates, due to man-made and degenerative diseases, decline. Life expectancy at birth and at age 65 continues to increase. The age structure of the population becomes more rectangle shaped, as each successive cohort essentially replaces itself, and the proportion of the population that survives into advanced ages increases. The original formulations of this theory predicted that the percentage of older adults in the population would peak at 20 percent during the posttransition phase, although many countries have exceeded, or are projected to exceed, this expectation.

This general pattern of demographic change occurred slowly in most developed countries as the industrial revolution spurred economic development and improvements in the standard of living. Consequently, developed countries have experienced a gradual increase in the proportion of the older adult population during the latter part of the twentieth century. For example, the percentage of the population aged 65 and older doubled from 7 percent to 14 percent in France over a 115-year period, from 1865 to 1980, and in the United States over a 69-year period, from 1944 to 2013 (Kinsella and He 2009). However, the classic demographic transition model does not adequately describe the experience of developed countries, many of which experienced more closely timed declines in fertility and mortality that occurred over a shorter period of time. As a result, developing countries are experiencing population aging at a much faster rate than developed countries. For example, the doubling of the percentage of the population aged 65 and older from 7 percent to 14 percent is expected to take 21 years, from 2011 to 2032, in Brazil and 26 years, from 2000 to 2026, in China (Kinsella and He 2009).

Furthermore, fertility and mortality rates have not reached equilibrium as expected; fertility declines have outpaced mortality declines. Consequently, some nations—particularly in Europe—have very low, and in

some cases negative, annual population growth rates (Population Reference Bureau 2014). This contributes to the aging of the population because, as cohorts fail to fully replace themselves through fertility, the age structure shifts more toward older ages and the median age of the population increases substantially. The median age of the global population is currently 29.2 (United Nations 2013a), with the highest median ages being in Japan, 46, and European countries such as Germany, 46, and Italy, 45 (United States Central Intelligence Agency 2015). Therefore, while Demographic Transition Theory provides a general framework for understanding how fertility and mortality change with economic development, it does not adequately account for the unprecedented levels of worldwide population aging during the twenty-first century.

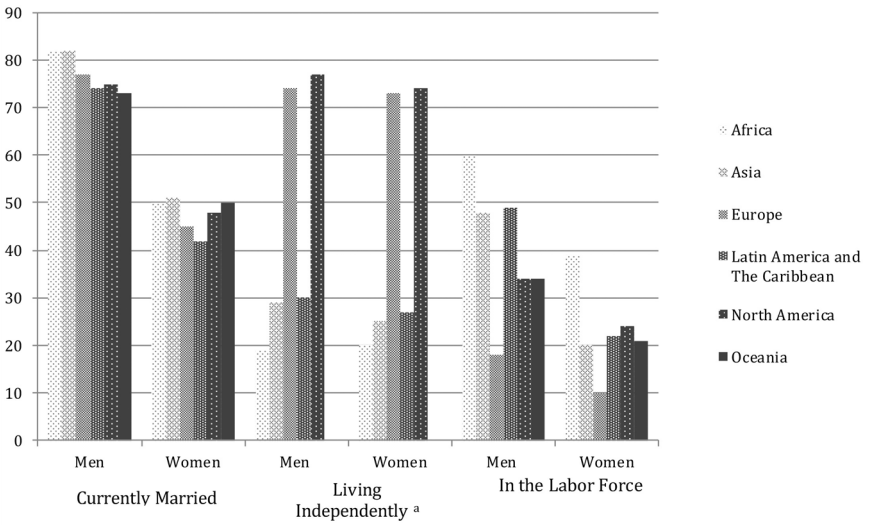
Characteristics of the Older Adult Population

Not only is the global population growing older, but the older adult population itself is also aging as mortality rates in later life continue to improve and more people survive to advanced ages. Only 7 percent of the population aged 60 and older was aged 80 or older in 1950, but by 2013 it had increased to 14 percent, which represents over 120 million people (United Nations 2013a; 2013c). The five countries with the largest percentage of the older adult population aged 80 or older in 2012 were France, 24 percent, Italy, 23 percent, Spain, 23 percent, Belgium, 22 percent, and Japan, 22 percent, whereas the countries with the largest number of adults aged 80 or older were China, 23 million, the United States, 12 million, India, 10 million, Japan, 9 million, and Germany, 4 million (United Nations 2012).

Due to gender differences in late-life mortality, which produce longer life expectancies at age 60 for women in every country, the ratio of men to women in later life is unbalanced. In 2012, worldwide there were 84 men per 100 women aged 60 and older (United Nations 2012). Countries with the most unbalanced later-life sex ratios below 60 men per 100 women are primarily in Eastern and Northern Europe, such as Belarus, Ukraine, Russian Federation, Estonia, Latvia, and Lithuania, which reflects the legacy of World War II on mortality among cohorts born in the early twentieth century. But older men outnumber older women in some countries in Africa, such as Western Sahara, Cote d'Ivorie, and Gambia, in South-Central Asia, such as Bhutan, Iran, Maldives, and Pakistan, and in Western Asia, such as Bahrain, Jordon, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, where maternal mortality rates and gender-based migration patterns likely contribute to later-life sex imbalances.

Although it is challenging to make cross-national comparisons across a wide range of sociodemographic characteristics due to a lack of comparable data, measures of marital status, living arrangements, and labor-force participation tend to be consistently measured across surveys. Figure 1.4 presents those characteristics for the population aged 60 and over across regions separately for men and women.[2]

In every country, older men are more likely to be married than older women (United Nations 2012). Approximately four-fifths of older men are married, although the proportion is higher in Africa, 82 percent, and Asia, 82 percent, than Europe, 77 percent, North America, 75 percent, Latin America and the Caribbean, 74 percent, and Oceania, 73 percent. The variation across countries in the percentage of older men who are married is substantial, with a range of 95 percent in Senegal to a low of 46 percent in French Guiana. Only 50 percent of older women are married, with the highest percentages being in Asia, 51 percent, Africa, 50 percent, and Oceania, 50 percent, and the lowest percentages being North America, 48 percent, Europe, 45 percent, and Latin America and the Caribbean, 42 percent. The percentage of older women who are married is highest in Nepal, 71 percent and lowest in Chad, 16 percent. It is noteworthy that many countries with relatively high percentages of married older men have relatively low percentages of married older women.



[a] Includes living alone or with spouse only. Data from Oceania are not available.

Figure 1.4 Select sociodemographic characteristics of the population aged 60 and older by region. (Data from United Nations [2012])

For example, in the United Arab Emirates 93 percent of older men are married compared to 31 percent of older women and the comparable percentages in Bangladesh are 91 percent and 28 percent, respectively. Also, the difference in marriage rates between older men and women within a given country is rarely less than 20 percent. These percentages are closest in Iceland, where 68 percent of older men are married and 52 percent of older women are married.

Independent living among older adults, which includes living with a spouse only or alone, is closely related to economic development. In developed countries older adults often have access to more economic resources that enable independent living. In addition, older adults in these countries tend to have fewer children with whom they can live given lower fertility rates and migration patterns that draw younger adults into urban areas within their own country and abroad. Given this, the highest rates of independent living among older adults are in regions with the most developed countries, in particular North America and Europe, where approximately three-fourths live with a spouse only or alone (United Nations 2012). Within these two regions, the countries with the highest rates of independent living among older adults are Denmark, Sweden, and Belgium, where over 95 percent of older men and women live with a spouse only or alone. In contrast, the lowest rates of independent living are in Africa, which are approximately one-fifth for men and women, Asia, which are approximately one-quarter for men and women, and Latin America and the Caribbean, which are less than one-third for men and women. Within these regions, the countries with the lowest rates of independent living among older adults are Senegal, Sierra Leone, Bahrain, and Bangladesh, where less than 10 percent of older men and women live with a spouse only or alone. It is important to note that, given the previously discussed gender differences in marriage, older men living independently are more likely to be living with a spouse only whereas older women living independently are more likely to be living alone.

Globally, older men are more likely to be in the labor force than older women (United Nations 2012). Rates of labor-force participation are high among older men living in Africa, 60 percent, Latin America and the Caribbean, 49 percent, and Asia, 48 percent, moderate among men living in North America and Oceania, 34 percent, and low in Europe, 18 percent. But these regions' rates mask substantial country variation. For example, within Africa, 95 percent of older men in Malawi are in the labor force compared to 11 percent in Reunion, and within Europe, the older male labor-force participation rate is highest in Iceland, 47 percent, and lowest in France, 8 percent. Rates of labor-force participation among older women are relatively high in Africa, 39 percent, moderate in Asia, Latin

America and the Caribbean, North America, and Oceania, approximately 20 percent, and low in Europe, 10 percent. Similar to the older male rates, there is substantial variation among the older female rates within regions. For example, within Africa older female labor-force participation is 89 percent in Malawi and 2 percent in Algeria, and within Europe it is 33 percent in Iceland and 3 percent in Malta. These differences across countries are due to variation in economic conditions, statutory retirement ages, historical labor-force participation rates among working-aged adults, and cultural norms regarding employment among women and older adults.

Implications of Population Aging

The demographic characteristics of the older adult population discussed in the previous section set the stage for considering the implications of population aging for families, health and health care, and economic productivity. The following discussion highlights some of the relevant demographic issues in each of these areas.

Families. The aging of the population has been accompanied by substantial shifts in family structure that have altered older adults' informal support networks. As life expectancies have improved, four- and five-generation families have become more common which has increased the number of elders within a family who might need care. At the same time, lower fertility rates have reduced the size of younger generations, including the pool of potential adult child caregivers. But these changes in family structure have not necessarily reduced the level of support given to older adults from family members (Knodel et al., 1992; Tomassini and Wolf 2000). Families continue to meet older adults' needs by coordinating care across members in a given generation and relying on skip-generation care arrangements in which, for example, grandchildren provide care to grandparents. In addition, improvements in life expectancy mean that more spouses and siblings are available to provide support to older adults in need of assistance (Redfoot and Pandya 2002; Tomassini et al., 2004; Miner and Uhlenberg 2004).

Despite migration patterns that tend to encourage the movement of young adults away from their family of origin, most older adults in developed countries have family members in relatively close proximity and interact with them on a regular basis, which provides a potential network from which support can be obtained. In the United States approximately three-fourths of older adults live within an hour of their children (Silverstein 1995) and the majority of U.S. older adults see at least one of their children at least once a week (Crimmins and Ingegneri 1990). Over half of U.S. older adults live within 25 miles of at least one sibling, and they are

most likely to receive support from these proximate siblings when spouses and children are not available (Miner and Uhlenberg 2004). A study of 10 European countries indicated that 85 percent of parents have a child within 25 kilometers, and 90 percent are in contact with a child at least once a week, although proximity and contact rates tend to be lower among northern Europeans than southern Europeans (Hank 2007). As previously discussed, rates of coresidence between older adults and family members are higher in developing countries than developed countries, which suggests support networks are readily accessible. Research suggests that older adults in developing countries who live independently have access to proximate children and other relatives who provide support (Knodel and Ofstedal 2003). However, rural elders in developing countries are at risk of having unmet care needs given that younger generations may have migrated to urban areas for employment and formal supports are often not available.

Access to potential caregivers is undermined by childlessness, which has been increasing across cohorts in many countries. Approximately 6 percent of women aged 40–44 are childless worldwide, with childlessness rates being particularly high in Austria, 23 percent, the United Kingdom, 20 percent, Finland, 20 percent, Bahrain, 20 percent, and Canada, 19 percent (United Nations 2013b). In addition, the rate of childlessness is increasing across recent cohorts in some countries (Dykstra 2009). For example, in Germany less than 10 percent of women born in the mid-1930s were childless compared to over 25 percent of women born in the late 1950s, and comparable rates across cohorts over the same time period in the United States were approximately 11 percent and 19 percent (United Nations 2003). Childless older adults are more likely to live alone or in an institution and have lower levels of overall social contact (Koropeckyj-Cox and Vaughn 2007; Grundy and Read 2012). This suggests childless older adults are not able to compensate for the lack of child caregivers by expanding their social networks and therefore are at risk of needing formal care services.

Health and Health Care. As previously mentioned, the aging of the population is associated with improvements in life expectancy. Global life expectancy at birth is currently 70 years and is expected to increase to nearly 76 years by 2050. Those who survive to age 65 can expect to live 16 years currently and 18 years by 2050 (United Nations 2013a). There has been debate whether longer life is associated with a compression of morbidity (Fries 1982), in which added years are lived in good health and disability-free, or an expansion of morbidity, in which added years are lived in poor health with disability (Gruenberg 1977; Olshansky et al., 1991). Recently, there has been growing evidence for dynamic equilibrium

(Manton 1982) in which the prevalence of chronic diseases increases, but the rate of chronic disease progression slows such that a larger portion of the population experiences low levels of disability for a longer period of their lives (Laditka and Laditka 2009).

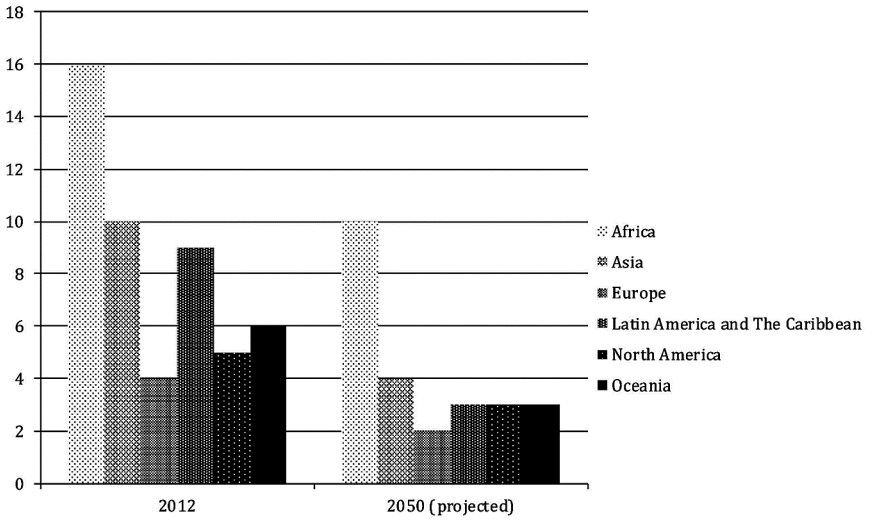
Given that chronic conditions often lead to disablement that requires personal assistance with instrumental and physical activities of daily living, countries worldwide need to prepare for the long-term care needs of their aging populations. Difficult choices about the appropriate balance of support provided by families, the public sector, and the private sector will have to be made that may require some combination of expanding support to family caregivers, developing additional community-based programs, and increasing access to assisted living and skilled nursing care facilities. Long-term care provision will be particularly essential to the growing number of older adults with dementia. The global number of people with dementia is projected to increase from nearly 36 million in 2010 to more than 115 million in 2050, with more rapid increases in low- and middle-income countries than high-income countries (Alzheimer's Disease International 2010).

Chronic conditions and other noncommunicable diseases are the main cause of death among older adults; globally among adults aged 60 and older, 85 percent die from a noncommunicable disease, 11 percent die from communicable diseases, and 4 percent die from injuries (United Nations 2013c). Thus, as the population ages, more attention has to be paid to preventing, delaying, and slowing the progression of noncommunicable diseases. Health-care providers also have to be increasingly prepared to meet the end-of-life needs of older adults. As populations age, the distribution of deaths shifts to older ages such that the majority of deaths occur among adults aged 60 and older. For example, globally 27 percent of deaths were among adults aged 60 and older in 1950–1955, but by 2005–2010 it was 60 percent, with regional percentages of 82 percent for North America, 81 percent for Europe, 73 percent in Oceania, 64 percent in Asia, 61 percent in Latin America and the Caribbean, and 27 percent in Africa (United Nations 2013c).

Given that medical costs associated with the treatment of noncommunicable diseases and end-of-life care are high, increases in the proportion of the older adult population in need of these services raises concerns about rising health-care expenditures. Health-care expenditures are higher among older adults. For example, in the United States per capita spending on health care in 2010 was $8,370 for ages 45–64, $15,857 for ages 65–84, and $34,783 for ages 85 and older (Centers for Medicare and Medicaid Services 2014). However, the United States is an outlier in health-care spending, and overall in high-income Organization for Economic Cooperation and Development (OECD) countries there is little correlation between

GDP spent on health care and the percentage of the population that is aged 65 and older. Crystal and Siegel (2009, p. 628) concluded that ". . . the crisis of 'sustainability' of health benefits for the elderly has more do to with the internationally idiosyncratic and remarkably inefficient structure of U.S. health-care financing and delivery systems than with the coming aging of the population." Thus, population aging does not necessarily translate into unmanageable health-care costs.

Economic Productivity. Most discussions about the economic implications of population aging are situated in a discussion of old-age dependency ratios and old-age support ratios. Both these ratios measure the relative size of the older adult population that is potentially in need of support to the working-aged population that generates tax revenue that finances old-age programs and serves as a pool of potential care workers. The old-age dependency ratio, which represents the number of adults aged 65 and older per 100 working-aged adults between the ages of 15 to 64, is expected to increase from 12 in 2013 to almost 25 in 2050. Over that same time period the old-age support ratio, which is number of working-aged adults per older person, will decrease from approximately 8 to 4 (United Nations 2013a). As shown in Figure 1.5, every region is expected to experience declines in the old-age support ratio, but by 2050 the absolute level will be lowest in Europe, which will only have two working-aged adults for every older adult.



[a] The old-age support ratio represents the number of adults ages 15 to 64 per adult ages 65 and older.

Figure 1.5 Old-age support ratio by region, 2013 and 2050 (a) (United Nations [2012])

Although there is widespread concern that global population aging will lower economic growth due to expected increases in public debt, labor shortages, and lower rates of saving and investment (England 2002; Hateley and Tan 2003), these fears may be unfounded. The specific mechanisms through which population aging affects economic growth are rarely explicated (Mullan 2000) and there is no historical evidence that population aging slowed economic growth in developed nations (Easterlin 1991; Mullan 2000). Further, a United Nations report concluded that "worries that ageing populations and ageing workforces will lead to acute declines in economic growth appear unfounded" (United Nations 2007, p. 84). In addition, a National Research Council panel concluded there is "ample reason to believe that nations will be able to cope with current and projected demographic changes provided policy makers have access to information about the emerging economic and social forces that will shape future society well-being" (National Research Council 2001, p.17).

Improving Our Understanding of Population Aging through Survey Research

Planning for population aging requires high-quality, population representative data. While almost all nations collect demographic data through periodic censuses, which provides basic information about the size and characteristics of the older adult population, there is substantial variation across countries in the availability of national registries of vital statistics or detailed survey data based on representative samples of older adults. For more than 25 years, many developed countries have initiated a series of increasingly sophisticated longitudinal data collections that have yielded substantial insight into the aging process. Most notable among these is the Health and Retirement Study and its associated family of "sister studies," which are listed in Table 1.1.

These studies contain relatively comparable longitudinal measures of demographic characteristics, health conditions and physical functioning, cognition, health-care utilization, employment and retirement, income and wealth, family structure, and intergenerational exchanges from middle-aged and older adults in various developed and developing countries. Increasingly, researchers are interested in harmonizing these HRS "sister studies," as exemplified by the "Gateway to Global Aging Data" that is available at https://g2aging.org/, and evaluating the reproducibility of results based on various samples of older adults, such as the work being done with the "Integrative Analysis of Longitudinal Studies on Aging" that is explained in more detail at http://www.ialsa.org/. Collectively, these efforts are laying a foundation that will substantially advance our

Table 1.1 International "Sister Studies" of the Health and Retirement Study

Data Set Name	Study Waves	Sample Ages	Notes
Health and Retirement Study(HRS)	1992, 1993, 1994, 1995, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012	50 and older	United States
The Brazilian Longitudinal Study of Aging (ELSI-BRASIL)			Under development as a HRS sister study. Data was collected from respondents aged 35–37 in 2008–2010 and 2012–2013 in the "Brazilian Longitudinal Study of Adult Health."
Canadian Longitudinal Study of Aging			Under development as a HRS sister study. Data collection from respondents aged 45 and older began in 2010.
Costa Rican Longevity and Healthy Aging Study – Pre-1945 cohort – 1945–1955 cohort	2005, 2007, 2009 2010, 2012	60 and older 55 and older	
The China Health Aging and Retirement Longitudinal Study (CHARLS)	2011, 2013	45 and older	
English Longitudinal Study of Ageing (ELSA)	2002, 2004, 2006, 2008, 2010, 2012	50 and older	

Data Set Name	Study Waves	Sample Ages	Notes
Health and Aging in Africa: Longitudinal Studies in Three INDEPTH Communities (HAALSI)			Under development as a HRS sister study. Data collection from respondents aged 40 and older living in South Africa was initiated in 2014.
Indonesia Family Life Survey (IFLS)	1993	26 and older	The study was redesigned in 2007 to be similar to the HRS.
The Irish Longitudinal Study on Ageing (TILDA)	2010, 2012	50 and older	
Japanese Study of Aging and Retirement (JSTAR)	2007, 2009, 2011	50 and older	
Korean Longitudinal Study on Ageing	2006, 2008, 2010, 2012	45 and older	
Longitudinal Aging Study in India (LASI)			Under development as a HRS sister study. Pilot data for respondents 45 and older is available
Mexican Health and Aging Study (MHAS)	2001, 2003, 2012, 2015	50 and older	
New Zealand Health and Aging Research Team	2010, 2012	50 and older	
Northern Ireland Cohort for the Longitudinal Study of Ageing (NICOLA)			Under development as a HRS sister study. Initial data was collected from respondents aged 50 and over in 2013.

(*continued*)

Table 1.1 (*continued*)

Data Set Name	Study Waves	Sample Ages	Notes
The Scottish Longitudinal Survey of Ageing (THSLS)			Under development as a HRS sister study. Plans to sample respondents aged 50 and older are underway.
Study on Global Ageing and Adult Health (SAGE)	2011	50 and older	Countries include: China, Ghana, India, Mexico, Russia, and South Africa
Survey of Health, Aging and Retirement in Europe (SHARE)	2004, 2006, 2008, 2010, 2012	50 and older	Countries include: Austria, Belgium, the Czech Republic, Estonia, Denmark, France, Germany, Greece, Hungary, Ireland, Israel, Italy, the Netherlands, Poland, Portugal, Slovenia, Spain, Sweden, and Switzerland. Country participation and field time vary across waves.

For additional details go to the HRS International Sister Studies webpage located at: http://hrsonline.isr.umich.edu/index.php?p=sisters

understanding of aging across different cultural contexts and policy environments, which will enable us to effectively meet the challenges of global population aging.

However, this is inherently difficult work, given the problems associated with standardizing survey instruments across different languages and cultural contexts. This type of large-scale research requires significant sustained investment in social science research activities, including survey development, construction, and implementation; subject recruitment,

retention, and compensation; data collection, storage, and analysis; and dissemination of results. Sufficient infrastructure, including computing and accounting systems, and human resources, including well-trained scientists and staff, are also essential. But supporting these initiatives is crucial to developing high-quality data that can track trends and provide insights that will assist policy makers plan for the growing older adult population.

Discussion

This chapter has documented the unprecedented aging of the global population and its implications for families, health and health care, and economic productivity. The timing and pace of population aging have varied substantially across countries, which makes it an immediate pressing issue in the developed countries of Europe, North America, Oceania, and Asia and a longer-term issue in developing countries in Africa, Latin America and the Caribbean, and Asia. The social and economic impact of changing age structure on specific countries in these regions will depend on a range of factors.

The first and foremost factor is the overall health of the population. Lowering chronic disease prevalence, delaying the onset and slowing the progression of disability, and providing access to high-quality health care throughout the life course are likely to foster improvements in the health of older adults. However, in many developed and developing countries, the health of future cohorts of older adults is likely to be undermined by rising rates of obesity among young and middle-aged adults (Wilmoth and Simpson 2013). At the same time, substantial differences across countries in health behaviors such as smoking, substance use, and exercise will also shape the health of older adult populations. Tracking changes in population health at all ages will provide insight into future demand among older adults for health care and long-term care.

A second factor to consider is evolving family forms. Rising rates of divorce and remarriage in developed countries are creating complex family arrangements that are calling into question the nature of family obligations (Connidis 2015). It remains to be seen whether adult children whose parents were never married or are divorced provide the same level of support to each of their aging parents as those whose parents' marriages remain intact or dissolved through the death of one partner. Similarly, the conditions under which stepchildren are willing to provide instrumental and personal assistance to aging stepparents are not fully understood. At the same time, increasing acceptance of cohabitation and same-sex unions in many countries is legitimizing relationships in ways that could expand and strengthen older adults' informal support systems. Obtaining a better understanding of

changes in family structure and personal relationships is essential for accurately estimating the supply of informal caregivers available to older adults and the potential demand for formal long-term care services.

A third factor is public policy. In planning for the societal changes that will accompany population aging, it is essential that policy makers take into account structural lag, which occurs when the operation of social institutions lags behind the circumstances experienced by individuals (Riley and Riley 1994). In this situation, public policies that were designed during an earlier historical time have to be updated to ensure they are effectively meeting the needs of citizens and serving national interests (Wilmoth 2014). For example, improvements in later-life health and mortality mean that older adults are spending a longer portion of their lives as retirees who are not in the labor force. The average number of years men spend in retirement in OECD countries is almost 19, with much higher averages in some European countries such as Spain, 21, Italy, 22, Austria, 23, and France, 24 (Organization for Economic Cooperation and Development 2009). Increasing statutory retirement ages and providing older adults with incentives to stay in the labor force would alleviate some of the pressures generated by declining old-age support ratios and provide older adults with an opportunity to continue engaging in work roles. Such changes in policy would help nations proactively address the challenges generated by population aging.

However, there is no one-size-fits-all strategy for addressing population aging; policies that arose in one country may or may not be effective in another country. Governments will have to develop strategies for addressing population aging that will meet the unique needs of their citizens. In doing so, existing variation among the older adult population in a given country will need to be recognized. As the other chapters in this edited volume explore in more detail, socially constructed categories such as gender, race, ethnicity, and class shape inequalities that accumulate across the life course and produce heterogeneity in the older adult population. Understanding the sources of later-life heterogeneity can serve as a foundation for formulating effective policies that not only address the issues associated with population aging but also benefit all segments of the population regardless of age.

Notes

1. All numbers and percentages reported in this section for 1950 are from Rowland (2009). All numbers and percentages for 2012 and 2050 are based on

United Nations (2012). Please see these sources for additional information about countries not discussed here.

2. All numbers reported in this section are from United Nations (2012). Please see this source for additional information about countries not discussed here.

References

Alzheimer's Disease International. (2010). *World Alzheimer Report, 2010*. Accessed 6/1/2015 http://www.alz.co.uk/research/files/WorldAlzheimerReport2010.pdf.

Centers for Medicare and Medicaid Services. (2014). *National Health Expenditure Data—Age and Gender*. Accessed 6/1/2015 http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/2010GenderandAgeTables.pdf

Connidis, I. (2015). Commitment and change: Constants of family ties over time. Presented at the Aging Families/Changing Families International Conference, Syracuse University, June 3–6.

Crimmins, E. M., & Ingegneri, D. G. (1990). Interaction and living arrangements of older parents and their children. *Research on Aging,* 12, 3–35.

Crystal, S., & Siegel, M. J. (2009). Population aging and health care policy in cross-national perspective. In P. Uhlenberg (Ed.), *International handbook of population aging* (pp. 608–630). New York: SpringerScience+Business Media.

Dykstra, P. A. (2009). Childless old age. In P. Uhlenberg (Ed.), *International handbook of population aging* (pp. 671–690). New York: SpringerScience+Business Media.

Easterlin, R. (1991). The economic impact of prospective population changes in advanced industrial countries. *Journal of Gerontology: Social Sciences,* 46, S299–S309.

England, R. S. (2002). *The macroeconomic impact of global aging: A new era of economic frailty?* Washington, DC: Center for Strategic and International Studies Press.

Fries, J. (1982). The compression of morbidity. *The Milbank Memorial Fund Quarterly,* 61, 397–419.

Gruenberg, E. M. (1977). The failures of success. *Milbank Memorial Fund Quarterly,* 55, 3–24.

Grundy, E., & Read, S. (2012). Social contacts and receipt of health among older people in England: Are there benefits of having more children? *Journals of Gerontology, Series B: Psychological and Social Sciences,* 67, 742–754.

Hank, K. (2007). Proximity and contact between older parents and their children: A European comparison. *Journal of Marriage and Family,* 69, 157–173.

Hardy, M., & Skirbekk, V. (2012). Research opportunities in the demography of aging. In L. J. Waite (Ed.), *Perspectives on the future of the sociology of aging* (pp. 32–59). Washington, DC: National Academies Press.

Hateley, L., & Tan, G. (2003). *The graying of Asia: Causes and consequences of rapid aging in Asia.* New York: Eastern Universities Press.

Kinsella K., & He, W. (2009). *An aging world: 2008.* Washington, DC: National Institute on Aging and U.S. Census Bureau.

Knodel, J., Chayovan, N., & Siriboon, S. (1992). The impact of fertility decline on family support for the elderly: An illustration from Thailand. *Population Development Review,* 18, 79–103.

Knodel, J. E., & Ofstedal, M. B. (2003). Gender and aging in the developing world: Where are the men? *Population and Development Review,* 29(4), 677–698.

Koropeckyj-Cox, T., & Vaughn, R. A. C. (2007). Characteristics of older childless persons and parents: Cross-national comparisons. *Journal of Family Issues,* 28, 1362–1414.

Laditka, S. B., & Laditka, J. N. (2009). Active life expectancy: A central measure of population health. In P. Uhlenberg (Ed.) *International handbook of population aging* (pp. 543–565). New York: SpringerScience+Business Media.

Manton, K. G. (1982). Changing concepts of morbidity and mortality in the elderly population. *Milbank Memorial Fund Quarterly,* 60, 183–191.

Miner, S., & Uhlengberg, P. (2004). Intergenerational proximity and the social role of sibling neighbours after midlife. *Family Relations,* 46, 145–153.

Mullan, P. (2000). *The imaginary time bomb: Why an ageing population is not a social problem.* New York: I. B. Tauris.

National Research Council. (2001). *Preparing for an aging world: The case for cross-national research.* Washington, DC: National Academy Press.

Olshansky, S. J., Rudberg, M. A., Carnes, B. A., Cassel, B. A., & Brady, J. A. (1991). Trading off longer life for worsening health: The expansion of morbidity hypothesis. *Journal of Aging and Health,* 3, 194–216.

Organization for Economic Cooperation and Development. (2009). *OECD society at a glance.* Accessed 6/1/2015 http://public.tableausoftware.com/views/Retirement/LFEA

Population Reference Bureau. (2014). *2014 world population data sheet.* Accessed 5/29/2015 http://www.prb.org/pdf14/2014-world-population-data-sheet_eng.pdf

Redfoot, D. L., & Pandya, S. M. (2002). *Before the boom: Trends in long-term supportive service for older Americans with disabilities.* Washington, DC: The AAPR Public Policy Institute.

Riley, M. W., & Riley, J. W., Jr. (1994). Structural lag: Past and future. In M. W. Riley, R. L. Kahn, & A. Foner (Eds.), *Age and structural lag* (pp. 15–26). New York: John Wiley and Sons, Inc.

Rowland, D. T. (2009). Global population aging: History and prospects. In P. Uhlenberg (Ed.), *International handbook of population aging* (pp. 37–65). New York: SpringerScience+Business Media.

Schoeni, R. F., & Ofstedal, M. B. (2010). Key themes in research on the demography of aging. *Demography,* 47, 5–15.

Siegel, J. (1980). On the demography of aging. *Demography,* 17, 345–364.

Silverstein, M. (1995). Stability and change in temporal distance between the elderly and their children. *Demography,* 32, 29–45.

Teitelbaum, M. S. (1975). Relevance of demographic transition theory for developing countries. *Science,* 188(4187), 420–425.

Tomassini, C., Glaser, K., Wolf, D. A., Broese van Broenou, M. I., & Grundy, E. (2004). Living arrangements among older people: An overview of trends in Europe and the USA. *Population Trends*, 115, 24–34.

Tomassini, C., & Wolf, D. A. (2000). Shrinking kin networks in Italy due to sustained low fertility. *European Journal of Population Studies,* 16, 353–372.

Uhlenberg, P. (Ed.) (2009). *International handbook of population aging.* New York: SpringerScience.

United Nations (2003). Partnership and reproductive behavior in low-fertility countries. Accessed 6/2/2015 http://www.un.org/esa/population/publications/reprobehavior/partrepro.pdf

United Nations (2012). Population aging and development, 2012 wallchart. Accessed 5/29/2015 http://www.un.org/esa/population/publications/2012WorldPopAgeingDev_Chart/2012PopAgeingandDev_WallChart.pdf

United Nations (2013a). Profiles of aging. Accessed 5/29/2015 http://esa.un.org/unpd/popdev/AgingProfiles2013/default.aspx

United Nations (2013b). World Fertility Report 2012. Accessed 6/1/2015 http://www.un.org/en/development/desa/population/publications/dataset/fertility/wfr2012/MainFrame.html

United Nations (2013c). World population ageing 2013. Accessed 5/29/2015 http://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2013.pdf

United States Central Intelligence Agency. (2015). *The world factbook: Median age.* Accessed 5/29/2014 https://www.cia.gov/library/publications/the-world-factbook/fields/2177.html

Wilmoth, J. M. (2014). The implications of structural lag for old age policy. In R. Hudson (Ed.), *The new politics of old age policy* (3rd ed., pp. 20–38). Baltimore: Johns Hopkins Press.

Wilmoth, J. M., & Simpson, N. M. (2013). Demographic perspectives on aging. In J. M. Wilmoth & K. F. Ferraro (Eds.), *Gerontology: Perspectives and issues* (4th ed., pp. 199–222). New York: Springer Pub.

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CHAPTER TWO

Theories of Aging and Social Gerontology: Explaining How Social Factors Influence Well-Being in Later Life

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In science, theories are explanations, and the purpose of theories is to provide an explanation of *why* and *how* things happen. Social gerontology as a scientific field is concerned with understanding how social factors affect older individuals' well-being at both the macrolevel of society and the microlevel of individuals and their relationships.

Social gerontology is a multidisciplinary field that was originated by sociologists, psychologists, social workers, and public policy advocates interested in aging, then expanded by demographers, economists, and scholars in the humanities. The common intent underlying their efforts has been a humanitarian goal to understand and improve the lives of older adults through research that can lead to interventions. Research efforts of social gerontologists have been directed at a wide variety of topics, such as explaining why there are disparities among older persons in well-being, and how the diversity of people's aging experience affects and is affected by their location in social structures.

In this chapter, we examine some of the major theories that have been developed to date in social gerontology. We begin by discussing what is

meant by theory in social gerontology and the history of theorizing in our field. We then present some of the major theories or perspectives in social gerontology and what they try to explain about well-being later in life. We organize these along three major dimensions: theories concerned with social stratification and the life course in relation to well-being, those concerned with social-psychological models of well-being, and interpretive or social constructionist perspectives on aging and well-being. We conclude with some recent models of well-being in later life and a call for future efforts at theorizing—which is much needed in our field, and often badly neglected in our current emphasis on training of graduate students.

What Is Theory and Why Does It Matter?

While the term *theory* may be used in many ways, in science theory means the development of *explanations* to account for empirical findings (Bengtson et al., 2009). Theories of aging help to explain the *how* and *why* behind the *what* that is reported in data about age differences and age changes. The end product of a good theory in science can be a successful *intervention,* which involves changing existing conditions to improve some outcome, such as a new vaccine to prevent disease, or (hopefully) a more equitable old-age Medicare insurance policy to improve health outcomes for all sociodemographic groups (Bengtson, Burgess, & Parrott, 1997).

The systematic progression of theory-based explanation over time is the standard by which the progression and status of any field of scholarly or scientific research is judged (Brown, 1986). If empirical results are not presented within the context of explanations or theory, this limits the process of building, revising, and interpreting how and why phenomena occur. It is through the ability to explain specific empirical findings with more general theories that knowledge develops (Turner, 2005).

Theories also provide understanding, which is somewhat different from explanation (Bengtson & Settersten, 2016). We can posit a theory about the causal relationship between two variables without having insight into the mechanisms that underlie the relationships; a theory that includes mechanisms achieves a deeper level of understanding. Moreover, in social gerontology it can be said that there are two general types of theory: (1) theories of *explanation* concerning how and why something occurs—for example, cumulative advantage/disadvantage theories in aging, which explain *why* variability among older people partly reflects social inequalities, and *how* social processes generate those inequalities over time; and (2) theories of *orientation* that provide a worldview and even a set of explicit assumptions or propositions, that lead us to see and interpret aging phenomena in particular ways—for example, postmodern

theory, feminist theory, critical gerontology, or the life-course perspective. While the latter are often called "theories," they are, from another perspective, more often broader "paradigms" than theories. But the frame and propositions they provide are extremely useful in developing more specific theories. In any case, both types are represented in gerontology today, and we discuss both in this chapter.

But theory, and particularly the process of theory development (which we suggest is central to the future of social gerontology), may seem irrelevant to some students and junior researchers who are readers of this chapter. Yet theory is part and parcel of every research project, recognized or not. When we put together a plan to study some problem of importance, we already have some hunch, or explanation, about possible outcomes. These reflect some implicit theory about how a set of phenomena may be related, and these expectations or hunches are indebted to previous explanations. Yet too often researchers appear to be unaware of this conceptual and theoretical inheritance and proceed without any acknowledged theory (Hendricks, Applebaum, & Kunkel, 2010). In social gerontology, particularly in public policy applications or program interventions, it is crucial to specify the theoretical assumptions of the research or program intervention before investing large sums of money and hoping for the best. If the underlying theory is missing or inadequate, it is unlikely the intervention program or public policy will achieve its objectives. And if the intervention is not backed by tested theory-based knowledge, it will be difficult to judge why it worked—or, more important, why it *didn't* work (Bengtson, Burgess, & Parrott, 1997; Settersten & Bengtson, 2016).

Concepts are the building blocks of theory. Concepts are terms, like "successful aging" or "cumulative disadvantage" or "social roles," that represent a great number of observations, or data, collected through research procedures. Concepts are linked to these empirical phenomena through operational definitions, from which hypotheses are derived and then tested through more empirical observations (data collection). The process of theory building engages researchers in developing explanations about what lies behind these data—the *why* and *how* underlying these phenomena (Turner, 2005; Wallace & Wolf, 1991). Theories are useful in predicting and hence manipulating naturalistic phenomena and environments. Thus they are important for designing programs aimed at ameliorating problems associated with aging, such as programs and services provided by the Older Americans Act, Medicare, and Adult Protective Services.

Another major approach shaping research in social gerontology has been the interpretive perspective, which historically has taken a somewhat different approach to theory (Marshall, Matthews, & McMullen, 2016). Many researchers using interpretive approaches focus on describing and

understanding how social interactions proceed, as well as the subjective meanings or interpretations of age and aging phenomena. From this perspective, a "theory" is useful to the extent it provides a deeper understanding of particular social events and settings that have meaning for older persons in the context of their social worlds (Gubrium & Holstein, 1999). This reflects what Berger and Luckman (1966) called the *social construction of reality*. A major contribution of the interpretive perspective is its emphasis on agency—seeing individuals as active agents who can change the nature of their social environments, which is an important consideration for social gerontologists (Marshall, 2005).

Another perspective is critical theory, which questions scientific methods as a means for understanding the diverse manifestations of aging. Rather, the process of critical understanding of meanings, the analysis of power and domination, and the constraints imposed by social structures or forces—which, taken together, constitute *critical knowledge*—are equally as important as objective or scientific knowledge in understanding the phenomena of aging (Bengtson, Burgess, & Parrott, 1997; Moody, 2001).

Some critical theorists argue that values cannot be separated from what are termed "facts," and that all research is inherently value-laden—subject to the biases of the investigator (Marshall, 1999). Social gerontologists operating in the scientific mode would argue instead that their vigorous and peer-reviewed methods guard against such biases. We suggest that one way to address these issues is to regard each of these perspectives as providing different lenses to approach the different problems at hand. Interpretive and critical approaches to knowledge may be different in their objectives and methods, yet they also involve the identification of concepts, which are the building blocks of any theory. All these theoretical perspectives can thereby enrich understanding of the multiple facets of well-being in later life.

Early Explanations: Social Roles and Their Relation to Well-Being in Later Life

The development of gerontology, as a field of research and intervention, has owed much to its progressive development of theory (for a comprehensive review, see Bengtson, 2016). The earliest researchers in aging, such as Burgess (1923, 1960), Hall (1922), Cowdry (1939), Linton (1942), Parsons (1942), and Havighurst (1943), integrated empirical findings into theoretical insights and established the foundations of gerontology. Then, as social gerontology developed in the post–World War II period, it drew theoretical insights from the prevailing social theories of the time, such as structural functionalism and symbolic interactionism, and later Marxism and rational choice theory.

Activity Theory

What are the social factors that influence well-being in later life? What are the social requisites for successful aging? These were the research questions that formed the basis for the first major social science study of aging (Cavan et al., 1949; Havighurst & Albrecht, 1953). The answer appeared relatively straightforward: older people should maintain a high level of activity in the social roles they had in middle life, and when they lose these roles (through retirement, for example) they should replace them, as in volunteer activities. This became the activity theory of aging, an informal and implicit theory until Havighurst (1963) discussed it and Lemon, Bengtson, and Peterson (1972) formalized it.

Activity theory postulated that older individuals who are more active would be more satisfied with their lives. Underlying the theory was an assumption that social interaction was important to a positive self-development, and that an individual's self-concept is related to his or her social roles. A natural consequence of aging, unfortunately, is an involuntary reduction in roles, through events like retirement, widowhood, and the loss of friends. In order to maintain a positive sense of self, older persons must compensate for these role losses and find substitute roles. Well-being in later life, therefore, results from increased activity in newly acquired roles, such as volunteer work, hobbies, and participating in social clubs.

Activity theory provided a conceptual justification for an assumption underlying many programs and interventions for the elderly—that social activity in and of itself is beneficial and will result in greater life satisfaction. But activity theory received relatively little empirical support (Lemon, Bengtson, & Peterson, 1972), and there were many criticisms (Maddox, 1965). First, the theory assumed that all older persons need and desire high levels of social activity, although some old people may prefer to be couch potatoes. Second, the theory overlooked variations in the meaning of particular activities in the lives of older people. For example, baby-sitting grandchildren may improve self-esteem and sense of self-worth for some people but be viewed as a chore and burden to others.

Nevertheless, the ideas underlying activity theory were attractive in the 1960s, in part because they reinforced American cultural values of independence and autonomy. Moreover, they can be readily discerned in recent successful aging models that have become increasingly visible today, as we will discuss later. Not unlike activity theory, the successful aging model has been criticized for its excessive individualism, its discounting of social/economic inequality, and its "one size fits all" stereotyping (Schmeeckle & Bengtson, 1999).

Disengagement Theory

While activity theory maintained that high role involvement was the explanation (and prescription) for successful aging, disengagement theory provided a much different view. Here, older persons who follow a gradual retrenchment to more diminished and focused levels of activities are likely to have higher well-being. Disengagement theory (Cumming & Henry, 1961) was the first explicitly social-psychological theory of aging. It was based on an impressive multidisciplinary project of data collected from the Kansas City Studies of Adulthood and Aging. The data demonstrated gradual but progressive declines by age in social interaction, psychological involvement, and physiological functions of aging individuals. The theory explained these decreases as inevitable processes, which would occur intrinsically within older people; they would occur across all cultures, time periods, and communities, as part of developmental disengagement. The theory postulated that aging individuals and social structures mutually disengage as death approaches, an adaptation that could be seen as beneficial for the individual and society because it allows younger generations to replace older adults in positions of increasing power and importance (Cumming & Henry, 1961).

Disengagement was a truly general theory of aging, explaining many aging processes under one general set of mechanisms that fit together. Moreover, as a theory it was elegant, multidisciplinary, parsimonious, and intuitively provocative (Achenbaum & Bengtson, 1994). However, its ambitious propositions were roundly criticized (Hochschild, 1975). The theory had attempted to explain both macro- and microlevel changes with one grand theory, but when tested against other data, its validity and generalizability claims were not supported. While many older people did appear to be disengaging or withdrawing from their social connections and activities while maintaining high life satisfaction, many did not, particularly in other social settings (Bengtson, 1969).

One outcome of the criticism of disengagement theory was to curtail further attempts to develop a general theory of aging. However, disengagement theory had a significant effect in social gerontology by prompting development of alternative theories of aging, in particular, activity theory, and, much later, socioemotional selectivity theory (Carstensen, 1992), described later in this chapter.

Modernization Theory

A few years after the theoretical controversy sparked by disengagement versus activity theory, another grand theory emerged. Cowgill and Holmes

(1972) presented a theory based on ideas that had been first articulated by the pioneer of American sociology of aging, Ernest Burgess, in the 1920s (Burgess, 1960). Modernization theory proposed that the status and well-being of the elderly is inversely related to the level of industrialization in a society, and that this explains why the aged are less valued in, say, North America than in traditionally agrarian Asian societies (Cowgill, 1974; Cowgill & Holmes, 1972). It attempted to explain variations in age status both historically and across societies. While the elderly held high status in preindustrial societies as a result of their control of scarce resources and their knowledge of tradition, they have lower status in modern industrialized societies. Four elements of industrialization are related to the reduced status of older people: economic technology, urbanization, mass education, and health technology (Cowgill, 1974).

This was an attractive theory, and it was often cited as a critique of the position of the elderly in American society. Yet, like many general theories, it could not be documented empirically except at somewhat superficial levels (Laslett, 1976). Historical research examining the loss of authority of elders (Fisher, 1977), the timing and sequencing of the proportion of aged (Laslett, 1985), and the appearance of retirement (Quadagno, 1982) did not support the theory. Large-scale comparative research on the effects of modernity suggested that the aged were actually better off in more modernized contexts (Bengtson et al., 1975). Still, though modernization theory is no longer used as a general explanation of the status of the aged, it has been applied in more narrowly defined settings, for example, Aboderin's (2004) qualitative study of the intergenerational relations and the status of elders under conditions of poverty in urban Ghana in the late 1990s.

Continuity Theory

At the individual level, Atchley's (1989) continuity theory proposed that despite some disruptions of established roles and behavior patterns across the life span, individuals are inclined to maintain the same habits, personalities, and lifestyles they developed in earlier years. If necessary, individuals actively make adaptations that allow them to gain a sense of continuity between the past and the present. The theory posited that it is this sense of continuity across the life span that contributes to well-being in later life.

Continuity theory's implicit reference to trajectories and their constitutive roles, identities, values, and behaviors across life stages finds parallels in aspects of the life-course perspective described later on. However, assumptions contained in our perceptions of the meaning of time—our own constructions or culture-bounded views—may call into question the

usefulness of continuity theory. Kenyon, Ruth, and Madder (1999) questioned whether continuity theory is about aging *per se,* or whether in some cases it reflects a cohort, cultural, or period effect based on an unexamined belief in a linear view of time.

In support of continuity theory, research by Agahi, Ahacic, and Parker (2006) reported that average levels of leisure participation were mostly stable from midlife into older age, yet there were significant *intra*individual differences in participation over time and variation across activity types. For example, participation in religious activity remained relatively constant over a 34-year period for those who engaged in religious activity in midlife, but restaurant visits varied considerably. There were individuals who rarely ate at restaurants in midlife who then dined out frequently in later life (perhaps their wives got tired of cooking!). The researchers contend that these changes may reflect historical trends in the growing popularity of dining out instead of age-related effects. In a review of the literature on retirement satisfaction, researchers found that continuity theory can accommodate longitudinal patterns in retirement adjustment, helping to explain *inter*individual differences in well-being; however, the theory does not adequately explain *intra*individual fluctuations in life satisfaction over time (Wang, Henkens, & van Solinge, 2011).

Social Competence/Breakdown Model

How do problems of aging occur for individuals, and how can gerontological interventions be constructed to help them? Social competence/breakdown theory (Kuypers & Bengtson, 1973) represented an attempt to explore both normal and problematic aspects of aging by linking micro- and macrosocial dimensions. This model started from an interpretive theoretical perspective, looking at meanings of age and aging in a culture where ageism is rampant.

The social breakdown model sought to explain the negative consequences that follow an age-related crisis and pose a threat to well-being. The precipitating event is often an age-related crisis in health, a job loss to a younger worker, or the death of a spouse. These role losses can activate the older person's internalized beliefs that he is frail and incompetent, which are further reinforced by a culture that devalues the contributions of older people. Internalized ageism manifests outward, leading to further atrophy of the older person's previous competency skills and his self-confidence. Once the older person recharacterizes himself as sick, inadequate, or incompetent, he becomes more vulnerable still, resulting in further negative social and psychological well-being.

This process can be reversed, and competence promoted, by intervening before the downward spiral begins. Interventions may include providing improved environmental supports, such as senior transportation, modified housing, or job retraining, while facilitating expression of personal strength. It is this aspect of the social breakdown/competence model that made it appealing as an explanatory theory for social workers. However, it has seldom been tested in empirical studies.

Social Stratification, the Life Course, and Well-Being

The theories described above were innovative and useful in calling attention to the newly developing field of social gerontology. But they tended to focus on individuals and their social roles, and how these related to well-being in later life. The next stage of theory development would expand this to integrate the social structure with the life course (Bengtson, 2016). New theoretical perspectives emerged. Prominent among them were the age stratification model, the life-course perspective, and the cumulative advantage/disadvantage model. This theoretical work reflected an effort to synthesize the distinct micro- and macrolevel approaches of earlier theorizing (Hendricks, 1992).

The Age Stratification Perspective

Both the age stratification and the life-course perspectives began in gerontological theory with the insights of Leonard Cain (1964). He drew from sociologists (such as Mannheim and Eisenstadt) on the importance of generations, and anthropologists (such as Van Gnepp and Malinowski) for the concept of age grading and age statuses in preliterate societies, to build a persuasive case that age, and aging, were important phenomena in American society.

A few years later Matilda Riley developed what she at that time called the age stratification model, which became one of the most important traditions of macrolevel theorizing in social gerontology (Riley, Johnston, & Foner, 1972). This model sought to bring together and explain: (1) cohort flow or the movement of different age cohorts across time in order to identify similarities and differences between them; (2) the interdependence of age cohorts and social structures; and (3) the asynchrony between structural and individual change over time. It developed concepts such as age cohorts, age roles, age-graded social structures, age segregation/integration, and structural lag. Structural lag occurs when social structures cannot keep pace with the changes in population dynamics and individual

lives. A useful example of structural lag (Riley, Kahn, & Foner, 1994) is the discordance between the increasing needs of elderly parents for caregiving support, the concurrent reductions in state resources to provide long-term care services, and the resultant increased demands placed on families to provide parent care, even as adult children are less able to do so because of employment demands. Using this theoretical perspective, Riley and Loscocco (1994) argued that a more age-integrated society brought about by policy changes can compensate for structural lag and improve the lives of older adults. Restructuring the social institutions of work, education, and the family, through such policies as extended time off for education or caregiving, can bring social structures in balance with individuals' lives.

The Life-Course Perspective

This perspective is perhaps the most widely cited theoretical framework in social gerontology today. It is based on the premise that to understand the present circumstances of elderly people, we must take into account the social and psychological forces operating throughout the earlier course of their lives (George, 1996). This represents a convergence of thinking in sociology and psychology about processes at both macro- and microsocial levels of analysis and how they apply to populations and individuals over time. It is a multidisciplinary perspective, drawing concepts and methods from sociology, psychology, biology, anthropology and history.

Researchers using the life-course perspective were attempting to explain: (1) the dynamic, contextual, and processual nature of aging; (2) age-related transitions and life trajectories; (3) how aging is related to and shaped by social contexts, cultural meanings, and social-structural location; and (4) how time, period, and cohort shape the aging process for individuals as well as for social groups (Bengtson & Allen, 1993; Elder, 1992; Elder & Johnson, 2002).

Several basic assumptions were part of the life-course perspective (Elder & Johnson, 2002; Settersten & Godwelski, 2016). The first is that *development and aging are lifelong processes*—relationships, events, and processes of earlier life stages have consequences for later-life relationships, processes, and outcomes. The second principle concerns the *interdependence of lives over time,* especially in the family, where individuals are linked across generations by bonds of kinship and processes of intergenerational transmission. For example, economic declines can have reverberating effects on the interconnected life paths of family members. The third principle concerns *agency* in human development—the idea that individuals make choices within the constraints of social structures and

historical conditions. The fourth principle is the impact of *history and place.* Research designs should nest individual lives and family processes within social and historical contexts. A fifth principle emphasizes *historical time,* or the importance of transitions and their timing relative to structural and historical contexts. There can be a "best fit" in the timing of individual development and family life stages as they converge with structural and historically created opportunities.

An example is the epidemiologic transition theory, which expanded the life-course perspective to a population scale using an anthropological perspective (Omran, 1971, 2005). The theory examines how demographic, economic, and sociological factors interact with health and disease over time to alter the structure and composition of populations. In Western societies, degenerative diseases replaced infectious diseases as the drivers of mortality. This created an epidemiological transition from high mortality and high fertility to low mortality and low fertility, and an increasing divide between males and females in longevity. Longer, healthier lives were accompanied by changes in work roles, family structure—more generations alive at one time—overall economic productivity, and an overall improvement in living standards for older adults. While not a social gerontology theory, the epidemiological transition theory is a useful macrolevel explanation for how modernization affects population health, life expectancy, and social roles, which then affects the overall well-being of older societies (Gaziano, 2010).

Cumulative Advantage/Disadvantage Theory

The cumulative disadvantage/advantage theory applied a life-course approach to the analysis of stratification among the aged. The theory sought to explain how inequality is produced across the life course and maintained in old age (O'Rand, 2016). As applied to older people, those already advantaged (across a range of domains, such as health or wealth) will accumulate more benefits, while those who are disadvantaged early will accumulate more loss (O'Rand, 1996).

In the 1970s and 1980s, two themes emerged in social gerontology that the cumulative advantage/disadvantage perspective was uniquely positioned to examine: the heterogeneity or diversity of older persons, and poverty and inequality among the aged (Dannefer, 2003). A central concept was intracohort heterogeneity. Structural or institutional arrangements operate to stratify cohorts as they allocate differential opportunities for the accumulation of value and reward. Inequality is seen as the product of institutional arrangement as well as aggregated individual actions over time. People who begin in a position of social advantage generally

are better positioned to acquire additional resources than those who begin life at the bottom of the hierarchy (Quadagno & Reid, 1999). This also explains the differences within cohorts along significant life-course trajectories in terms of health, family, work, income, and wealth.

The cumulative inequality theory suggested by Ferraro, Shippee, and Schafer (2009) uses an interdisciplinary lens to integrate the life-course perspective with the cumulative advantage/disadvantage perspective. Originally based on the Matthew effect in science (Merton, 1968), cumulative inequality is premised on five axioms. The first is that social systems, not individual behaviors, generate inequality, and that these social systems set a course for demographic and developmental processes. Second, disadvantage increases exposure to risk, while advantage increases exposure to opportunity. Those who begin in poverty are more likely to experience food insecurity, joblessness, and negative life events like divorce, bankruptcy, and poor heath; whereas those born into wealth are more likely to have access to good nutrition, education, and eventually greater economic security in retirement. Inequality can accumulate over generations, so that the family one is born into affects the availability of both physiologic and social resources throughout his or her life; and prenatal conditions—the mother's diet, lifestyle choices, and her exposure to environmental pathogens—affect developmental trajectories. The third principle is that accumulation of risk, available resources, and human agency all influence a person's ultimate life-course trajectory.

Fourth, subjective feelings about where people stand relative to others are more important in shaping their life-course trajectory than their actual position in the social hierarchy. In other words, believing that one is doing better than one's peers increases self-efficacy, and self-efficacy may improve physiological well-being. In this way, the cumulative inequality theory diverged from cumulative advantage/disadvantage theory by borrowing concepts from social constructionism. Fifth, individuals who have accumulated the most disadvantages will have the greatest health problems in older age, leading to higher mortality rates. The strengths of the cumulative inequality theory are its interdisciplinary focus and its ability to explain the heterogeneity of older cohorts, thus making it very popular among health disparity researchers.

Social-Psychological Models of Well-Being in Later Life

Other perspectives in social gerontology take a more narrow approach to explaining well-being in later life. These theories focus less on how broad social forces influence well-being—like how cultural, economic, and political contexts produce social stratification—to instead focus on

the individual and the individual's relationships with others. These mid-level theories include the social exchange theory applied to aging (Dowd, 1975), selective optimization with compensation (Baltes & Baltes, 1990), and the socioemotional selectivity theory (Carstensen, 1992). They explain adaptive changes in emotion regulation and decision making with age, in addition to exploring the costs and benefits of social relationships over the life course.

Social Exchange Theory: A Rational Choice Perspective

Social exchange theory has been useful in analyses focusing on intergenerational social support and transfers. Developed and extended by Dowd (1975), this theory of aging drew from sociological formulations by Homans (1961) and Blau (1964) and work in economics that assumes a rational choice model of decision making and behavior. Applied to aging, this perspective attempted to account for exchange behavior between individuals of different ages as a result of the shift in roles, skills, and resources that accompany advancing age (Hendricks, 1995). A central assumption was that the various actors (such as parent and child or elder and youth) bring resources to the interaction or exchange. Resources can be nonmaterial, such as social support and companionship, and will most likely be unequal. For example, in caregiving relationships a dependent older person requires increasing levels of support over time but can provide fewer resources in return for care. A second assumption of social exchange theory was that the actors will continue to engage in the exchange only as long as the personal benefits are greater than the personal costs, and that there are no better alternatives. This theoretical approach also assumed that exchanges are governed by norms of reciprocity: when we give something, we trust that something of equal value will be given in return.

A contribution of social exchange theory is its ability to explain exchanges of contact and social support as well as how these exchanges are influenced by emotional, social, or financial support (Silverstein et al., 2002). However, simplistic formulations of social exchange theory may ignore the fact that many interactions are not driven solely by rationality or an economic calculation on the part of each actor, but rather by irrational motivations such as altruism, affection, or a sense of familial obligation.

Another issue is that in contrast to social constructionist theories, the quality and the meaning of the exchange are ignored in rational choice-type theories. Yet Merz et al. (2009) note that relationship quality moderates the association between providing intergenerational support to parents and the well-being of adult children, such that in high-quality

relationships, the challenges of providing intergenerational support are perceived as less burdensome. In a separate study, Merz and Consedine (2009) found that receiving *emotional* support from family members was related to greater well-being, whereas receiving *instrumental* support was either negatively or not associated with well-being. These associations depended on whether the older person's attachment style was open and emotionally secure. Thus, the quality of the relationship and the type of resources provided—emotional versus instrumental—were important in determining whether there were barriers or facilitators to intergenerational exchange.

The social exchange theory was premised on the assumption of an imbalance in the relative power of the parties to the exchange and has been used as an explanation for caregiver stress leading to elder abuse and neglect (Dong, Simon, & Gorbien, 2007; Walker & Allen, 1999). The idea is that as an elder becomes more and more impaired, his or her increasing dependency becomes stressful to a caregiver who responds by physically and/or emotionally harming the older person in order to rebalance the distribution of power. While this paradigm was attractive to researchers for its simplicity, other researchers have found that it is more often the abuser who is dependent on the elder for financial and emotional support rather than the other way around (Jackson & Hafemeister, 2013; Pillemer & Finkelhor, 1989).

Selective Optimization with Compensation Theory

This psychologically oriented theory explained how individuals cope with age-related losses to manage adaptive (successful) development in later life (Baltes & Baltes, 1990). The theory identified three fundamental mechanisms or strategies: selection, optimization, and compensation. The central focus of this model of psychological and behavioral adaptation was on maximizing gains—optimization—and minimizing losses—selection and compensation—as one ages.

Selection refers to the increasing restriction of an individual's life to fewer domains of functioning because of age-related losses in the range of adaptive potential. Optimization reflects the idea that people engage in behaviors that augment or enrich their general reserves and maximize their chosen life courses. Like selection, compensation results from restriction of the range of adaptive potential and becomes operative when specific behavioral capacities are lost or are reduced below a standard required for adequate functioning. This lifelong process of selective optimization with compensation enables people to age successfully (Schroots, 1996).

These concepts have been tested empirically, particularly in the areas of work-related demands and coping with chronic disease. For example,

Young, Baltes, and Pratt (2007) found that selective optimization with compensation strategies were effective for people whose time and energy resources were constrained by having young dependents, receiving little support at work, and being older. And in a qualitative study, researchers found that resource allocation strategies are used by adults adapting to physiological constraints due to chronic health conditions (Rozario, Kidahashi, & DeRienzis, 2011).

Socioemotional Selectivity Theory

This has become one of the most highly used theories across a wide range of individually focused social gerontological studies. In constructing this theory, Carstensen (1992) combined insights from developmental psychology—particularly the selective optimization with compensation model developed by Baltes and Baltes (1990)—with social exchange theory to explain why the social exchange and interaction networks of older persons are reduced over time, a phenomenon disengagement theory tried to explain. According to the socioemotional selectivity theory, constricting the range of social partners is a lifelong adaptation performed to maximize emotional and social gains and minimize emotional risks. While social interactions benefit the individual by providing opportunities to acquire new information, get assistance, identify and select mates, and maintain one's self-concept, new social interactions also require effort and can pose a risk to one's self-concept. Through mechanisms of socioemotional selectivity, individuals reduce interactions with people in their peripheral social network while increasing emotional closeness with significant others, such as adult children and siblings.

The theory has been empirically tested in both young and old populations. Studies showed that future time perspective is more important than age in determining whether socioemotional selectivity will occur (Carstensen, 2006; Fung, Carstensen, & Lutz, 1998). When individuals perceive there is less time left in life, they selectively devote more effort to emotion regulation and bonding with close friends and family than to investing in future relationships and rewards. For example, Carstensen and Fredrickson (1998) found that HIV-positive men with limited time left to live behaved more like older adults in their interest in interacting with various social partners.

Carstensen's (1992) socioemotional selectivity theory, which is a lifespan theory of motivation, provided a concise development-behavioral explanation for selective interactions in old age. The theory explained age-related declines in the level of contact with distal social partners in exchange for more meaningful interactions with significant others. Such

chosen interactions reflect the levels of reward these exchanges of emotional support provide for older persons. An extension of this theory—the positivity effect, or older adults' selective memory for positive stimuli over negative stimuli—has been supported by results from neuroimaging studies on anticipation, exposure, and encoding of emotional stimuli (Samanez-Larkin & Carstensen, 2011).

Interpretive Perspectives on Well-Being in Later Life

Additional theories emerged in another period of theorizing in social gerontology, including the political economy of aging perspective (Estes et al., 1984), which drew from Marxist thinking and conflict theory in sociology, as well as development of socially constructed and ideological theories. The growing presence in the field of social constructivist theories, critical perspectives, political economy of aging perspectives, feminist theories of aging, and postmodernist perspectives reflects this trend.

Social Constructionist and Interpretive Theories

When social constructionist theories emerged several decades ago, they became the most frequently cited perspectives in social gerontology. Social constructionist theories drew from a long tradition of microlevel analysis in the social sciences: symbolic interactionism (Mead, 1934), phenomenology (Berger & Luckmann, 1966), and ethnomethodology (Garfinkel, 1967). They are often associated with the postmodern era in qualitative research (Andrews, 2012). Using hermeneutic or interpretive methods, social constructionism focused on individual agency and social behavior within larger structures of society and particularly on the subjective meanings of age and the aging experience.

Key concepts of social constructionist and interpretive theories of aging included social meaning, social realities, social relations, attitudes toward aging and the aged, and life events (Marshall et al., 2016). Researchers working in the social constructivist tradition emphasized their interest in understanding, if not explaining, individual processes of aging as influenced by social definitions and social structures. Examples include Gubrium's (1993) study of the subjective meanings of quality of care and quality of life for residents of nursing homes, and how each resident constructs meanings from her or his own experiences. There are critiques: the microlevel focus of social constructionist theories obscures macrolevel effects such as cohort, historical, and age stratification influences. Also, meanings emerge from analyses of life narratives, and thus cannot be measured by predefined measurement scales, such as those used by most survey

researchers. This perspective may also minimize the effects of social structure or the role of power.

A more recent application of social constructionism is Gilleard and Higgs's (2010) conceptualization of the "fourth age," which was a response to Bernice Neugarten's (1974) initial conceptualization of the third age as a postretirement/predisability life stage. According to Neugarten, third agers—55 through 75-year-olds—are generally healthy, affluent, politically active, and free from the responsibilities of child care and work. Peter Laslett (1987) popularized this concept by arguing that modernization is what facilitated the lifestyles and behaviors of adults in the third age. Because of better health and financial security, older people could productively engage with society in a way that previous generations could not.

Gilleard and Higgs (2010) applied a social constructionist perspective to these concepts. According to their revised perspective, generational identity is socially constructed. They argued that shifting work identities, consumerism, and community structures lead to a fracturing between the young-old and oldest-old cohorts. While third agers are socially positioned to participate in public discourse due to better health and financial resources, fourth agers are characterized by increasing frailty, cognitive decline, and institutionalization. According to this reconceptualization of Neugarten's original framework, the divide between the third and fourth ages and the marginalization of the oldest-old is driven by the anti-aging movement, youth-oriented culture, consumerism, and society's general reluctance to accept the aging process.

Critical Gerontology

Critical gerontology was less a formal theory than a framework for understanding the status of the aged within the broader social context (Quadagno & Reid, 1999). Critical perspectives are reflected in several theoretical trends in contemporary social gerontology, including the political economy of aging theory, feminist theories, theories of diversity, and humanistic gerontology. Coming primarily out of the Frankfort school of critical theory (Horkheimer & Adorno, 1944; Habermas, 1971), and poststructuralism (Foucault, 1977), these perspectives shared a common focus on criticizing "the process of power" (Baars, 1991) as well as traditional positivistic approaches to knowledge. The strength of critical theory was its focus on how class structure and the distribution of resources affect opportunities for social interaction and human capital, yet it ignored individual agency as a factor that shapes the lives of older people (Victor, 2013).

Critical gerontology developed two distinct patterns, one that focused on humanistic dimensions of aging, and one that emphasized structural

components. Moody (1993) postulated four goals of the humanistic strand of critical theory: (1) to theorize subjective and interpretive dimensions of aging; (2) to focus on praxis (involvement in practical change) instead of technical advancement; (3) to link academics and practitioners through praxis; and (4) to produce "emancipatory knowledge." A second strand emphasized that critical gerontology should create positive models of aging focusing on the strengths and diversity of age, in addition to critiquing positivist knowledge (Bengtson, Burgess, & Parrott, 1997). To reach the goals of critical gerontology, researchers focused on the key concepts of power, social action, and social meanings in examining the social aspects of age and aging. For example, Wild, Wiles, and Allen (2013) used critical gerontology as a lens to question whether *resiliency* is an acceptable benchmark to assess how well people cope with the challenges of older age. They argue that most resilience research fails to explore the role that social inequality and community structure play in limiting or enabling access to resilience resources.

Political Economy of Aging

This perspective, which drew originally from Marxism (Marx, 1967/1867), conflict theory (Simmel, 1904/1966), and critical theory (Habermas, 1971), has used the interaction of economic and political forces to explain how social resources are allocated, and how variations in the treatment and status of the elderly can be understood by examining public policies, economic trends, and social-structural factors (Estes, 2001; Quadagno & Reed, 1999). A political economy perspective applied to aging maintains that socioeconomic and political constraints shape the experience of aging, resulting in the loss of power, autonomy, and influence of older persons. Life experiences are seen as being patterned not only by age, but also by class, gender, race, and ethnicity (Phillipson, 2009). These structural factors, often institutionalized or reinforced by economic and public policies, constrain opportunities, choices, and experiences of later life.

The political economy of aging perspective has been used to critique positive gerontology's focus on civic engagement as a beneficial and necessary role for retired older adults (Martinson & Minkler, 2006). The authors argued that the civic engagement movement devalues older adults for whom engagement is either not desired or impossible because of conditions of poverty or disability. They claimed that the movement is driven by the politics of retrenchment in American political and economic life. Policy makers turn to retired older adults to fill service gaps in their communities, with volunteer work replacing paid work and government-funded social programs designed to serve a community's needs.

The political economy of aging theory would argue that social programs created for older adults benefit capitalist interests and the existing social order more than the elderly themselves (Quadagno & Reid, 1999). Because those in power decide what programs are needed and differentially allocate services across socioeconomic and demographic groups, programs reinforce social stratification and reproduce existing class divisions rather than empower those who are oppressed. Thus, a major focus of the political economy of aging perspective is how ageism is constructed through social practices and policies, and how it harms the well-being of older people.

Feminist Gerontology

Feminist theories of aging, or feminist gerontology, was a form of critical gerontology that gave priority to gender as an organizing principle for social life across the life span that significantly alters the experience of aging in inequitable ways (Calasanti, 1999; McMullin, 1995). Feminist theories regarded current theories and models of aging as insufficient because they failed to address differences in power and privilege in gender relations, the experience of women in the context of aging, civic engagement, and caregiving demands, and issues of race, ethnicity, and class (Blieszner, 1993; Calasanti, 1999; Netting, 2011; Ray, 1996).

Feminist gerontology recognized that gender is socially constructed and has different meanings throughout the life course (Hooyman & Gonyea, 1995). Gender roles for older women are shaped by cultural expectations and historical, political, and economic forces. At the macrolevel of analyses, feminist theories of aging combined with political economy and critical perspectives to examine differential access to key material, health, and caring resources, which substantially alter the experience of aging for women compared to men (Arber & Ginn, 1991; Calasanti & Slevin, 2006). For example, feminist researchers sought to explain the comparatively high rates of poverty among older women and to propose changes in the ideologies and institutions that perpetuate it.

From a feminist perspective, family caregiving can be understood as an experience of obligation, structured by the gender-based division of domestic labor and the devaluing of unpaid work (Stroller, 1993). At the microlevel, feminist perspectives held that gender should be examined in the context of social meanings, reflecting the influence of the social constructivist approach. Like critical gerontology, feminist theories are oriented toward social justice. Proponents advocate for structural change in the institutions of work, retirement, and caregiving to produce greater equity between the sexes (Hooyman et al., 2002).

Social constructionism and critical perspectives have gained prominence in social gerontological theorizing, mirroring theoretical developments in sociology and in the humanities. Social gerontologists often combine insights from these perspectives to guide their research and interpret findings. At the same time, these theoretical perspectives pose a challenge to the scientific assumptions that have traditionally guided much gerontological research.

The Rise of Successful Aging Models and Positive Gerontology

Following the often savage criticisms of disengagement theory (Maddox, 1965; Hochschild, 1975), some social gerontologists simply moved away from explaining how things *are* for older adults, to how things *should be* to improve well-being—hence the popularity of successful and productive aging theories. These theories prescribed ways to maximize and improve the aging experience (Havighurst, 1963; Johnson & Mutchler, 2014; Rowe & Kahn, 1998). Unlike critical gerontology perspectives, frameworks for successful, productive, and positive aging focused less attention on macrolevel political and institutional forces that affect social roles for the aged. Rather, they viewed individuals as active agents in society, directly shaping their aging trajectories through personal lifestyle choices. Positive gerontology emphasized the multiple ways older people contribute to their own health, to their families and communities, and to society (Johnson & Mutchler, 2014).

Successful Aging

The concept of "successful aging" has become perhaps the most popular and frequently cited concept in the history of gerontology (Rowe & Coscoe, 2016). The successful aging perspective is rooted in Havighurst's (1963) activity theory and also Baltes and Baltes's (1990) model of selective optimization with compensation. Rowe and Kahn's (1998) frequently cited recipe for successful aging involves a combination of low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life. Modifiable factors that can improve well-being include healthy eating, exercise, and increased social engagement.

Although successful aging has dominated the literature, there are many other positive aspects of aging that have been subjects of theory development—and, importantly, may be less value-laden or politically volatile, more precise, easier to operationalize, and theoretically fecund. These include theories of "optimal" aging, coping, and resilience (Aldwin & Igarashi,

2016), spirituality (Coleman, Schroeder-Butterfill, & Spreadbury, 2015), and wisdom (Ardelt & Oh, 2016).

Productive Aging and Civic Engagement

Productive aging advocated that older adults participate in paid and unpaid work that benefits society (Butler, 1989). Civic engagement refers not only to unpaid volunteer work, but also to work in organizations that pursue activities that benefit the public (Kaskie et al., 2008). The concepts emerged following the 1961 White House Conference on aging, where it was stated that older adults had a "right to be useful" and an "obligation" to participate in meaningful social roles through civic participation, work, and leisure (U.S. Senate Special Committee on Aging, 1961).

According to Bass and Caro's (2001) productive aging framework, social institutions and cultural values that devalue older adults' contributions to society restrict their engagement and exclude them from many positive roles. Activity choices can be improved through organizational and public policies to increase the quality and quantity of civic engagement for older adults. Like Bass and Caro's (2001) framework, many models of productive aging focused on ways that older people can give back to society and the ways policies can promote those roles.

Generativity

The theory of generativity is another successful aging perspective for improving well-being in later life. It was based on Erik Erikson's (1950) lifespan theory of personality development. According to Erikson, generativity is a later stage of adult development that involves nurturing, teaching, leading, and promoting the next generation (McAdams, Saint Aubin, & Logan, 1993). Generativity can be cultivated through volunteering, community activism, religious participation, and work and leisure pursuits. Although not construed as an innate biological drive, generative actions are motivated by a combination of cultural demand and personal desire to build a legacy by promoting younger generations.

The value of generative actions is determined by the aging person's subjective belief in the goodness of humankind and a conscious concern for the well-being of future cohorts (McAdams & Saint Aubin, 1992). In this way the theory borrowed from social constructionism and interpretive theoretical perspectives. The *generativity script*, as described by McAdams (1988), represented individuals' inner accounts of how generative actions fit into their larger life stories, contemporary society, and the social world. As such, the generativity script contributes to one's personal identity,

providing a sense of intergenerational unity and life purpose (McAdams & Saint Aubin, 1992). Generativity, like other productive aging frameworks, emphasized social engagement in later life but with a special focus on engaging with younger generations, leading to improved physical and mental well-being.

Recent Efforts at Unified Models of Well-Being in Later Life

Theory development in social gerontology has shifted over time from attempts at grand explanations of the social position of the aged toward discipline-specific micro- and midlevel theories. Midlevel theories are useful in building a bridge between observable social problems and mid-range conceptualization (Hendricks, Applebaum, & Kunkel, 2010). Often labeled *models* or *frameworks*, these theories apply existing theoretical concepts to current problems facing older adults, or they apply new concepts to explain specific age-related phenomena, such as elder abuse and intergenerational roles and relationships. Examples of micro- and midlevel theories that have received attention include Andersen's (1995) behavioral health utilization model, the Roy adaptation model applied to caregiver stress (Roy, 1991; Tsai, 2003), and environmental gerontology perspectives that examine the relationship between older persons and their socio-spatial surroundings (Wahl & Weisman, 2003).

A trend in gerontology has been to bridge theories across disciplines related to aging—psychology, biology, sociology, and public policy. Bass's (2009) integrative model of social gerontology, for example, examined the cumulative and interacting forces of historical events, economic conditions, power structures, and political environments on an aging individual. These broad sociopolitical conditions shape family and cultural norms around religion, tradition, and role expectations. These contexts also affect a person's access to social and economic resources—health care, housing, jobs, and social relationships.

Bass's (2009) integrative model depicted the life course as proceeding along a dynamic, fluid path. Physiological and psychological conditions interact with the environment to direct individual development and affect well-being in old age. As with the cumulative inequality theory (Ferraro, Shippee, & Schafer, 2009), Bass's (2009) comprehensive life-course model helps explain the heterogeneity among older people in well-being, but its layered, multifaceted dimensions are hard to test using empirical data.

A more recent interdisciplinary perspective is the spectrum model of aging (Martin & Gillen, 2013). It is perhaps the most recent attempt to create a unified lifespan model of aging and human development. Grounded in the positivist perspective, it was conceived as an individual-specific

framework that bridged objective and subjective influences on human development and well-being over the life course: genetics, sociodemographic circumstances, childhood events, and lifestyle choices. The spectrum model used a game theory approach (Marshall, 1973) and evidence-based research from many disciplines to plot strategies for improving the aging experience. Similar to Rowe and Kahn's (1998) successful aging framework, it posited that individuals can modify their subjective aging position through behavior modification, pharmacological interventions, social support, health promotion, and other strategies that improve well-being. Each person must choose from a range of options based on the economic, political, and social resources available. A modification in one domain can create new opportunities in other domains, so individuals face limitless possibilities for progressing through a developmental trajectory. The framework allowed individuals to construct their own meanings of successful aging and what they must do to achieve it. Thus, it provides more interpretive approaches to defining successful aging than previous successful aging models (Havighurst, 1963; Rowe & Kahn, 1998).

Opportunities for Future Theory Development in Social Gerontology

Social gerontology is ripe with opportunities to incorporate new concepts into theoretical models that explain well-being in later life. For example, with better tools for collecting physiological data from thousands of participants in longitudinal studies, gerontologists and epidemiologists are now examining the lifelong interplay between genes and the environment, *epigenetics*, and how these interactions affect later-life outcomes. Epigenetics concerns how environmental exposure and lifestyle choices affect the expression of genes, particularly those involved in aging and disease. While little is known about how social support and social structures affect gene expression and ultimately influence well-being, theory development in this area can help guide researchers in designing studies to examine these interactions, leading to targeted interventions.

Another opportune area for theory development is elder mistreatment. This is an expanding interdisciplinary area of research in gerontology that has major implications for well-being in later life. In the early 1980s, caregiver stress and burden was the predominant explanation for elder abuse (Steinmetz, 1978). This perspective was rooted in the social exchange theory (Dowd, 1975) and proposed that as people age they rely more on others who are ill prepared to meet the demands caregiving requires. To rebalance the distribution of power in the relationship, caregivers respond by harming the elder or failing to meet the elder's needs.

Empirical evidence has largely discredited the caregiver stress and burden theory as the sole cause of elder mistreatment (Suitor & Pillemer, 1988; Bristowe & Collins, 1989). Studies in the later 1980s found that caregivers who abused older adults did not necessarily care for more impaired or dependent elders than nonabusing caregivers (Bristowe & Collins, 1989; Pillemer, 1985; Suitor & Pillemer, 1988), and in many cases abusers are not caregivers at all. Despite these findings, researchers still rely on this theory to explain conflict and violence in caregiving relationships.

Other researchers have developed broader theoretical explanations for elder abuse, such as the ecological perspective. This focused on the contextual risk factors that give rise to abuse, such as living with dependent younger relatives with mental health or substance abuse issues (Schiamberg & Gans, 2008). Jackson and Hafemeister (2013) argue that although symptoms and risk factors vary by type of mistreatment, such as neglect versus physical abuse, interventions must be guided by a comprehensive theory. An inclusive theory of elder abuse should explain the underlying phenomenon and take into account the characteristics of both the older victim and the abuser, because successful interventions will likely involve both individuals.

Discussion

Emerging scholars in gerontology should prioritize theory in their area of specialization, as well as try to connect theories across disciplines. In the past, gerontology was characterized as data rich and theory poor (Birren & Bengtson, 1988), although this is slowly changing (Alley et al., 2010; Hendricks, Applebaum, & Kunkel, 2010). Still, applied researchers generally conduct studies that are problem-driven rather than theory-driven. They would argue that their goal is to improve the lives of older adults through research, rather than to generate knowledge for the sake of advancing science. Yet no applied research is devoid of theory. Even descriptive researchers are operating under implicit assumptions about how the world works and how to effect social and political change to enhance the well-being of older adults. Their efforts could be more effective in creating a cumulative knowledge base if they would pay more explicit attention to the theory underlying their findings.

To build a better roadmap for addressing social problems through research, future gerontologists should make their assumptions about cause and effect more explicit using a theoretical framework. Perhaps focusing on midlevel theory development is a promising enterprise for emerging scholars. Midlevel theories do not try to explain everything, but can act as scaffolding to help researchers make sense of their observations and synthesize knowledge across disciplines.

References

Aboderin, I. (2004). Decline in material family support for older people in urban Ghana, Africa: Understanding processes and causes of change. *Journal of Gerontology: Social Sciences, 59B*, S128–S137.

Achenbaum, W. A., & Bengtson, V. L. (1994). Re-engaging the disengagement theory of aging: On the history and assessment of theory development in gerontology. *The Gerontologist, 34*, 756–763.

Agahi, N., Ahacic, K., & Parker, M. G. (2006). Continuity of leisure participation from middle age to old age. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 61*(6), S340–S346.

Aldwin, C. M., & Igarashi, H. J. (in press). Coping, optimal aging, and resilience in a sociocultural context. In V. L. Bengtson & R. J. Settersten, Jr. (Eds.), *Handbook of theories of aging* (Ch. 25). New York: Springer.

Alley, D. E., Putney, N. M., Rice, M., & Bengtson, V. L. (2010). The increasing use of theory in social gerontology: 1990–2004. *Journal of Gerontology: Social Sciences, 65B*, 583–590.

Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior, 36*, 1–10.

Andrews, T. (2012). What is social constructionism? *Grounded Theory Review, 11*(1), 39–46.

Arber, S., & Ginn, J. (1991). *Gender and later life: A sociological analysis of constraints*. Newbury Park, CA: Sage.

Ardelt, M. A., & Oh, H. D. (2016). Theories of wisdom and aging. In V. L. Bengtson & R. J. Settersten, Jr. (Eds.), *Handbook of theories of aging* (Ch. 29). New York: Springer.

Atchley, R. C. (1989). A continuity theory of normal aging. *The Gerontologist, 29*, 183–190.

Baars, J. (1991). The challenge of critical theory: The problem of social construction. *The Journal of Aging Studies, 5*, 219–243.

Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging. The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral science* (pp. 1–34). New York: Cambridge University Press.

Bass, S. A. (2009). Toward an integrative theory of social gerontology. In V. L. Bengtson, D. Gans, N. M. Putney, & M. Silverstein (Eds.), *Handbook of theories of aging* (2nd ed., pp. 347–374). New York: Springer.

Bass, S. A., & Caro, F. G. (2001). Productive aging: A conceptual framework. In N. Morrow-Howell, J. Hinterlong, & M. Sherraden (Eds.), *Productive aging: Concepts and challenges* (pp. 37–78). Baltimore, MD: Johns Hopkins University Press.

Bengtson, V. L. (1969). Cultural and occupational differences in level of present role activity in retirement. In R. J. Havighurst, J. M. A. Munnichs, B. L. Neugarten, & H. Thomas (Eds.), *Adjustment to retirement: A cross-national study* (pp. 33–53). Assen, The Netherlands: Van Gorkum.

Bengtson, V. L. (in press). The social forces of later life: Early theory development in the sociology of aging. In V. L. Bengtson & R. J. Settersten Jr. (Eds.), *Handbook of theories of aging* (Ch. 5, pp. 101–123). New York: Springer.

Bengtson, V. L., & Allen, K. R. (1993). The life course perspective applied to families over time. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 469–504). New York: Plenum Press.

Bengtson, V. L., & Settersten, R. J., Jr. Theories of aging: Developments within and across disciplinary boundaries. In V. L. Bengtson & R. J. Settersten Jr. (Eds.). *Handbook of theories of aging* (3rd ed., pp. 1–17). New York: Springer.

Bengtson, V. L., Burgess, E. O., & Parrott, T. M. (1997). Theory, explanation, and a third generation of theoretical development in social gerontology. *Journal of Gerontology, 52B*, S72–S88.

Bengtson, V. L., Dowd, J. J., Smith, D. H., & Inkeles, A. (1975). Modernization, modernity, and perceptions of aging: A cross-cultural study. *Journal of Gerontology, 30*(6), 688–695.

Bengtson, V. L., Gans, D., Putney, N. M., & Silverstein, M. (2009). Theories about age and aging. In V. L. Bengtson, D. Gans, N. M. Putney, & M. Silverstein (Eds.), *Handbook of theories of aging* (2nd ed., pp. 3–23). New York: Springer.

Bengtson, V. L., Rice, C. J., & Johnson, M. L. (1999). Are theories of aging important? Models and explanations in gerontology at the turn of the century. In V. L. Bengtson & K. W. Schaie (Eds.), *Handbook of theories of aging* (pp. 3–20). New York: Springer.

Berger, P. L., & Luckmann, T. (1966). *The social construction of reality*. New York: Doubleday.

Birren J., & Bengtson, V. (1988). Preface. *Emergent theories of aging* (pp. ix–x). New York: Springer.

Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.

Blieszner, R. (1993). A socialist–feminist perspective on widowhood. *Journal of Aging Studies, 7*, 171–182.

Bristowe, E., & Collins, J. B. (1988). Family mediated abuse of noninstitutionalized frail elderly men and women living in British Columbia. *Journal of Elder Abuse & Neglect, 1*(1), 45–64.

Brown, H. (1986). *The wisdom of science*. New York: Random House.

Burgess, E. W. (1923). The Study of the delinquent as a person. *American Journal of Sociology, 28*(6), 657–680.

Burgess, E. W. (Ed.). (1960). *Aging in western societies*. Chicago, IL: University of Chicago Press.

Butler, R. N. (1989). Dispelling ageism: The cross-cutting intervention. *Annals of the American Academy of Political and Social Science, 503*, 138–147.

Cain, L. D., Jr. (1964). Life course and social structure. In R. E. L. Faris (Ed.), *Handbook of modern sociology* (pp. 272–309). Chicago, IL: Rand McNally.

Calasanti, T. M. (1999). Feminism and gerontology: Not just for women. *Hallym International Journal of Aging, 1*, 44–55.

Calasanti, T. M., & Slevin, K. F. (2006). *Age matters: Realigning feminist thinking*. New York: Taylor & Francis.

Carstensen, L. L. (1992). Social and emotional patterns in adulthood: Support for socioemotional selectivity theory. *Psychology and Aging, 7*, 331–338.

Carstensen, L. L. (2006). The influence of a sense of time on human development. *Science, 312*(5782), 1913–1915.

Carstensen, L. L., & Fredrickson, B. L. (1998). Influence of HIV status and age on cognitive representations of others. *Health Psychology, 17*(6), 494–503.

Cavan, R. S., Burgess, E. W., Havighurst, R. J., & Goldhamer, H. (1949). *Personal adjustment in old age*. Chicago, IL: Science Research Associates.

Coleman, P. G., Schroeder-Butterfill, E. S., & Spreadbury, J. H (2016). Religion, spirituality and aging. In V. L. Bengtson & R. J. Settersten Jr. (Eds.), *Handbook of theories of aging* (Ch. 29). New York: Springer.

Cowdry, E. V. (1939). *Problems of aging*. Baltimore, MD: Williams and Wilkins.

Cowgill, D. A. (1974). Aging and modernization. A revision of the theory. In J. F. Gubrium (Ed.), *Late life* (pp. 126–146). Springfield, IL: Charles C. Thomas.

Cowgill, D. A., & Holmes, L. D. (1972). *Aging and modernization*. New York: AppletonCentury-Crofts.

Cumming, E., & Henry, W. (1961). *Growing old: The process of disengagement*. New York: Basic Books.

Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. *Journal of Gerontology: Social Sciences, 58B*, S327–S337.

Dong, X., Simon, M. A., & Gorbien, M. (2007). Elder abuse and neglect in an urban Chinese population. *Journal of Elder Abuse & Neglect, 19*(3–4), 79–96.

Dowd, J. J. (1975). Aging as exchange: A preface to theory. *Journal of Gerontology, 30*, 584–594.

Elder, G. H., Jr. (1992). Models of the life course. *Contemporary Sociology: A Journal of Reviews, 21*, 632–635.

Elder, G. H., Jr., & Johnson, M. K. (2002). The life course and aging: Challenges, lessons, and new directions. In R. A. Settersten Jr. (Ed.), *Invitation to the life course: Toward new understandings of later life* (pp. 49–81). Amityville, NY: Baywood.

Erikson, E. (1950). In M. J. E. Senn (Ed.), *Symposium on the healthy personality* (pp. 91–146). Oxford, England: Josiah Macy, Jr. Foundation.

Estes, C. L. (2001). Political economy of aging: A theoretical framework. In C. L. Estes et al. (Eds.), *Social policy and aging: A critical perspective*. Thousand Oaks, CA: Sage.

Estes, C. L., Gerard, L. E., Jones, J. S., & Swan, J. H. (1984). *Political economy, health, and aging*. Boston, MA: Little, Brown.

Ferraro, K. F., Shippee, T. P., & Schafer, M. H. (2009). Cumulative inequality theory for research on aging and the life course. In V. L. Bengtson, D. Gans, N. M. Putney, & M. Silverstein (Eds.), *Handbook of theories of aging* (2nd ed., pp. 413–433). New York: Springer.

Fisher, D. H. (1977). *Growing old in America*. New York: Oxford University.

Foucault, M. (1977). *Discipline and punish: The birth of a prison* (A. Sheridan, Trans.). New York: Vintage/Random House.

Fung, H. H., Carstensen, L. L., & Lutz, A. M. (1999). Influence of time on social preferences: Implications for life-span development. *Psychology and Aging, 14*(4), 595–604.

Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice Hall.

Gaziano, J. M. (2010). Fifth phase of the epidemiologic transition: The age of obesity and inactivity. *Journal of the American Medical Association, 303*(3), 275–276.

George, L. K. (1996). Missing links: The case for a social psychology of the life course. *The Gerontologist, 36*, 248–255.

Gilleard, C., & Higgs, P. (2010). Theorizing the fourth age: Aging without agency. *Aging and Mental Health, 14*, 121–128.

Gubrium, J. F. (1993). *Speaking of life: Horizons of meaning for nursing home residents*. New York: Aldine de Gruyter.

Gubrium, J. F., & Holstein, J. A. (1999). Constructionist perspectives on aging. In V. L. Bengtson & K. W. Schaie (Eds.), *Handbook of theories of aging* (pp. 287–305). New York: Springer.

Habermas, J. (1971). *Knowledge and human interests* (J. J. Shapiro, Trans.). Boston, MA: Beacon Press.

Hall, G. S. (1922). *Senescence*. New York: Appleton.

Havighurst, R. J. (1943). *Human development and education*. New York: Longman.

Havighurst, R. J. (1963). Successful dying. In R. Williams, C. Tibbits, & W. Donahue (Eds.), *Processes of aging*. New York: Atherton.

Havighurst, R. J., & Albrecht, R. (1953). *Older people*. New York: Longmans, Green.

Hendricks, J. (1992). Generations and the generation of theory in social gerontology. *International Journal of Aging and Human Development, 35*, 31–47.

Hendricks, J. (1995). Exchange theory in aging. In G. Maddox (Ed.), *The encyclopedia of aging* (2nd ed.). New York: Springer.

Hendricks, J., Applebaum, R., & Kunkel, S. (2010). A world apart? Bridging the gap between theory and applied social gerontology. *The Gerontologist, 50*(3), 284–293.

Hochschild, A. R. (1975). Disengagement theory: A critique and a proposal. *American Sociological Review, 40*, 553–569.

Hooyman, N. R., & Gonyea, J. (1995). *Feminist perspectives on family care: Policies for gender justice*. Thousand Oaks, CA: Sage.

Hooyman, N. R., Browne C. V., Ray, R., & Richardson, V. (2002). Feminist gerontology and the life course. *Gerontology & Geriatrics Education, 22*(4), 3–26.

Homans, G. C. (1961). *Social behavior: Its elementary forms*. New York: Harcourt Brace Jovanovich.

Horkheimer, M., & Adorno, T. W. (1944). The cultural industry: Enlightenment as mass deception. In M. Horkheimer & T. W. Adorno (Eds.). *Dialectic of enlightenment* (J. Cumming, Trans.). New York: Continuum Publishing.

Jackson, S. L., & Hafemeister, T. L. (2013). *Understanding elder abuse: New directions for developing theories of elder abuse occurring in domestic settings*. Research in Brief, National Institute of Justice. No. NCJ 241731.

Johnson, K. J., & Mutchler, J. E. (2014). The emergence of a positive gerontology: From disengagement to social involvement. *The Gerontologist, 54*(1), 93–100.

Kaskie, B., Imhof, S., Cavanaugh, J., & Culp, K. (2008). Civic engagement as a retirement role for aging Americans. *The Gerontologist, 48*(3), 368–377.

Kenyon, G. M., Ruth, J., & Mader, W. (1999). Elements of a narrative gerontology. In V. L. Bengtson & K. W. Schaie (Eds.), *Handbook of theories of aging* (pp. 40–58). New York: Springer.

Kuypers, J. A., & Bengtson, V. L. (1973). Social breakdown and competence: A model of normal aging. *Human Development, 16*, 181–201.

Laslett, P. (1976). Societal development and aging. In R. Binstock & E. Shanas (Eds.), *Handbook of aging and the social sciences* (pp. 87–116). New York: Van Nostrand Reinhold.

Laslett, P. (1985). Societal development and aging. In R. Binstock & E. Shanas (Eds.), *Handbook of aging and the social sciences* (2nd ed., pp. 199–230). New York: Van Nostrand Reinhold.

Laslett, P. (1987). The emergence of the third age. *Ageing & Society, 7*, 113–160.

Lemon, B. W., Bengtson, V. L., & Peterson, J. A. (1972). An exploration of the activity theory of aging. *Journal of Gerontology, 27*, 511–523.

Linton, R. (1942). Age and sex categories. *American Sociological Review, 7*, 589–603.

Maddox, G. L. (1965). Fact and artifact: Evidence bearing on disengagement theory from the Duke Geriatrics Project. *Human Development, 8*(2–3), 117–130.

Marshall, V. W. (1973). Game-analyzable dilemmas in a retirement village: A case study. *The International Journal of Aging and Human Development, 4*(4), 285–291.

Marshall, V. W. (1999). Analyzing social theories of aging. In V. L. Bengtson & K. W. Schaie (Eds.), *Handbook of theories of aging* (pp. 434–455). New York: Springer.

Marshall, V. W. (2005). Agency, events, and structure at the end of the life course. *Advances in life course research, 10*, 57–91.

Marshall, V. W., Matthews, A. M., & McMullin, J. A. (2016). The interpretive perspective on aging. In V. L. Bengtson & R. J. Settersten Jr. (Eds.), *Handbook of theories of aging* (Ch. 20). New York: Springer.

Martin, D. J., & Gillen, L. L. (2014). Revisiting gerontology's scrapbook: From Metchnikoff to the spectrum model of aging. *The Gerontologist, 54*(1), 51–58.

Martinson, M., & Minkler, M. (2006). Civic engagement and older adults: A critical perspective. *The Gerontologist, 46*(3), 318–324.

Marx, K. (1967[1867–1895]). *Capital: A critique of political economy*. New York: International Publishers.

McAdams, D. P. (1988). *Power, intimacy, and the life story: Personological inquiries into identity*. Hey York: Guilford Press.

McAdams, D. P., & de Saint Aubin, E. D. (1992). A theory of generativity and its assessment through self-report, behavioral acts, and narrative themes in autobiography. *Journal of personality and social psychology, 62*(6), 1003–1015.

McAdams, D. P., de Saint Aubin, E. D., & Logan, R. L. (1993). Generativity among young, midlife, and older adults. *Psychology and Aging, 8*(2), 221–230.

McMullin, J. (1995). Theorizing age and gender relations. In S. Arber & J. Ginn (Eds.), *Connecting gender and aging: A sociological approach*. Philadelphia, PA: Open University Press.

Mead, G.H. (1934). *Mind, self, and society*. Chicago, IL: University of Chicago Press.

Merton, R.K. (1968). The Matthew effect in science. II: Cumulative advantage and the symbolism of intellectual property. *Isis, 79*, 606–623.

Merz, E.M., & Consedine, N.S. (2009). The association of family support and wellbeing in later life depends on adult attachment style. *Attachment & Human Development, 11*(2), 203–221.

Merz, E., Consedine, N.S., Schulze, H.J., & Schuengel, C. (2009). Wellbeing of adult children and ageing parents: Associations with intergenerational support and relationship quality. *Ageing and Society, 29*(05), 783–802.

Moody, H.R. (1993). Overview: What is critical gerontology and why is it important? In T.R. Cole, W.A. Achenbaum, P.L. Jakobi, & R. Kastenbaum (Eds.), *Voices and visions: Toward a critical gerontology*. New York: Springer.

Moody, H.R. (2001). The humanities and aging: A millennial perspective. *The Gerontologist, 41*, 411–415.

Netting, F.E. (2011). Bridging critical feminist gerontology and social work to interrogate the narrative on civic engagement. *Affilia, 26*(3), 239–249.

Neugarten, B. (1974). Age groups in American society and the rise of the young–old. *The Annals of the American Academy of Political and Social Science, 415*(1), 187–198.

Omran, A.R. (1971). The epidemiologic transition: A theory of the epidemiology of population change. *The Milbank Memorial Fund Quarterly, 49*(4), 509–538.

Omran, A.R. (2005). The epidemiologic transition: A theory of the epidemiology of population change. *Milbank Quarterly, 83*(4), 731–757.

O'Rand, A M. (1996). The precious and the precocious: Understanding cumulative disadvantage and cumulative advantage over the life course. *The Gerontologist, 36*, 230–238.

O'Rand, A. M. (2016). Long, broad and deep: New research directions in aging and inequality. In V. L. Bengtson & R. J. Settersten Jr. (Eds.), *Handbook of theories of aging* (Ch. 19). New York: Springer.

Parsons, T. (1942). Age and sex in the social structure of the United States. *American Sociological Review, 7*, 604–616.

Pillemer, K. (1985). The dangers of dependency: New findings on domestic violence against the elderly. *Social Problems, 33*(2), 146–158.

Pillemer, K., & Finkelhor, D. (1989). Causes of elder abuse: Caregiver stress versus problem relatives. *American Journal of Orthopsychiatry, 59*(2), 179–187.

Phillipson, C. (2009). Social welfare, aging, and globalization in a post-industrial society. In J. Hendricks & J. Powell (Eds.), *The welfare state in post-industrial society* (pp. 57–70). New York: Springer.

Quadagno, J. (1982). *Aging in early industrial society: Work, family and social policy in nineteenth century England*. New York: Academic Press.

Quadagno, J., & Reid, J. (1999). The political economy perspective in aging. In V.L. Bengtson & K.W. Schaie (Eds.), *Handbook of theories of aging* (pp. 344–358). New York: Springer.

Ray, R. E. (1996). A postmodern perspective on feminist gerontology. *The Gerontologist, 36*, 674–680.

Riley, M. W., Johnson, M., & Foner, A. (1972). *Aging and society. Vol III: A sociology of age stratification*. New York: Russell Sage Foundation.

Riley, M. W., Kahn, R. L., & Foner, E. (1994). *Age and structural lag: Society's failure to provide meaningful opportunities in work, family and leisure*. New York: John Wiley.

Riley, M. W., & Loscocco, K. A. (1994). The changing structure of work opportunities: Toward an age-integrated society. In R. P. Abeles, H. C. Gift, & M. G. Ory (Eds.), *Aging and quality of life*. New York: Springer.

Rowe, J. D., & Kahn, R. L. (1998). *Successful aging*. New York: Pantheon Books.

Rowe, J. W., & Cosco, T. D. (2016). Successful aging. In V. L. Bengtson & R. J. Settersten Jr. (Eds.), *Handbook of theories of aging* (Ch. 27). New York: Springer.

Roy, C. (1991). *The Roy adaptation model: The definitive statement*. Norwalk, CT: McGraw-Hill/Appleton & Lange.

Rozario, P. A., Kidahashi, M., & DeRienzis, D. R. (2011). Selection, optimization, and compensation: Strategies to maintain, maximize, and generate resources in later life in the face of chronic illnesses. *Journal of Gerontological Social Work, 54*(2), 224–239.

Samanez-Larkin, G. R., & Carstensen, L. L. (2011). Socioemotional functioning and the aging brain. In J. Decety & J. T. Cacioppo (Eds.), *The Handbook of social neuroscience* (pp. 507–521). New York: Oxford University Press.

Schiamberg, L. B., & Gans, D. (2008). An ecological framework for contextual risk factors in elder abuse by adult children. *Journal of Elder Abuse & Neglect, 11*(1), 79–103.

Schmeeckle, M., & Bengtson, V. L. (1999). Successful aging. Conclusions from a longitudinal study: Cross national perspectives. *Contemporary Gerontology, 5*, 87–90.

Schroots, J. F. (1996). Theoretical developments in the psychology of aging. *The Gerontologist, 36*, 742–748.

Settersten, R. J., Jr., & Bengtson, V. L. (2016). Prospects for future theory development in aging. In V. L. Bengtson & R. J. Settersten Jr. (Eds.), *Handbook of theories of aging* (Ch. 35). New York: Springer.

Settersten, R. J., Jr., & Godlewski, R. A. (2016). Concepts and theories of age and ageing. In V. L. Bengtson & R. J. Settersten Jr. (Eds.), *Handbook of theories of aging* (Ch. 2). New York: Springer.

Silverstein, M., Conroy, S. J., Wang, H., Giarrusso, R., & Bengtson, V. L. (2002). Reciprocity in parent–child relations over the adult life course. *Journal of Gerontology: Social Sciences, 57B*, S3–S13.

Simmel, G. (1904/1966). *Conflict* (K. H. Wolff, Trans.). Glencoe, CL: Free Press.

Steinmetz, S. K. (1978). Battered parents. *Society, 15*(5), 54–55.

Stroller, E. P. (1993). Gender and the organization of lay health care: A socialist–feminist perspective. *Journal of Aging Studies, 7*, 151–170.

Suitor, J. J., & Pillemer, K. (1988). Explaining intergenerational conflict when adult children and elderly parents live together. *Journal of Marriage and the Family, 50*(4), 1037–1047.

Tsai, P. F. (2003). A middle-range theory of caregiver stress. *Nursing Science Quarterly, 16*(2), 137–145.

Turner, J. H. (2005). Is a scientific theory of the family desirable? In V. L. Bengtson, A. C. Acock, K. R. Allen, P. Dilworth-Anderson, & D. M. Klein (Eds.), *Sourcebook of family theory & research* (pp. 26–29). Thousand Oaks, CA: Sage.

U.S. Senate Special Committee on Aging. (1961). *The 1961 White House Conference on aging: Basic statement and recommendations*.

Victor, C. (2013). Social gerontology: Older people and everybody else. In K. Komp & M. Aartsen. (Eds.), *Old age in Europe* (pp. 45–58). Amsterdam: Springer Netherlands.

Wahl, H. W., & Weisman, G. D. (2003). Environmental gerontology at the beginning of the new millennium: Reflections on its historical, empirical, and theoretical development. *The Gerontologist*, *43*(5), 616–627.

Walker, A. J., & Allen, K. R. (1999). Relationships between caregiving daughters and their elderly mothers. *The Gerontologist, 31*(3), 389–396.

Wallace, R. A., & Wolf, A. (1991). *Contemporary sociological theory: Continuing the classical tradition* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

Wang, M., Henkens, K., & van Solinge, H. (2011). Retirement adjustment: A review of theoretical and empirical advancements. *American Psychologist, 66*(3), 204–213.

Wild, K., Wiles, J. L., & Allen, R. E. (2013). Resilience: Thoughts on the value of the concept for critical gerontology. *Ageing and Society, 33*(1), 137–158.

Young, L. M., Baltes, B. B., & Pratt, A. K. (2007). Using selection, optimization, and compensation to reduce job/family stressors: Effective when it matters. *Journal of Business and Psychology, 21*, 511–539.

CHAPTER THREE

Ageism: Stereotypes, Causes, Effects, and Countermovements

Meika Loe, Ariel Sherry, and Evan Chartier

Do you remember that awful feeling in the pit of your stomach when you turned 40? Bet you'd like to feel that again! Happy 50th!

—Hallmark birthday card

Ageism, or the systematic stereotyping of and discrimination against people because they are old, manifests across overlapping individual, interpersonal, and institutional or societal axes (Wilkinson & Ferraro, 2004). As seen above, ageist birthday cards perpetuate prejudicial attitudes toward elders on an individual level. Young people can also experience age-based individual discrimination when they are considered incompetent at work simply due to their age. These individual manifestations of ageism may include affective, cognitive, and behavioral components (Cuddy & Fiske, 2004).

Unlike other kinds of oppression, with the exception, perhaps, of oppression based on disability, every individual will experience ageism in his or her lifetime. The dichotomy between those privileged and those marginalized by ageism is not as clear as it is with other identities, because who is perceived as old is subjective, there is no obviously defined group of victims, making this a complicated form of discrimination (Kite & Wagner, 2004). Ageism is also more commonplace and socially acceptable than other forms of oppression; most members of American society hold ageist beliefs and/or implicit prejudices such as disproportionately valuing youth

(Levy & Banaji, 2004). Implicit attitude tests have demonstrated that the old exhibit internalized ageism by revealing negative attitudes toward elders, which demonstrates that most people do not age out of ageism (Levy & Banaji, 2004). The widespread nature of ageism makes it less surprising that elders internalize these negative views, such as rejecting the label old or perpetuating the idea of a senior moment (Levy & Banaji, 2004).

We are troubled by the extent to which ageism has pervaded contemporary American society. We therefore write this chapter with an eye toward social change. We hope that Robert Butler's prediction will come true: that the baby boomer generation, in collaboration with other generations, will be successful in eradicating ageism. To that end, we dedicate the final section of this chapter to countering ageism.

We approach this chapter from a social justice perspective that prioritizes agency and self-determination. And yet, our own agency as authors of this chapter is constrained when we consider how language is age-based and politically charged. In order to maintain some level of consistent language use, we support the efforts of sociologists of aging Toni Calasanti and Kathleen Slevin (2001), who make a strong case for using the adjective "old" to reclaim its positive connotations, to naturalize and neutralize it. However, we are aware that attempts to counter ageism can themselves be perceived as ageist. When Meika Loe surveyed several hundred people aged 55 to 95, asking which words they prefer to use to describe their age group, most noted dislike for common terms that highlight age like "elderly," "old," or "senior citizen." When pressed, the majority was most comfortable with "mature adult" or "elder." Similarly, a recent Pew Research Report revealed that 75 percent of Americans associate the term "old" with those who are aged 85 and older, and those who are no longer independent (Taylor, 2009). "Elder" was more warmly received, as it tends to connote respect and refer to a broad age spectrum. Thus, while we have chosen to employ the terms "old" and "elder" as the best of problematic terms to counter ageism, we cannot avoid how charged *age-based language* is in an age-stratified society.

In this chapter, we examine ageism from multiple perspectives to account for the often diffuse and pervasive ways that people of all ages experience *age-based discrimination*. We employ an *age-relations approach* that examines structural ageism by exposing ageism as a system of inequality that generally privileges the young at the expense of the old (Calasanti, 2003). We show how, similar to racism and sexism, ageism is embedded in patterns of behavior and serves as a social organizing principle (Dressel, Mickler, & Yen, 1997). We also use an *intersectional feminist lens* to intentionally uncover how experiences with ageism can differ in frequency and intensity across members of various classes, professions, genders, sexualities, ethnicities, and geographic communities (Bergling,

2004; Cruikshank, 2009; Gullette, 2004). Such a multitiered approach explicitly identifies how ageist policies, institutional practices, and attitudes pervade our individual psyches, social interactions, and biomedical practices. Thus, this chapter analyzes not only *macrolevel age-based stratification*, but also *microlevel ageism* including that which may be internalized by the old themselves (Joyce & Loe, 2010). Accordingly, we have divided our chapter into four subsections. The first section lays out common definitions and stereotypes associated with ageism as well as social theories attempting to understand the causes of ageism; the second explores effects of structural ageism; the third takes an intersectional approach in understanding ageism; and the final section is dedicated to countering ageism.

Ageism: Definitions, Stereotypes, and Social Causes

Ageism Defined

Pulitzer prize winning geriatrician Robert Butler coined the term *ageism* in 1969 to refer to the "systematic stereotyping of and discrimination against people because they are old, just as racism and sexism accomplish this with skin color and gender" (p. 243). Such judgments were based on a "deep-seated uneasiness on the part of the young and the middle aged—a personal revulsion to and distaste for growing old, disease, disability, and fear of powerlessness, uselessness and death" (Butler, 1969, p. 243). Butler (1975) felt that such learned revulsion led younger generations to "subtly cease to identify with their elders as human beings" (p. 12).

In 1980, Butler expanded his definition of ageism for use in social science by developing three distinguishable but interrelated concepts: *prejudicial attitudes, discriminatory practices*, and *institutional practices and policies that perpetuate stereotypes and undermine dignity*. All three social aspects of ageism are interrelated and mutually reinforcing.

Although Butler's work was well known in academic circles, founder of the Gray Panthers Maggie Kuhn is credited with popularizing the term *ageism* in America. Kuhn founded the Gray Panthers organization in 1970, in response to her forced retirement at the age of 65 (Wilkinson & Ferraro, 2004). Among their many initiatives and achievements, the Gray Panthers established a U.S. national media watch task force designed to track ageist stereotyping.

Ageist Stereotypes

Cuddy and Fiske (2004) argue that individuals can have multiple, often contradictory views of older persons. Even elders themselves often internalize contradictory ageist notions called self-ageism. *Self-ageism*, or "a learned set of beliefs and practices that prevent us from functioning in an optimal

way in relation to aging, our own bodies, and people more than ten years older than we are," is one form of internalized oppression (Gullette, 2011, p. 34). Self-ageism encourages elders into one of a limited number of culturally acceptable roles, such as the grandmotherly and family-oriented older woman, distinguished elder statesman and respected conservative gentleman, or the isolated and inactive senior citizen (Cuddy & Fiske, 2004). Hess's classic work on stereotypes and stereotype threat revealed a deep-seated prejudice in American culture that may prime older adults to enact self-ageism through slowed walking and displaying worse memory, thereby making ageism a self-fulfilling prophecy (Hess, 2006; Whitbourne & Sneed, 2004).

Word association studies indicate that Americans tend to associate old people who are white and middle class with words such as "incompetent" and "warm." However, these associations change dramatically when asked about elders with different racial, gender, and class identities (Cuddy & Fiske, 2004). The *stereotypes* associated with our culturally acceptable roles for elders intersect with race, class, and gender-based oppressions to especially marginalize people of color, low income, and transgender individuals who are often unable to embody one of society's acceptable elder roles. Other common stereotypes of elders include being diseased, lonely and depressed, physically and cognitively impaired, unattractive, unproductive, and asexual (Joyce & Mamo, 2006; Whitbourne & Sneed, 2004; Wilkinson & Ferraro, 2004).

Ageist stereotypes are perpetuated through our language use, mass media, and academic scholarship. Media outlets, such as television and greeting card companies, often underrepresent the elderly, cast them in peripheral or negatively depicted roles, and rely on ageist notions as the punch line for jokes (Palmore, 1999; Pasupathi & Löckenhoff, 2004; Wilkinson & Ferraro, 2004). The societal taboo of asking someone his or her age points to the implicit assumption that it is something to be ashamed of (Palmore, 1999). In scholarship, ageism occurs when elders are lumped together in one group, without acknowledging variation or generational differences.

Social scientists have built upon Butler's work to link ageism with both social oppression and privilege. Positive ageism exists both in the form of discrimination in favor of old people, such as Medicare, as well as *positive stereotypes* (Wilkinson & Ferraro, 2004). Palmore (1999) notes eight positive attributes associated with elders: kindness, wisdom, political power, eternal youth, dependability, happiness, freedom, and affluence.

Causes of Ageism

Two primary theoretical perspectives have emerged in the debate over what processes cause ageism: terror management theory and social

identity theory. *Terror management theory* (Becker, 1973) suggests that ageism stems from death denial, or fears about our own mortality. Scholars in this tradition propose that older adults remind the young of their inevitable death. The recognition of one's mortality threatens one's worldview, and the individual responds by physically and psychologically distancing themselves from elders (Greenberg, Schimel, & Mertens, 2004). Such distancing creates a social barrier that inhibits individuals from meeting older adults who may defy their ageist stereotypes. As a result, perceptions of elders are more greatly influenced by one's own family members or mass media outlets, which are already imbued with ageist messages.

Social identity theory, described by Kite and Wagner (2004), has also been used to explain how ageism is taught and reinforced through interactions. This theory posits that in order to feel good about oneself, one must feel good about the group to which one belongs by feeling superior to other groups. Therefore, a young person may negatively stereotype elders to increase his or her self-esteem. As the United States undergoes massive demographic changes as the population ages significantly over the next several decades, social identity theory may become an even more important perspective to explore.

Ageism: Social, Economic, and Health Effects

Ageism shapes social, economic, and health outcomes. This section reviews social science research on the effects of ageism in relationships, in the workplace, and in terms of health behaviors and outcomes.

Ageism in Relationships

Within the context of relationships, ageism can significantly influence the way individuals interact with older adults. At one level, it shapes communication. Due to the stereotype that elders are incompetent, many speak to elders using what has been termed *elder speak*. Elder speak is much like baby talk, characterized by simple words and explanations and basic topics of conversation (Cuddy & Fiske, 2004; Pasupathi & Löckenhoff, 2004). Not only does ageism alter the way others speak to elders, but it also influences the way people respond to what elders say. One contributor to the high rates of elder abuse is the fact that many people do not believe older adults when they "complain" about being mistreated (Pasupathi & Löckenhoff, 2004). Ageism may also fuel elder abuse because of the individuals' conceptions of elders as helpless and repulsive, therefore not worth respecting (Palmore, 1999). Nursing homes put elders at particular risk because the power dynamic between the employees and the residents leave elders in powerless and low-status roles (Palmore, 1999).

Additionally, many people prefer to distance themselves physically from elders. This practice takes many forms, including putting seniors in nursing homes and avoiding senior centers. Although it is illegal for real estate agents to discriminate by age, such a law indicates ageist tendencies in finding housing for elders (Palmore, 1999). *Physical distancing* is also seen in experimental contexts, such as in a study by Isaacs and Bearison (1986), in which children distanced themselves more from an elder partner (75-year-old) than a younger one (35-year-old), showing just how early such discrimination begins. Such isolation puts the old at higher risk for mental and physical illness, and even suicide (Palmore, 1999). Even more interesting, sometimes it is the old who distance themselves from the young to avoid becoming targets of ageist remarks and discrimination (MacDonald & Rich, 1983; Palmore, 1999).

For older women in particular, ageist stereotypes increase the risk of invasion of privacy and threats to safety. Within families, sometimes it is not isolation but the opposite that causes problems. Gerontologist Margaret Cruikshank (2009) explains that many families make the generalized assumption that older women require little physical and psychological space. This is in part connected with the stereotyping of all older women as grandmothers whose purpose it is to serve younger generations.

Ageism at Work

Yet another physical distancing technique involves keeping elders out of the workplace. Employers point to many common stereotypes of senior workers as rationale for *workplace discrimination*. One such stereotype is that older workers are no longer fit to continue their jobs due to physical and mental decline or age-related inability to adapt to changing technology (McCann & Giles, 2004). This stereotype is further linked with the assumption that performance and productivity decline among older workers and that senior employees are less creative than their younger counterparts (Cuddy & Fiske, 2004; McCann & Giles, 2004). Such a bias is reflected in work evaluations, where many employers rate older workers as worse than their younger counterparts, despite studies that show there are no differences in the two groups' work outputs (McCann & Giles, 2004). Even when employers are presented with identical resumes, save for the age of the applicant, they reveal a preference for the younger worker (Bendick, Jackson, & Romero, 1993). Older workers are also often charged as being close-minded and unwilling to change (Cuddy & Fiske, 2004).

These ageist views can severely impact the careers and quality of life for older workers. Those who still have a job might experience ageism on a daily basis in their work environment in the form of jokes and hostile

humor, patronizing speech, and discrimination in training (McCann & Giles, 2004). Ageism is closely tied with discrimination against older adults during hiring and forcing senior workers into retirement (Greenberg, Schimel, & Mertens, 2004; Palmore, 1999). At times, such hiring discrimination is made on a judgment as basic as someone "looks too old" (Gullette, 2011, p. 119). This can make it extremely hard for older workers to find jobs and can also have a tremendous negative impact on their economic well-being. Even those in midlife can have significant difficulty securing certain jobs (e.g., those that depend on rapidly changing technology), and such "displacement among workers in their fifties and sixties often results in lower wages or lasting unemployment" (Gullette, 2011, p. 153). In addition to their negative views of older workers, employers are also motivated to reject older workers because they can pay younger workers much less and save by not having to pay pension or retirement packages (Palmore, 1999).

The U.S. government has played a notable role in protecting older workers. The Social Security Act, enacted in 1935, was the first major national policy in this realm. This act served to institutionalize retirement, presenting 65 as the proper age for retirement (McCann & Giles, 2004). Three decades later, the Age Discrimination in Employment Act (ADEA) of 1967 was created in an attempt to "protect individuals older than age 40 from employment discrimination based on age, as well as to promote opportunities for older workers who were capable of meeting job requirements" (McCann & Giles, 2004, p. 177). Many years later, in 2005, the Supreme Court ruled that with regard to the ADEA, victims only needed to show disparate impact instead of intentional discrimination (Cruikshank, 2009). Building on the ADEA is the Older Workers Benefit Protection Act of 1990 (the Older Workers Act), which was put in place with the goal to ensure that older workers receive benefits outlined in a waiver that is given "knowingly and voluntarily" (Gregory, 2001; McCann & Giles, 2004).

Despite the government's efforts to protect the rights of older workers, there are still many cases in the United States where individuals are victims of hiring discrimination or ageist comments in the workplace (McCann & Giles, 2004; Wilkinson & Ferraro, 2004). Gregory (2001) argues that the ADEA falls short in eliminating ageist stereotypes in the workplace and notes that it can be extremely challenging for older workers to prove discrimination in hiring. Similarly, because many other decisions within the workplace are subjective, such as promotions and transfers, it is hard to prove discriminatory intent (Gregory, 2001). Because it is so difficult to prove workplace age discrimination in court, many fear accusing their employers because of the retaliation that might ensue in the case of a nonconviction (Gregory, 2001). The shortcomings of these policies indicate

a need for new or reformed laws that could better bring justice to the workplace.

Despite the negative impact ageism can have on older adults' employment and economic security, elders are also the beneficiaries of *positive economic ageism.* There are many programs that discriminate by age such that elders save money, such as certain tax benefits (e.g., double personal exemption) and senior discounts at many stores, restaurants, and hotels (Palmore, 1999). Social security is another institutional form of positive ageism, as those who receive benefits do so because of their age, combined with marital status and work history. Additionally, there are two government programs that attempt to increase employment opportunities for just older adults. The first, Senior Community Service Employment Program for Older Americans Act, guarantees minimum-wage pay to those over 55 for part-time public service. Similarly, the Foster Grandparent Program pays low-income elders to help care for people in need, such as special needs children, orphaned infants, and those in convalescent hospitals (Palmore, 1999).

Ageism in Health Care

Discriminatory treatment of older adults extends into the medical sphere as well. Cultural critic Margaret Gullette (2011) suggests that doctors treat older patients differently, "withholding information, diagnostic services, or treatment" (p. 51). Elder speak appears extensively in this domain, as health-care practitioners are known to oversimplify the information they share with elder patients, use slower speech, and adopt a demeaning emotional tone (Cuddy & Fiske, 2004; Palmore, 1999). Furthermore, studies show that doctors communicate more clearly and respectfully and provide much better information when dealing with younger patients as opposed to older adults (Pasupathi & Löckenhoff, 2004). In nursing homes, many employees treat residents almost as if they are children, which has the effect of depleting older adults' self-esteem and promoting dependent rather than independent behavior (Pasupathi & Löckenhoff, 2004). Other health professionals too are known to treat older patients like children (Palmore, 1999). Wilkinson and Ferraro argue that ageist attitudes of doctors begin at medical school, where they are exposed to ageist language in discussions about geriatric care. Additionally, medical professionals are most familiar with older adults who are sick, making it easier to stereotype all elders as frail and to associate aging with disease (Palmore, 1999).

Not only do elders receive less information about their health but they also receive *differential treatment.* There are many instances in which older adults remain untreated for "common and treatable medical conditions"

(Levy & Banaji, 2004, p. 50). Contributing to the problem is the fact that many believe health conditions and illnesses in older adults are inherent and irreversible, simply due to natural aging, even if that is not the case (Palmore, 1999). Comparing the diagnostic differences between younger and older patients, researchers have found that older adults are less likely to be referred for psychiatric help and that doctors tend to attribute health issues to age rather than an actual medical condition (Cuddy & Fiske, 2004; Gullette, 2011; Pasupathi & Löckenhoff, 2004). For example, memory lapses are considered much more seriously in older adults and such cognitive issues in this population are considered to arise from stable causes, rather than some temporary condition (Kite & Wagner, 2004). As a result of these biased diagnoses, many elders fail to receive the treatment they need. And many elders themselves fail to recognize signs of health issues because they too attribute many symptoms to normal aging (Palmore, 1999).

In some cases, elders experience not merely lack of treatment, but outright mistreatment. *Elder abuse* in the health-care system is a serious problem. Awareness of this issue has increased as hidden videos capturing instances of elder abuse in care facilities across America have been released online. MacDonald and Rich (1983) explain how the stereotype of older women as particularly weak and vulnerable makes them easy targets for male abusers. For more on elder abuse, see Chapter 9, Volume 2 of this series.

Just as stereotypes alter the ways health practitioners interact with, diagnose, and treat older adults, stereotypes also contribute to health issues. Much research in the social sciences has found evidence of *stereotype priming*, in which simply thinking about stereotypes of the group to which one belongs can unconsciously lead individuals to behave in the ways described by those stereotypes. This phenomenon has been observed many times with older adults. Stereotype activation among older cohorts has been shown to lead to decreases in one's will to live, worse handwriting, slower walking speeds, and decreased performance on memory tasks (Levy & Banaji, 2004). Furthermore, exposure to these stereotypes has been shown to lead to heightened cardiovascular stress responses (Levy & Banaji, 2004). The effects of stereotype priming therefore makes it hard to assess whether older adults actually display signs of serious health issues or are just influenced by the stereotypes of which they are constantly bombarded.

Further fueling ageism in the medical sphere are notions that older adults are not worth the same care as younger patients. Gullette (2011) refers to this as medical care being "rationed by age" (p. 52). Because many elder patients rely on Medicare they are less attractive to hospitals because

such institutions make less money in treating them (Wilkinson & Ferraro, 2004). Additionally, many people believe that since older adults will be "dying soon" anyway, they do not deserve the same treatment as the young, even if a proper analysis of their health would reflect otherwise (Pasupathi & Löckenhoff, 2004). Others argue that treating older adults is much more complex than treating the non-old, and thus reducing their health care would alleviate some of doctors' stress (Palmore, 1999). The sentiments that elders are burdens on the health-care system and unworthy of proper medical attention can produce even more health risks for older adults. Gullette (2011) suggests that making elders feel like burdens on an institutional level may lead many older adults not to seek care when it is needed, or to contemplate and maybe even attempt suicide.

Ageism and Medicine

So far we have discussed ageism in health care primarily in terms of how it directly influences the way older adults are regarded and treated. Another key way in which health care in America is linked with ageism is *medicalization*. Medicalization is the tendency to define any emotional, mental, and physical process as medical (Conrad, 2007). Medicalization affects all ages, but it has particular implications in an ageist society. In societies that position youthful bodies as the norm, the changes associated with aging are ripe for being labeled pathological. Sociologists, anthropologists, and gerontologists have carefully documented the transformation of the emotional, mental, and physical changes associated with aging into "illnesses" (Cruikshank, 2009; Estes & Binney, 1989; Gubrium, 1986; Kaufman, 1994; Lock, 1993). For example, the medical construction of Alzheimer's disease redefined memory loss as an illness category during the 1960s and 1970s (Gubrium, 1986). Since then, what had been a normal component of aging was reconfigured into a spectrum-based, "mild-to-severe" disease through the creation and delineation of medical diagnostic categories (Joyce & Loe, 2010).

Today, *anti-aging medicine* taps into the fear of aging and represents one possible extension of medicalization processes. Instead of particular mental, physical, or emotional processes being turned into a disease, now the aging process itself is understood as pathology (Joyce & Loe, 2010). In this context, even popular medicine such as Dr. Oz's "The Power to Prevent Aging," pathologizes aging and promotes restoration to youthfulness.

Embodied ageism and medicalization intersect with sexism in particular by pressuring women to achieve what Brooks (2010) calls "the ideal of a feminized agelessness." Within this ideal, women are expected to continually work to reverse, minimize, and prevent signs of aging and maintain

appearances, such as perky breasts and flat stomachs, associated with a particular version of youthful femininity. With anti-aging medicine, such as expensive pharmacological therapies and surgeries, the symbols and connotations associated with a particular body can be manipulated to present different levels of aging (Calasanti & Slevin, 2001). Brooks (2010) explores how American women's attitudes about femininity and aging are shaped in the context of deciding whether to use anti-aging medicine and technology. Because American society deems women old at a younger chronological age than men, primarily due to the cultural importance of appearance and reproductive abilities to a woman's worth in society, women experience particular pressure to utilize anti-aging techniques (Calasanti & Slevin, 2001).

Ageism: An Intersectional Approach

Ageism is a socially constructed system of discrimination that intersects with other hierarchies such as gender, race, class, and sexuality. An *intersectional approach* reveals ageism as one form of discrimination within a system of overlapping oppressions such as racism, sexism, classism, and homophobia (Collins, 1990). Ageism varies from other forms of discrimination because we all must age and die, and therefore all humans experience ageism during their lives.

Although all elders may experience ageism, other forms of discrimination—namely sexism, racism, classism, and heterosexism—make the experience of ageism different across various groups (Calasanti & Slevin, 2001). For example, we all experience some of the *social stigma* against aging bodies; however, elders in minority groups who may be black, lesbian, or poor will experience more prejudice and have access to different tools for responding to ageism than a white, wealthy, and/or straight man. At the same time, *cultural variation in attitudes* about aging and old people within the United States may translate into more reverence for elders in minority groups. For example, Loe (2011) shows how old women are often keystones in African American churches. This section is dedicated to uncovering the importance and impact of these intersectional realities.

Calasanti and Slevin's (2001) book, *Gender, Social Inequalities, and Aging*, highlights the ways in which an intersectional framework is beneficial to illuminating the persistence of ageism within society and academia. Calasanti and Slevin use a *relational approach* that recognizes how diverse elders' experiences of ageism are shaped in relation to one another by intentionally focusing on nonmajority experiences. Unfortunately, academic fields in general, and gerontological research specifically, lack significant data on diverse populations; despite increasing racial and ethnic

diversity amongst America's elderly population, gerontologists continue to study primarily homogeneous populations of white elders and low-income African Americans (Calasanti & Slevin, 2001). The following analyses are therefore based on a small number of studies with limited data on nonmajority groups, perhaps due in part to racial/ethnic patterns in life expectancy; however, we believe that the conclusions drawn from even restricted sample sizes have important ramifications for how we understand ageism in contemporary society.

One reality of an intersectional approach is the impossibility of analyzing a specific hierarchy or identity in isolation. We focus the following discussion around manifestations of ageism in relation to three *guiding ageist stereotypes*: the dependent elder, the ageless elder, and the asexual elder. Woven throughout each discussion is an integrated intersectional analysis that attempts to illuminate how ageism is experienced differently across races, genders, sexualities, and social classes.

An intersectional perspective is particularly important for gerontologists given the complicit role of the discipline in perpetuating ageist practices. Gerontologists have historically used a middle-aged, white, heterosexual bias in theory and research to define the old as deviant from a middle-aged norm (Calasanti & Slevin, 2001). For example, the concept of "aging successfully" promotes the idea that aging is an individual problem that elders can adapt to (Calasanti & Slevin, 2001). If aging is seen as an individual problem that can be controlled, then elders who cannot control their aging process—for medical, financial, or other reasons—are at fault and can be blamed. "Productive aging" defines a successful elder as one who maintains their ability to produce within a capitalist society, even though capitalism disadvantages the oldest-old, women, and minorities who either cannot work or perform a majority of unpaid care work (Calasanti & Slevin, 2001). An emphasis on productive aging is ageist because it contends that the old are only valuable as long as they subscribe to middle-aged norms, which transfers ageist stereotypes to those who cannot work rather than challenging such notions (Calasanti & Slevin, 2001).

The Dependent Elder

One ageist stereotype of the old is their uniform association with increased *economic dependence* on state resources. However, research shows that the economic dependence of elders varies widely amongst individuals with different racial, class, sexual orientation, and gender identities. For example, government benefits—such as Social Security and Medicare—are allocated to assist low-income elders; however, partner benefits have previously not been available to individuals in same-sex partnerships in states

without marriage equality. In these states, elders in same-sex relationships may be unable to access their spouse's benefits, therefore increasing their dependence on outside resources as compared to their straight, legally married peers (Calasanti & Slevin, 2001; LGBT Movement Advancement Project and Services and Advocacy for Gay, Lesbian, Bisexual and Transgender Elders, 2010).

Gendered care work provides another example of how particular groups become especially economically dependent with age. Traditional divisions of labor, market discrimination, and unstable employment histories make it more difficult for women to receive promotions, pay, pensions, and Social Security; women are therefore more likely than men to become dependent on state resources in old age (Calasanti & Slevin, 2001). The inability to access resources and dependence on state assistance is especially problematic for many elder women of color, who are overwhelmingly represented in low-income and care work occupations (Calasanti & Slevin, 2001). Men of color are significantly more likely than whites to have a criminal record, which has a strong negative correlation with securing a job and increases the likelihood that nonwhite elders will become dependent on state resources in old age (Pager, 2003). Given society's ageist tendency to devalue elders who are seen as economically dependent on outside resources, low-income, nonwhite, LGBT, and women elders are marginalized by ageism at rates far greater than the stereotypical white, straight, and/or male individual.

Old age in the United States has become synonymous with physical dependence and illness and is therefore something to be avoided. This ageist assumption that all elders are physically dependent ignores important nuances inherent in lives of *interdependence*. Furthermore, U.S.-based elders are constructed in contrast to a mythical ideal of human adult independence, an ideal that is virtually unattainable. Assuming that elders are completely physically dependent on family members or personal care assistants strips them of the significant personal agency that the old exercise throughout their daily lives. In her book *Aging Our Way: Independent Elders, Interdependent Lives,* Meika Loe (2011) explains how the old exercise *personal agency* by advocating for themselves, networking, innovating, growing, and learning well into old age. That said, agency itself is shaped by locational factors, privilege, and oppression. By ignoring the diverse manifestations of personal agency in old age, we construct the aging process as primarily a loss of independence.

Physical dependence and poor health do not develop among the old uniformly, nor are they experienced in the same ways across individuals. These dependence and health disparities are stratified across socioeconomic and racial lines, and become especially problematic when ageist

societies give independent elders more social value, while others who are needy are marginalized and ostracized. For example, social class has a significant impact on a child's exposure to different physical and psychosocial environments, which in turn influence adult health (Cohen et al., 2010). Low-income youth who enter working-class jobs with minimal health benefits become dependent, low-income elders far sooner than their more privileged peers (Calasanti & Slevin, 2001). Moreover, members of racial minority groups report age-related physical ailments far earlier than white elders, and research indicates that black elders receive inferior health care compared to white elders regardless of their income (Newman, 2003; Wallace, 1991). *Cumulative inequality theory* suggests that the lifelong accumulation of disadvantages associated with low-income occupations, inaccessible health benefits, and inferior quality medical care lead impoverished nonwhite people into physical dependence at a far greater rate than those who are more privileged, a fact that makes "successful aging" nearly impossible (Ferraro & Kelley-Moore, 2003; Ferraro & Shippee, 2009). These minority group members are therefore more likely to become physically dependent and be marginalized by a society that increasingly values productive independence.

Even elders who rely on family members or personal care assistants are not uniformly impacted by their dependence. Class privilege affords elders with financial resources the ability to purchase care work at market value, thereby maintaining separate social, familial, and dependent care work spheres. As seen in the film, *Gen Silent* (Maddux, 2010), ageism and sexuality intersect in caring for elder gays/lesbians; many elders who become dependent on personal care assistants feel they must go back in the closet to protect their health and well-being. The LGBTQ elders who are forced to hide their sexuality due to fear of reprisal or discrimination at the hands of family members or personal care assistants are unable to maintain the heterocentric middle-aged norm touted by American society, and thus fail to age successfully in their contexts of care.

The Ageless Elder

Martha B. Holstein (2006) describes how cultural messages, the media, and the academy "support the denial of change" and imply "that age should be no more than an artifact . . . we need be no different in old age than we were in middle age" (p. 313). Successful aging is defined by the ability to maintain an "ageless" level of independence and productivity into old age (Kaufman, 1994). *Agelessness* is a social ideal marketed to the healthy and wealthy in the form of anti-aging medicine. Specifically, medicalization encourages the old to become dependent on medications and expensive

procedures in an attempt to stall, or even reverse, the aging process. However, the medicalization of aging does not affect all elders equally. An intersectional approach is useful to uncover how the diverse old experience medicalization differently.

Medicalization highlights the importance of economic resources. As mentioned above, the surgeries, hormone treatments, exercise regimes, and prescriptions that help some elders avoid ageist stereotypes by passing as younger adults, or aging successfully, are an exercise in class privilege (Calasanti & Slevin, 2001, p. 19–21). These expensive medical interventions differentiate aging experiences between the rich and poor, as the former are more able to afford such treatments and thus avoid the stigma associated with aging. Given the strong relationship between gender and racialized oppressions, the class privilege associated with the ability to pass as middle-aged disproportionately marginalizes low-income women of color. In addition to being a principally ageist notion, participating in a culture of medicalized aging to distance ourselves from the old is simply not an option for most marginalized populations.

The Asexual Elder

The medicalization of aging highlights the intersections between ageism and sexuality by rendering invisible sexually active elders, particularly those beyond midlife. In so doing, medicalization continues to prioritize a middle-aged or ageless heterosexual norm as the social and cultural basis against which other expressions of sexuality are judged. As people age, they tend to rely on an increasing number of medications and medical interventions that can dampen sexual desire, such as antidepressants, drugs for high blood pressure, and chemotherapy (DeLamater, 2012). The negative impact of these medical interventions and medications on a person's libido may perpetuate the commonly held ageist assumption that aging in general subsumes all sexual desire, rather than attributing at least some of the changes to various medicinal side effects (Walz, 2002). In addition, the increased prevalence of and social reliance on expensive cosmetic surgeries, hormone replacement treatments, and erectile dysfunction drugs are attempts to avoid the stigma and shame associated with sexually inactive aging bodies by medicalizing an otherwise biologically normal phenomenon (Joyce & Mamo, 2006; Loe, 2006).

Ageist assumptions that the old are inherently asexual, along with limited research on elders' sexual experiences, render the realities of elders' sexual desire and pleasure invisible. Sexual people are conceptualized as teenagers and young adults, especially young men and couples in their

teens, twenties, and thirties. Even feminist scholars have paid more attention to younger women's sexual experiences and reproductive issues associated with youth (DeLamater, 2012). The stereotype that elders do not engage in sexual behaviors is contradicted by recent findings that more than half of 65 to 74-year-olds, and more than one in four 75 to 85 year-old elders, identify as sexually active (Lindau et al., 2007). Many women over the age of 85 experience sexual intimacy and pleasure (Loe, 2006). In fact, some elders report developing an increased sense of personal agency and expanded "repertoire of physical responses" as they age (Winks & Semans, 2002). The widespread assumption that the old are not engaged in sexual behaviors may hamper efforts to provide accurate sexual health education and counseling services to the elderly population (Lindau et al., 2007).

The *social and cultural invisibility* of sexual lives of diverse elders is perpetuated in academic research. Scholars and research studies tend to focus only on straight, white, young, and/or middle-aged populations; for example, there were only three articles in family gerontology published in the 1990s that dealt with LGBT elders (Allen & Walker, 2006). This is despite the fact that 1.5 million elders over the age of 65 are currently identified as lesbian, gay, or bisexual, and this population is expected to double over the next 15 years (LGBT Movement Advancement Project and Services and Advocacy for Gay, Lesbian, Bisexual, and Transgender Elders, 2010). Understanding the sexual experiences of LGBT elders is particularly difficult because the contemporary old, particularly privileged women, grew up in a culture where they were expected not to be sexual beings let alone identify as gay, lesbian, bisexual, or transgender (Calasanti & Slevin, 2001).

Countering Ageism

How can we counter ageism in the twenty-first century? Anti-ageist work can occur on *individual, relational, and societal levels*. This section reviews efforts to counter ageism ranging from policy reform, to social media campaigns, to organizational and grassroots work. Calasanti and Slevin (2001) suggest that individuals strive to be anti-ageist by uncovering and fighting ageism in its many forms.

Countering Ageism at Individual and Relational Levels

What can you do to counter ageism? Awareness is an important first step in fighting ageism. Being *self-aware* of our potentially ageist attitudes, including being mindful of our implicit ageism, is key to changing how

we view and interact with elders (Golub, Filipowicz, & Langer, 2004; Palmore, 1999). When we learn to recognize negative ageist stereotypes and discrimination, perpetuated by others or ourselves, we can better call attention to these unacceptable thoughts and behaviors. Furthermore, acknowledging age-based power and privilege, or how younger individuals benefit from ageism, puts age relations in perspective.

Spreading awareness and educating others about ageism and its many forms is crucial to combatting ageism. Braithwaite (2004) as well as Golub, Filipowicz, and Langer (2004) argue the importance of teaching people to recognize that not all elders are the same and should not be grouped as such, encouraging people to recognize the unique characteristics of older adults. Barbara MacDonald and Cynthia Rich (1983) calls on us to treat elders as fully human, and thus to "look [elders] in the eye." Education, which can include anything from gerontology workshops and classes to social studies, should also include teaching diverse positive images of elders and challenging negative stereotypes by learning why many are common misconceptions (Levy & Banaji, 2004; Palmore, 1999). One way to understand the root of many ageist misconceptions is to consider other reasons that older adults might be behaving in the ways that are stereotyped. For example, Golub, Filipowicz, Langer (2004), borrowing from disability studies, suggest that elders might have difficulty getting out of a car not because of physical weakness but rather because the car is not well designed for their needs. Similarly, there may be cases in which older adults appear forgetful to younger generations, but this could be because they are indifferent to a topic and thus do not pay attention to it (Golub, Filipowicz, & Langer, 2004).

It can be equally beneficial to change the language we use, not only in terms of referring to elders, but also in how we communicate with them and how we talk about aging. Palmore (1999) calls on us to stop using *ageist language* in a way that connotes aging as positive or negative. For example, he suggests that rather than say "stay young," we say "stay healthy, alert, vigorous, active" (Palmore, 1999, p. 92). Also, as we saw at the beginning of this chapter, humor can be a vehicle to reinforce ageism. Aging itself is regularly turned into a joke in an ageist society. We can counter ageism by limiting the ageist jokes we tell and call others out when they use ageist language or humor (Palmore, 1999). We can also use humor to reject age-based stereotypes, or to cope with ageism. For example, nonagenarian Glenn, profiled in *Aging Our Way*, confronts asexual elders stereotypes by sending lewd jokes via email, and leaving a thrift-store slip on his unmade bed for his housekeeper to find (Loe, 2011). In this way, laughing about the changes that aging inevitably brings can be healthy and beneficial.

Elders themselves can play a significant role in combatting ageism. Palmore (1999) finds that elders typically respond to ageism in four main ways: They accept ageism and tend to withdraw; they try to pass as younger so as to deny association with a negative status; they attempt to avoid ageism by isolating themselves; and they form organizations that strive to counter ageist stereotypes and promote reform. Because most elders are themselves ageist (just as women can reinforce sexism), there is a call for older adults in particular to rally against this prejudice and discrimination. Recent examples of elder activism around ageism include "Yo, is this ageist?" a blog in which Ashton Applewhite draws attention to ageist issues and has followers share the ageist situations they experience every day. Additionally, the Old Women's Project is a group of older women that call attention to how they are affected by ageism and call for an end to the injustice. Another women's group, the Raging Grannies, represents older women across the country that challenge ageist stereotypes by peacefully promoting equality for all using creativity and humor. That said, their name reinforces the view of old women as grandmotherly and doesn't leave symbolic space for old women without kids or grandkids.

In addition to calling attention to commonplace forms of ageism, Gullette (2011) argues that people, in particular elders, need to learn to accept their changing bodies; changes that are age-related or not. By embracing the physical changes of aging, individuals can more confidently confront the cultural ideal of a youthful image, such as by taking on anti-aging medicine and resisting "commerce in pathological aging and decline ideology as a whole" (Gullette, 2011, p. 101). Barbara MacDonald and Cynthia Rich (1983) also call on older adults, in particular women, to reclaim their selfhood and identify as old rather than trying to pass as younger. They must accept themselves before they can expect others to recognize them as individuals, more than just another older person.

Work by elders alone will not be sufficient to counter ageism, however; combatting ageism must be an intergenerational effort. Families can play an especially important role in helping to change the way people view the old. On the one hand, how adult children interact with their aging parents can go a long way in *confronting ageist expectations*. Palmore (1999), for example, suggests that if adults are accepting of their parents forming new relationships after the death of a spouse, this can defy the image of elders as sexless and confront messages that oppose remarriage among the old. Families also have the power to influence the way children conceive of elders and of aging. Gullette (2011) contends that "the before-and-after stories about aging that each of us internalizes in childhood can be no more than one sentence deep and yet as salient as Pike's Peak" (p. 148). We have seen evidence that we internalize *ageist messages* at a young age

and carry those with us throughout our lives, but so too can we hold onto anti-ageist messages, if those are the ones we learn.

One way for families to instill anti-ageist perceptions of elders is to foster connections between grandparents and grandchildren, relationships that may be impeded by geographic mobility patterns and social privilege. *Intergenerational relationships* can be beneficial in two ways. First, recognizing elders as in-group members, such as important family members, helps prevent stereotyping (Cuddy & Fiske, 2004). Additionally, numerous studies have shown that the more exposure to elders one has, the less likely one is to stereotype them later in life (Golub, Filipowicz, & Langer, 2004). Cuddy and Fiske (2004) explain that this helps because the more personal relationships one has with elders, the more likely it is to know an older adult who does not fit common stereotypes. Having a personal connection to someone who defies those stereotypes can lead one to question those stereotypes, thereby making one less likely to apply them in the future. Such findings indicate the importance of increasing the opportunities for children and young adults to interact with older adults. Some programs that foster intergenerational connections already exist, such as Generations United and the Homeshare program. There are also foster grandparent programs that provide opportunities for older adults to connect with younger generations in educational institutions (from preschool on), via tutoring programs, and through religious institutions (Braithwaite, 2004). Braithwaite (2004) suggests that interacting with older adults in these settings helps younger generations see elders in a multitude of important social roles, expanding their perception of elders. Similar programs that promote intergenerational cooperation could go a long way in confronting ageism.

Countering Ageism at the Societal Level

As we have discussed, one of the factors contributing to ageism is our *cultural valuation of youth*. Because we view youth as the ideal, by contrast we associate elders with negative images. As such, one way to counter ageism is to change society's perceptions of older adults so as to value elders. A powerful first step is to reclaim the word "old" by using it in a positive or neutral way, as suggested by Calasanti and Slevin (2001), which is what we have tried to do throughout this chapter. Similarly, rather than perpetuate negative stereotypes of the old, promoting positive images of aging can go a long way in changing the way society thinks about the aging process and elders. Gullette (2011) recommends transforming the aging narrative from a *narrative of decline* to a *narrative of progress*, emphasizing increased resilience, for example. Cheryl Laz (1998) and Bytheway (2002)

likewise encourage people to be more aware of aging in our everyday lives so as to help us view it as something that is actively "done" rather than some sudden, horrible transformation that happens to us.

We should also focus on spreading positive images of elders, revealing them as they really are, as caregivers, creative forces, designers, valued workers, and more (Loe, 2011). Beyond changing the way others view elders, positive stereotypes can actually directly impact the way older adults behave. Studies show that positive age stereotypes can in fact improve memory, increase walking speed, and improve balance (Kite & Wagner, 2004; Levy & Banaji, 2004). A particularly fascinating study by Ellen Langer in 1981 revealed that having older adults live as if they were a number of years younger, with greater responsibilities and expectations of autonomy, caused significant improvement in many measures used to assess natural decline due to aging (Grierson, 2014). Such studies illuminate how powerful the mind can be in shaping our behaviors in response to our mental constructs of age. This makes it all the more important for us to alter these *social constructs of aging* and elders in a positive way.

Along with valuing elders, we need to also strive to *destigmatize death*. Given that ageism is fueled by individuals' fear of mortality, it seems that helping society better understand and cope with death could assuage that concern and in turn reduce ageism. There are a number of ways we can destigmatize death. In Europe, for example, there is a death café movement, which is spreading to America. These death cafés provide a confidential forum for individuals to get together and discuss death in a philosophical way with the help of a facilitator (Span, 2013). Classes or more informal gatherings that directly address fears about death and aging decline could also help (Greenberg, Schimel, & Mertens, 2004). Braithwaite (2004) suggests that film, drama, television, and literature may serve a role in destigmatizing death by increasing exposure to "aspects of aging that leave us feeling conflict ridden, confused, inept, or ill at ease" (p. 322). In increasing the number of discussions about death and aging, it is important to also educate people so as to how they can better prepare for these changes, such as informing them about palliative care and advanced directives. Learning about these can give them a semblance of control over what might otherwise be extremely overwhelming.

But how can we begin to foster these crucial social norms and values? One way is through the media. Rather than bombard consumers with ageist jokes, we should promote slogans that counter ageism, such as "age is a case of mind over matter, if you don't mind it doesn't matter," "age is just a number," or "age is important only for wines and cheese" (Palmore, 1999). Media can also be an efficient way to spread positive images of elders to the masses, and as our society ages, and TV-watching demographics shift,

we hope that networks will be convinced of how realistic portrayals of elders as nuanced and complex can be profitable (such as in the program *Last Tango in Halifax*). TV shows, movies, and the news can help show older adults in many different social roles and better convey their positive attributes, such as their wisdom, volunteerism, political participation, and law-abiding nature (Braithwaite, 2004; Palmore, 1999). Providing society with these new *mediated images of elders* can help them widen their conceptions of older adults and break free from the limiting negative stereotypes.

Additionally, organizations can play an important role in altering how society views aging and elders. Palmore (1999) suggests that religious institutions can be especially influential in this matter, as they can draw upon religious texts and traditions that support the valuation of elders. Other organizations combat ageism by protecting the rights of the old, sponsoring research on aging, and providing resources for elders. Though not an exclusive list, the following are some of the more well-known organizations working toward these goals: Administration on Aging, AARP, American Federation for Aging Research, American Society on Aging, Gerontological Society of America, Gray Panthers, National Association for Hispanic Elderly, National Caucus on Black Aged, National Council of Senior Citizens, National Council on Aging, Inc., National Institute on Aging, National Senior Citizen's Law Center, Older Women's League.

Countering Ageism at Organizational and Institutional Levels

Because ageism occurs at the personal, social, and institutional levels, we need changes at all of these levels too. There are three *institutional domains* in which change could go a long way in reducing ageism. The first of these is The Vita Needle factory in Needham, MA, a superb example of a workplace that is inclusive of workers of all ages. Lynch (2012) reveals how many Vita Needle employees are actually older adults, who find that financially they need the opportunity to continue working after their previous careers, appreciate the flexible hours and extra income, and take joy in the social engagement and sense of meaning the job offers. Vita Needle's organizational structure seems nothing but mutually beneficial for both the employees and the company. Other companies might also find that they benefit from offering creative opportunities to keep older adults in the workforce.

Federal changes to laws such as the ADEA can also play a major role in improving the experiences of older workers. Gregory (2001) proposes a few amendments to these policies, many of which involve making it easier for older workers to prove age discrimination. In order to remedy hiring discrimination, Gregory (2001) suggests requiring employers to file

reports that reveal the breakdown of applications, interviews, and hires by age. Additionally, if class action were allowed in these situations—it currently is not—then it would be easier to challenge employers and also deter them from discriminatory practices in the first place. Abolishing the mixed-motive rule, which allows employers to prove that their decisions were in part influenced by legitimate reasons, could also make it easier for older workers to win their case. Finally, in those cases in which one can prove age discrimination, Gregory (2001) argues that older workers should also be compensated for the emotional distress unemployment causes.

It is also essential that we make changes to health care. On the one hand, this entails better preparing doctors to work with older patients. Such training must begin in medical school, where educators should eliminate negative stereotypes that are often perpetuated by the way doctors talk about older adults (Wilkinson & Ferraro, 2004). Medical schools should also teach students about the many social and psychological aspects of aging and promote compassionate interaction with older patients (Braithwaite, 2004; Palmore, 1999). Tufts Medical School, for example, brings some of its students to a local senior housing facility so they can practice developing a rapport with older adults. Practices like this can go a long way in preparing future medical practitioners for communicating effectively and respectfully with elder patients.

These programs might also be useful in generating more interest in geriatric medicine, which both Palmore (1999) and Wilkinson and Ferraro (2004) argue is necessary for improving the health-care system for older adults. Incentivizing doctors to specialize in geriatrics could also help combat ageism in health care. All in all, expanding the number of health practitioners who are sensitive to the needs of older patients not only makes elders' interactions with doctors more satisfying and helpful, but it can also improve their health. Gullette (2011) theorizes that better health care for older adults early on might mean that they are less sick when they use Medicare. If better geriatric medicine practices could lead to fewer health issues and thus less reliance on Medicare, this could mitigate society's frustration that health care for elders is a financial burden.

Finally, the government can play a major role in reducing ageism by creating and enforcing policies that protect the rights of older adults. This process should include three major components. First, it should include a thorough review of existing policies to ensure that current laws and procedures do not unnecessarily discriminate by age (Braithwaite, 2004). This also entails evaluating legislation, such as the Age Discrimination in Employment Act, to ensure that it is properly enforced (Palmore, 1999). Second, the government can create new policies and procedures that

reduce ageism (Braithwaite, 2004). For example, providing subsidies for home care may decrease the number of older adults pressured into moving into nursing homes by making it easier for such elders to find and afford in-home care (Palmore, 1999). The third key component is that older adults should be included in the process of reviewing, creating, and implementing policies (Braithwaite, 2004).

Conclusion

The most effective means by which to counter ageism is an integration of the many specific methods we have just discussed. It requires individuals sparking social change, and it involves institutions creating guiding rules and norms for the individuals they affect. It will be a process of both reevaluating our behavior, beliefs, and laws, and innovation—developing new legislation and new images and roles for elders. We all need to be aware of ageism because one day we might all become the targets of this discrimination and stereotypes. If you could do something now to protect your rights for the future, why wouldn't you?

References

Allen, K. R., & Walker, A. J. (2006). Aging and gender in families. In T. M. Calasanti and K. F. Slevin (Eds.), *Age matters: Realigning feminist thinking*. New York: Routledge.

Becker, E. (1973) *The denial of death.* New York: The Free Press.

Bendick, M., Jackson, C., & Romero, H. (1993). *Employment discrimination against older workers: An experimental study of hiring practices*. Washington, DC: Fair Employment Council of Greater Washington.

Bergling, T. (2004). *Reeling in the years: Gay men's perspectives on age and ageism.* New York: Harrington Park Press.

Braithwaite, V. (2004). Reducing ageism. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 311–337). Cambridge: MIT Press.

Brooks, A. (2010). Aesthetic anti-aging surgery and technology: Women's friend or foe? *Sociology of Health and Illness*, 32(2), 238–257.

Butler, R. (1969). Ageism: Another form of bigotry. *The Gerontologist*, 9, 243–245.

Butler, R. (1975). *Why survive? Being old in America.* New York: Harper and Row.

Butler, R. (1980). Ageism: A foreword. *Journal of Social Issues*, 36(2), 8–11.

Bytheway, B. (2002). Positioning gerontology in an ageist world. In Lars Andersson (Ed.), *Cultural gerontology* (pp. 59–76). Westport: Auburn House.

Calasanti, T. M. (2003). Theorizing age relations. In Simon Biggs, Ariela Lowenstein, and Jon Hendricks (Eds.), *The need for theory: Critical approaches to social gerontology* (pp. 199–218). New York: Baywood Press.

Calasanti, T. M., & Slevin, K. F. (2001). *Gender, social inequalities, and aging.* Walnut Creek: AltraMira Press.

Cohen, S., Janicki-Deverts, D., Chen, E., & Matthews, K. A. (2010). Childhood socioeconomic status and adult health. *Annals of the New York Academy of Sciences*, 1186, 37–55.

Collins, P. H. (1990). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment.* Boston: Unwin Hyman.

Conrad, P. (2007). *The medicalization of society: On the transformation of human conditions into treatable disorders*. Baltimore, MD: Johns Hopkins University Press.

Cruikshank, M. (2009). *Learning to be old.* Plymouth: Rowman & Littlefield.

Cuddy, A. J. C., & Fiske, S. T. (2004). Doddering but dear: Process, content, and function in stereotyping of older persons. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 3–26). Cambridge, MA: MIT Press.

DeLamater, J. (2012). *Sex for life: From virginity to Viagra, how sexuality changes throughout our lives.* New York: NYU Press.

Dressel, P., Minkler, M., & Yen, I. (1997). Gender, race, class, and aging: Advances and opportunities. *International Journal of Health and Services*, 27(4), 579–600.

Estes, C., & Binney, E. (1989). The biomedicalization of aging: Dangers and dilemmas. *The Gerontologist*, 29(5), 587–596.

Ferraro, K. F., & Kelley-Moore, J. A. (2003). Cumulative disadvantage and health: Long-term consequences of obesity? *American Sociological Review*, 68(5), 707–729.

Ferraro, K. F., & Shippee, T. P. (2009). Aging and cumulative inequality: How does inequality get under the skin? *Gerontologist*, 49(3), 333–343.

Golub, S. A., Filipowicz, A., & Langer, E. J. (2004). Acting your age. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 277–294). Cambridge, MA: MIT Press.

Greenberg, J., Schimel, J., & Mertens, A. (2004). Ageism: Denying the face of the future. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 27–48). Cambridge, MA: MIT Press.

Gregory, R. F. (2001). *Age discrimination in the American workplace: Old at a young age*. New Brunswick, NJ: Rutgers University Press.

Grierson, B. (2014, October 22). What if age is nothing but a mind-set? *New York Times*. Retrieved from http://www.nytimes.com/

Gubrium, J. (1986). *Old timers and Alzheimer's: The descriptive organization of senility*. JAI Press.

Gullette, M. M. (2004). *Aged by culture.* Chicago: University of Chicago Press.

Gullette, M. M. (2011). *Agewise: Fighting the new ageism in America.* Chicago: University of Chicago Press.

Hess, T. H. (2006). Attitudes toward aging and their effects on behavior. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of the Psychology of Aging* (pp. 379–406). Burlington, MA: Elsevier Academic.

Holstein, M. B. (2006). On being an aging woman. In T. M. Calasanti and K. F. Slevin (Eds.), *Age matters: Realigning feminist thinking.* New York: Routledge.

Isaacs, L. W., & Bearison, D. J. (1986). The development of children's prejudice against the aged. *International Journal of Aging and Human Development*, 23, 175–194.

Joyce, K., & Loe, M. (2010). A sociological approach to ageing, technology, and health. *Sociology of Health and Illness*, 32(2), 171–180.

Joyce, K., & Mamo, L. (2006). Graying the cyborg: New directions in feminist analyses of aging, science, and technology. In T. M. Calasanti and K. F. Slevin (Eds.), *Age matters: Realigning feminist thinking*. New York: Routledge.

Kaufman, S. (1994). *The ageless self: Sources of meaning in late life*. Madison: University of Wisconsin Press.

Kite, M. E., & Wagner, L. S. (2004). Attitudes toward older adults. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 129–161). Cambridge, MA: MIT Press.

Laz, C. (1998). Act your age. *Sociological Forum*, 13(1), 85–113.

Levy, B. R., & Banaji, M. R. (2004). Implicit ageism. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 49–75). Cambridge, MA: MIT Press.

LGBT Movement Advancement Project and Services and Advocacy for Gay, Lesbian, Bisexual and Transgender Elders. (2010). Improving the lives of LGBT older adults. Retrieved on November 1, 2014. Online. http://www.lgbtmap.org/file/improving-the-lives-of-lgbt-older-adults.pdf

Lindau, S. T., Schumm, L. P., Laumann, E. O., Levinson, W. L., O'Muircheataigh, C. A., & Waite, L. J. (2007). A study of sexuality and health among older adults in the United States. *The New England Journal of Medicine*, 357, 762–774.

Loe, M. (2006). *The rise of Viagra: How the little blue pill changed sex in America.* New York: New York University Press.

Loe, M. (2011). *Aging our way: Lessons for living from 85 and beyond.* New York: Oxford University Press.

Lock, M (1993). *Encounters with aging: Mythologies of menopause in Japan and North America.* Berkeley: University of California Press.

Lynch, C. (2012). *Retirement on the line: Age, work, and value in an American factory*. Ithaca, NY: Cornell University Press.

MacDonald, B., & Rich, C. (1983). *Look me in the eye: Old women, aging, and ageism.* San Francisco: Spinsters/Aunt Lute.

Maddux, S. (Producer and Director) (2010). *Gen Silent.* [Motion Picture]. United States of America: Interrobang Productions.

McCann, R., & Giles, H. (2004). Ageism in the workplace: A communication perspective. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 163–199). Cambridge, MA: MIT Press.

Newman, K. S. (2003). *A different shade of gray: Midlife and beyond in the inner city*. New York: The New Press.

Pager, D. (2003). The mark of a criminal record. *American Journal of Sociology*, 108(5), 937–975.

Palmore, E. (1999). *Ageism: Negative and positive.* New York: Springer Publishing Company.

Pasupathi, M., & Löckenhoff, C. (2004). Ageist behavior. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 201–246). Cambridge, MA: MIT Press.

Span, Paula (June 16, 2013). Tea, Two Sugars, and Death: Café Groups Ponder the End. *New York Times*.

Taylor, Paul, et al. (June 29, 2009). Growing old in America: Expectations vs. reality. *Pew Research Report*.

Wallace, S. P. (1991). The political economy of health care for elderly blacks. In M. Minkler and C. L. Estes (Eds.), *Critical perspectives on aging: The political and moral economy of growing old*. Amityville, NY: Baywood.

Walz, T. (2002). Crones, dirty old men, sexy seniors: Representations of the sexuality of older persons. *Journal of Aging and Identity*, 7(2), 99–112.

Whitbourne, S. K., & Sneed, J. R. (2004). The paradox of well-being, identity processes, and stereotype threat: Ageism and its potential relationships to the self in later life. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 247–273). Cambridge, MA: MIT Press.

Wilkinson, J. A., & Ferraro, K. F. (2004). Thirty years of ageism research. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 339–358). Cambridge, MA: MIT Press.

Winks, C., & Semans, A. (2002). *The good vibrations guide to sex*. San Francisco, CA: Cleis Press.

CHAPTER FOUR

The U.S. Old-Age Welfare State: Social Security, Supplemental Security Income, Medicare, and Medicaid

Debra Street and Sarah Desai

Uncertainty about how older age will be experienced is an inherent part of every individual life course. Individuals growing older may wonder how aging will change their relationships, whether there will be enough income and savings to live comfortably, and if they will be healthy or struggle with chronic illness, among other things. Some individuals look forward to golden years, expecting to retire in good enough health and with sufficient income to enjoy meaningful activities and relationships, leisure, and travel. Others confront an old age plagued by vulnerabilities associated with ill health, low incomes, or both, perhaps needing to work for as long as their bodies allow because they cannot afford to retire. Even individuals who begin retirement in comfortable circumstances face the prospects of serious illness, the death of a partner, or outliving savings. For some individuals and their families, the income and health needs associated with old age simply overwhelm their capacities to manage entirely on their own.

The singular uncertainties that individuals confront—the risks and rewards associated with individual lifetimes of high or low incomes, good or poor health—look very different from a societal level, where risk is

shared. The contours of the aggregate experiences of millions of elderly people in a national population are easier to predict, on average, than individualized ones. During the twentieth century, affluent countries around the world intervened in the risks of low income at older ages, by institutionalizing retirement through age-related social policies. Public pension programs became the largest single social expenditure program in most countries—the bulwark of an old-age welfare state—as public pension systems pooled risk and safeguarded elderly citizens against poverty and destitution. Public pension systems made universal or nearly universal retirement possible, giving citizens the right to stop working before wearing out (Myles, 1989). While individuals were still expected to do their part to maintain health and prepare financially for retirement, two periods of U.S. legislative activity in the twentieth century relieved individuals of exclusive responsibility for safeguarding well-being in old age by creating two centerpiece federal social insurance programs to support income and health security for older Americans. The Great Depression provided the social backdrop against which Franklin Roosevelt pushed for Social Security legislation in the 1930s. Social Security was intended, in part, to help prevent extreme poverty in old age. Lyndon Johnson's Great Society policy initiatives in the 1960s were the background for Medicare legislation that, for the first time, ensured routine access to health care for elderly Americans. Entitlement to social insurance coverage that provides income and health care at retirement age is the cornerstone of the U.S. old-age welfare state.

Supplementing and extending the reach of the social insurance entitlement programs are two parallel needs-based programs. Supplemental Security Income (SSI) augments income for impoverished elders and Medicaid plays an essential role in health-care provision for the poorest older Americans. To qualify for benefits under SSI or Medicaid, individuals must be deemed eligible by demonstrating need—usually through a means test that limits coverage to individuals with extremely low incomes and very few assets. While the threshold for eligibility under these poverty-based programs is very low and the process of qualifying for benefits can be stigmatizing, each provides essential income or access to services that improve the lives of the most vulnerable elderly Americans.

Social Security, SSI, Medicare, and Medicaid have all been adapted since their enactment to meet changing social and economic circumstances, and each program fills a distinct role in promoting the health and income security of older Americans. In the early years of the old-age welfare state, reforms often focused on broadening coverage and improving benefits. More recently, reforms have focused on containing costs and ensuring the future financial viability of the programs. For current elderly Americans,

entitlement to Social Security and Medicare benefits enacted in the twentieth century provide most of their retirement income and a floor of protection for most individuals' income and health arrangements, while SSI and Medicaid provide safety nets for the most vulnerable. An intrinsic characteristic of the old-age welfare state has been the challenge of balancing two sometimes competing demands. Benefits must be adequate to meet needs, and all participants—taxpayers and beneficiaries alike—must be treated equitably. Fiscal constraints and political contests make achieving the balancing act especially difficult. Yet as the U.S. baby boomers reach retirement age in the twenty-first century, between 2011 and 2029, these social programs will doubtless be adjusted to meet future needs for an increasingly diverse elderly population.

Social Security

Social Security is a self-financed—pay-as-you-go through worker and employer payroll tax contributions—federal social insurance program that provides monthly cash benefits to retired workers in the United States. In addition to older workers and their family members, Social Security also provides benefits for disabled workers and the family members of deceased workers. Eighty years ago, when Social Security was enacted, over half of elderly Americans lived in poverty, with few prospects to change that during the Great Depression. When President Franklin D. Roosevelt signed the Social Security Act of 1935 into law, one goal was to protect older Americans from a "poverty-ridden old age." Since then, the retirement and survivor components of Social Security have been reformed numerous times, lifting more and more elderly people out of extreme poverty by providing modest monthly incomes. By the late 1950s, the poverty rate among Americans 65 and older had dropped to just below 40 percent, and by 2015 it was around 10 percent, the lowest rate for any age group. In fact, despite enduring pockets of poverty and persistent levels of near-poverty in some segments of the elderly population, some argue that Social Security has been the single most effective antipoverty policy in the United States (e.g., Herd, 2009a).

Social Security is the largest social transfer program in the United States, by far, with about 97 percent of older Americans receiving monthly income as beneficiaries. Social Security is financed through payroll taxes. Covered workers and their employers each pay 6.2 percent of covered earnings up to a ceiling ($118,500 in 2015); self-employed individuals pay the full 12.4 percent of their income, up to the ceiling. Payroll taxes for Social Security are regressive, in that covered workers with the lowest incomes pay the same rate of taxes on much smaller incomes when

compared to much higher earners near the income ceiling. Earners above the ceiling pay a smaller proportion of their income in payroll taxes than the lowest-paid workers since none of their income above the ceiling is subject to payroll taxes. However, Social Security also has progressive elements. It was designed from the outset to reduce inequality in old age for covered workers, with benefit formulas giving high-wage earners a smaller percentage return and low-wage earners receiving a higher rate of return of preretirement earnings in their Social Security benefits. A high-wage earner can expect to receive about 28 percent of their average preretirement income in Social Security retirement benefits, while a low-wage earner can expect benefits that replace about 78 percent of their average prior earnings (Herd, 2009c). Although Social Security primarily covers retired workers and their families, the program also provides benefits for survivors and disabled workers. In 2014, 59 million people received Social Security benefits. Of these beneficiaries, 71 percent were retired workers or their spouses and children, 10 percent were the survivors of deceased workers, and 19 percent were disabled workers and their families (CBO, 2014).[1]

Eligibility for Social Security retirement benefits requires a minimum of 40 quarters of contributions, the equivalent of 10 years of Social Security-covered employment. The retirement benefit for workers is then calculated based on lifetime earnings, using the highest 35 years of earnings. As explained above, the progressive benefit formula provides low-wage earners with a higher replacement percentage when compared with high-wage earners. SS benefits account for about 38 percent of income from all sources for all elderly American people (SSA, 2014b). Retired worker benefits may be claimed as early as age 62, but the benefit is permanently reduced to account for the presumed longer receipt of benefits. The retirement age for full benefits ranges from 65 to 67, depending on year of birth (current full retirement age is 66). If an individual waits to claim benefits beyond the full retirement age, monthly benefits increase until age 70 to account for the presumed shorter overall receipt of benefits (Munnell, 2013). The spouse of an eligible retired worker may receive 50 percent of that worker's benefit amount as a dependent, if the dependent amount is higher than the retirement benefit to which they would be entitled based on their own work record. Although spousal dependent benefits can go to husbands or wives, women are overwhelmingly represented among the dependent beneficiary population. Surviving spouses can claim monthly benefits equaling 100 percent of the deceased worker's retirement benefits. Because of their lower lifetime earnings, discussed in greater detail below, two-thirds of older American women currently receive dependent or widow benefits rather than worker benefits in their own right (Harrington Meyer, Wolf, & Himes, 2005).

Brief History of Social Security

The Social Security Act of 1935, Title II, was designed to provide economic security for the nation's workers and prevent extreme poverty in old age through Social Security retirement benefits. At the outset, payroll taxes to finance Social Security were set at 2 percent of wages up to $3,000 in covered employment (1% paid by the worker, 1% paid by the employer). Initially, only about half of all American jobs were covered by Social Security with program assumptions reflecting the expectation that the typical Social Security worker was a white, married, breadwinning man (Mink, 1995; Ginn, Street & Arber, 2001). Occupations excluded from Social Security coverage were those disproportionately held by women and minority workers, with little to no Social Security coverage in the early years for workers employed in teaching, nursing, social work, domestic, and agricultural labor (Quadagno, 1994; DeWitt, 2010). Although the language of Social Security law and regulation was both gender- and race-neutral from the outset, the structure of the Social Security program replicated many of the inequalities of American society and has yielded gendered and raced outcomes from its inception. Program features that disproportionately affect people who vary by gender, marital status, and race/ethnicity have contemporary implications, which are discussed in more detail below.

The Social Security program has a complex history of reform. Even before the program was in full operation, the Social Security Amendments of 1939 expanded coverage to include the dependents and survivors of retired workers, and to establish a minimum benefit. Over the next several decades, legislative changes to the program generally focused on expansion. Over time, covered employment was more broadly defined until coverage became nearly universal. Today 97 percent of older people receive Social Security benefits. Among other major reforms, in 1956 the Disability Insurance (DI) component was added to the Social Security program and in 1972, Congress added an automatic cost-of-living adjustment. Policy makers recognized that, without such an adjustment, inflation eroded the value of the benefit and contributed to higher rates of poverty over time, given that elderly retirees were living longer but losing financial ground when prices rose. Not only were covered employment expanded and benefits inflation-proofed, the payroll tax rate has also increased over the years. From the initial 2 percent, periodic increases in the payroll taxes have led to the current rate of 12.4 percent. The taxable income cap has also increased gradually, from the initial $3,000 to $118,500 in 2015.

Starting in the late 1970s, legislative action on Social Security has taken a different direction. Rather than expanding, legislative efforts have focused primarily on solving persistent funding problems, by increasing revenue (payroll tax rates), and placing limits on future benefit growth. For

example, the Social Security Amendments of 1983 gradually raised the full retirement age for future beneficiaries, from the traditional full retirement age of 65 to age 66 for full benefits for individuals born between 1946 and 1955, rising to 67 for individuals born in 1960. The frequency of policy changes demonstrate that the only absolute certainties about Social Security, aside from the millions of bank deposits beneficiaries receive every month, is that the program will continue to evolve in the face of evolving social, demographic, and economic circumstances.

Social Security Financials

Social Security (SS) is the U.S. government's single largest program, accounting for nearly a quarter of all federal spending in fiscal year (FY) 2014. There are currently 59 million people receiving SS, and the program cost $840 billion in FY 2014. Old-age and survivors insurance (OASI) accounted for 83 percent of payments, with the other 17 percent going to DI. For years, payroll taxes exceeded the benefits being paid out, with the surplus invested in Treasury Bonds in the so-called Social Security Trust Fund. Beginning in 2010 current year outlays (payments of benefits and administrative costs) exceeded tax input. Under current law the program is projected to continue to take in less revenue in payroll taxes than it pays out in benefits into the foreseeable future, with the gap growing from 9 percent in 2013 to over 30 percent by the late 2020s (CBO, 2014). Past surpluses were invested in special trust funds created for OASI and DI. Under current law the DI trust fund is estimated to be exhausted in FY 2017 and the OASI fund in FY 2032, as shown in Figure 4.1. If the funds are treated as one, the combined trust fund will be exhausted around 2030 (CBO, 2014). Of course, because payroll taxes would still be collected from workers, there would be current revenue to provide a large fraction of benefits to beneficiaries. However, under most scenarios, at some future date a combination of payroll tax increases, covered earnings income ceilings rises, and benefit decreases—likely through raising the retirement age, or tweaking benefit calculation formulas—will doubtless maintain the integrity of the evolving Social Security program.

In 2004, Social Security benefits cost the federal treasury $492 billion; a decade later annual spending on the program totaled $840 billion (CBO, 2014). The ballooning cost of SS is due to a confluence of factors: an increase in the ratio of retired to working persons, as the baby boomers age, increases in life expectancy, and fertility declines (Palmer, 2006). By 2033, individuals 65 and older will grow from the 46.6 million elderly Americans today to more than 77 million (SSA, 2014b). Currently there are 2.8 workers paying payroll taxes per SS beneficiary, but by 2033 this

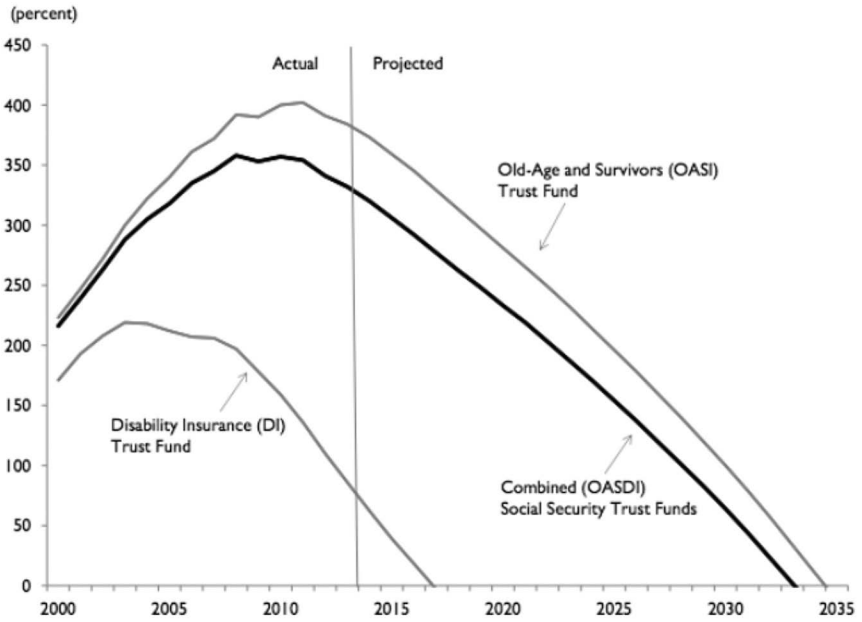


Figure 4.1 Social Security Trust Fund ratios. (Social Security Trustees, 2014 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, July 28, 2014, Table IV.B3, at http://www.ssa.gov/oact/tr/2014/lr4b3.html)

will decrease to 2.1 workers per beneficiary (SSA, 2014b). One way that legislators have been addressing rising costs is gradually increasing the maximum taxable income that payroll tax is collected on. In 2005, the maximum taxable earnings for SS were $90,000; 10 years later, payroll tax is collected on a maximum of $118,500 (OASDI and SSI Program Rates & Limits, 2005 & 2015). A much discussed option among policy makers to maintain the solvency of the Social Security program is to raise the age for eligibility for full retirement benefits (similar to changes in the 1983 Amendments) to 69 or 70, with the effect of cutting benefits to future Social Security beneficiaries who must wait longer for full benefits. While raising the retirement age across the board on its face seems like an equitable and seemingly inevitable way to share the increased costs of Social Security, many women, minority, and low-paid workers would be disproportionately disadvantaged by such a change. Remaining employed until age 70 is a very different experience, both in terms of capacity to work and sufficiency of income for retirement, for a minimum-wage retail worker who is on his feet all day, a nursing home aide providing personal care to

a frail resident, a construction worker in a physically demanding job, or a college professor working in her office.

Race, Class, Gender, and Social Security

While Social Security has reduced income inequality in old age and provided insurance against extreme poverty, it has not done this evenly across all groups. As noted earlier, the aggregate poverty rate for those over 65 is 10 percent, the lowest of any age group in the United States. However, looking at subgroups within the population paints a very different picture. Pockets of elder poverty and near-poverty persist. Older blacks, Hispanics, and unmarried people all entered the twenty-first century with poverty rates over 20 percent (Harrington Meyer, Wolf & Himes, 2005). Some, but not all, women are disadvantaged by the structure of the Social Security Program (Street & Wilmoth, 2001; Harrington Meyer & Herd, 2007; Carr, 2010). For example, one recent study documented the poverty rate for older single black women at around 40 percent, while the poverty rate for married white women the same age was less than 2 percent (Herd, 2009a,b,c). Social Security alone fails to provide a robust safety net for certain groups for several reasons. Often the reason for that failure is because the structure of the program is insufficient to compensate for disadvantages that often occur at the intersection of gender and race (Calasanti & Slevin, 2001) or the vagaries of lifetime low-waged or contingent employment (Ginn, Street & Arber, 2001).

Two key challenges that especially affect the value of women's Social Security benefits are linking noncontributory benefits to marriage and basing benefits on the average earnings over a very long work history. Because SS benefits are based on a long work history (35 years), time out of paid work or many years in low-wage jobs have permanently negative effects on the value of eventual benefits. While the Social Security benefit formula adjusts for this to some extent by providing a great rate of return to low-income earners, the adjustment does not completely remedy the impact of a lifetime of low wages or gaps in paid work. At some point in their life courses many women take time away from paid work or cut their hours to provide care for young children or aging parents, since the normative expectation—and the empirical reality—is that unpaid care and domestic work is mainly women's work (Sayer, 2005). Even when employed consistently, women face a gender wage gap that leaves them with median wages that are considerably less than their male counterparts. Estimates of the gender wage gap range from around 76 cents on the dollar to about 85 cents on the dollar, depending on source (Pew Research Center, 2013). The gender pay gap is long-standing and, despite shrinking somewhat in

recent years, it has been stubbornly persistent. Part of the reason women may be paid less than men is because they must work in lower-paid jobs to have sufficient flexibility, through part-time employment or shift work, to meet caregiving responsibilities. Part of the reason may be gender discrimination in the workplace. When women juggle paid and unpaid work, they may not be able to work the longer hours that men can tolerate to earn a raise, or overtime pay, or a promotion (Macpherson & Hirsch, 1995; O'Neill & O'Neill, 2005). The gender wage gap parallels a SS benefit gap, where older women receive about 76 cents on the dollar when compared to similar retired men (Herd, 2009a). While Social Security is redistributive, in reality the program pays very little in retirement benefits to older women who have worked long term in low-paid work and significantly more in spousal dependent benefits to wealthy married women who have worked only sporadically (Harrington Meyer & Herd, 2007). Poverty in early and midlife negatively affects savings, pension eligibility, and also SS benefits. The impact can be seen clearly for single mothers, who are 55 percent more likely to be poor in old age than married mothers (Herd, 2009a). This is a growing problem because the number of households headed by single mothers is increasing, from 10 percent in 1970 to 25 percent by 2005 (Herd, 2009a). In 2013, 40.6 percent of all births were to unmarried women (CDC, 2015). While not all of these women will remain single parents, a sizeable proportion is likely to. When such women reach retirement age, will there be adequate income support for them from Social Security, or will a benefit structure designed in the 1930s condemn them to the struggles of extreme poverty?

As mentioned earlier, Social Security is structured around a male breadwinner model, where a spouse can receive 50 percent of a retired worker's benefit and a surviving spouse receives 100 percent of the deceased worker's benefit. The 1939 Amendments extended coverage in these ways because most married white women were not employed at the time—they took care of the family and household. There was mounting concern that married men's modest SS benefits alone would not be sufficient to support a two-person household in retirement and that many widows, not eligible for benefits, would face extreme poverty.

While a breadwinner system made sense for many women and men in the 1930s, eight decades have dramatically changed patterns of women's workforce participation and changing patterns of family formation. This leaves a system whose eligibility and benefit criteria almost always lag behind social change, with Social Security structured to inadequately protect some of the most vulnerable older people in the United States. Because of the effects of broader social trends, SS is a contributor to racial, gender, and class inequality in old age (Harrington Meyer, Wolf, & Himes, 2005;

Herd, 2005). For many women, marital status matters more than work history in terms of the size of benefit received, with two-thirds of older women receiving spouse or widow SS benefits. Men can also qualify for spousal benefits, but have generally contributed more than they would receive as dependents or widowers because of higher lifetime wages and/or a longer work history, on average, than women. In 2000, 97 percent of recipients of spousal benefits were women (Harrington Meyer, Wolf, & Himes, 2005).[2]

Changing traditional marriage patterns have potentially troubling implications for the economic security of many older women in the future, especially if SS continues the breadwinner system of determining benefits. The current system best supports either women with long, uninterrupted work histories or those who marry, stay married, and never work; few women fit either of these models neatly (Herd, 2005). To receive spousal benefits a person must be currently married or have had a marriage that lasted 10 or more years (Harrington Meyer, Wolf, & Himes, 2005). As marriage rates decline and many marriages are shorter, the group eligible for traditional spousal benefits is shrinking. Despite the obvious disadvantage of women's lower Social Security incomes, it is nonetheless true that Social Security is incredibly important for older women's financial security (Street & Wilmoth, 2001), as it represents more than 80 percent of all retirement income received by over half of elderly American women, and becomes even more important as women age, representing 100 percent of income for a third of women aged 75+ (Fischer & Hayes, 2013).

Different cultural groups in the United States have different experiences associated with family formation and marital status that are eventually expressed in Social Security benefits. While marriage rates in the United States are declining across the board, they are declining dramatically for blacks and those with low educational attainment (Herd, 2009a). In 1970, the percentage of black women 65 and older who were married relative to white women the same age was 87 percent; by 2000 this comparative rate had fallen to 58 percent (Harrington Meyer & Herd, 2007). Only a third (33%) of older black women are married, compared to 57 percent of white women, 52 percent of Asian women, and 48 percent of Hispanic women (Harrington Meyer & Herd, 2007). The marriage rate for younger blacks has continued to decline. In 2010, a quarter of black men and women 35 and older had never married (U.S. Census Bureau, 2012). Marriage rates have also been declining for those with less education. In 2012, 73 percent of those aged 35–39 without a bachelor's degree had never been married, compared to 92 percent of the same group in 1950 (Fry, 2014). Racial minorities and those with less education often have lower lifetime

earnings; they are also more likely to be single and unable to benefit from the economies of scale realized in a shared household. Low-wage earners who are also single are constrained in their ability to save for old age. Continuing to tie Social Security income to marriage for future retirees, when the most vulnerable workers are also the least likely to be married, makes little sense if Social Security retirement benefits are to fulfill the original goal of alleviating elder poverty for all Americans.

SS income is critically important for racial minorities because they are less likely to have private pensions and retirement savings than their white counterparts (NASI, 2015). Among those 65 and older, SS was the only source of income for 36 percent of blacks and Hispanics, compared to 19 percent of whites (NASI, 2015). Even though the benefit formula for Social Security is progressive, racial minorities still receive a lower dollar amount due to lower lifetime earnings. Institutional racism is an endemic reality of the American sociopolitical landscape and clearly suppresses income across the life course for blacks and Hispanics. Some of the other factors that reduce lifetime earnings for minorities include higher rates of disability and chronic health conditions, particularly for African Americans, lower levels of education, and high incarceration rates, all of which can lead to intermittent unemployment and low wages (Martin & Murphy, 2014). In 2009, the average annual SS benefit for blacks 65 and older was $10,430, compared with an average benefit of $11,910 for all retirement-age beneficiaries (Martin & Murphy, 2014), more than 10 percent lower monthly Social Security retirement benefits for blacks compared to other beneficiaries. Black SS beneficiaries 62 and older are more than twice as likely to have incomes below the poverty line than all other SS recipients the same age—17.9 percent compared to 8.3 percent in 2009 (Martin & Murphy, 2014). Although SS reduces income inequality in old age to a certain extent, it also reproduces life-course experiences of racial inequality and fails to correct the effects of a lifetime of discrimination, poorer health, higher rates of disability, employment gaps, and lower wages.

When compared with other developed countries, older women in the United States are often more likely to be poor because of the way public and private pensions were designed (Ginn, Street, & Arber, 2001; Herd, 2009c). Elsewhere, adequate retirement income that is less tightly linked to lifetime earnings and marital status, delivered through public pensions, is essential for reducing inequality in old age. Because women have lower attachment to paid labor over the life course, older women fare better in countries where public pensions make up a larger percentage of retirement income, as long the public pension provides adequate benefits. In the United States public pension income is tied to lifetime earnings, although benefit formulas are redistributive, and makes up a smaller share

of retirement income than in other developed countries (Herd, 2009c). In Germany and Sweden, more than 70 percent of elderly income comes from public pensions, while only about 50 percent of retirement income in the United States is publicly funded (Herd, 2009c). In Europe, poverty is often defined as less than 40 percent of the median disposable income; by this measure 30 percent of older women in the United States are poor, indicating a failure of our public pension system (SS and SSI) (Herd, 2009c). Social Security makes up two-thirds of the average woman's retirement income in the United States, and is the only source of income for one in five older women (Herd, 2005). Herd (2009a, p. 127) also notes that "the US remains the only industrialized country with non-earnings-related benefits structured primarily around marital status."

Social Security reform is difficult to accomplish, because there are many stakeholders and beneficiaries, as well as a complex and slow-moving political process (Hudson, 2014). Herd (2005) notes that SS reform has the potential to reshape social relations in the United States more than any other policy, because it accounts for almost a quarter of federal spending, compared to about 1 percent spent on traditional welfare (TANF). As SS funding shortfalls become a more immediate challenge, it may even open up an opportunity to debate other creative, progressive, and meaningful policy changes to the program. Three types of reforms aimed at progressive improvements to Social Security are often proposed, based on policies in other developed countries: care credits to offset the costs of raising children, reforms that reduce the impact of divorce, and a universal minimum benefit (Herd, 2005). Projections of how each reform would impact race, class, and gender inequality indicate that a universal minimum benefit would do the most to reduce inequalities across multiple dimensions (Herd, 2005, see also Ginn, Street & Arber, 2001). One example of the way child care credits could improve Social Security records would be through imputing the national median income for a certain number of years for each child, and using the "child-adjusted" record of contributions rather than those years reflecting no or limited earning, to calculate lifetime average income. There are different ways to recognize unpaid care work, but projections indicate that care credit policy changes would make meaningful strides in increasing Social Security benefits to low-asset households and working women, while reducing racial and gender inequality (Herd, 2005). Policies that account for marital dissolution, however, still benefit those at the top of the asset distribution, while doing little for those near poverty or never married. Another possible reform looks at how the tax code, instead of SS payments, could be used to get closer to a minimum benefit. In the United States, the Earned Income Tax Credit (EITC) has been very successful for working-age Americans, providing a refundable

tax credit to the working poor. Nearly all of those eligible for the EITC receive it, compared to the 50–60 percent uptake among those eligible for SSI. One proposed reform is to do something similar for the elderly, using the tax code to give a refundable credit to the poorest older individuals (Herd, 2009a). Canada has a program, the Guaranteed Income Supplement (GIS) that works this way and has been successful in reducing poverty among older Canadians (Street & Connidis, 2001; Herd, 2009a).

Supplemental Security Income

The SSI program is a means-tested, federal income assistance program for the poorest elderly, blind, and disabled people in the United States. Social Security Disability Insurance (SSDI) is the largest disability program in the United States, but SSI does not have work history requirements, allowing it to fill in gaps in SS and SSDI (Furtado & Theodoropoulos, 2013). In July 2014, the SSI program distributed $4.7 billion in monthly benefits to 8.4 million recipients. As Figure 4.2 shows, less than 10 percent of SSI recipients qualify on the basis of being poor and elderly, with over 90 percent of recipients qualifying based on disability. However, for elderly beneficiaries receiving SSI benefits, they represent an economic lifeline. The SSI program was not an original part of Social Security; rather, the needs-based safety net program for the poor was created in 1972 under Title XVI of the Social Security Act, with the first benefits paid out in 1974. Prior to the implementation of SSI, the Social Security Act of 1935 had established federal-state needs-based programs of Old Age Assistance and Aid to the Blind, and later in 1950 added Aid to the Permanently and Totally Disabled. Under those programs, states received federal matching dollars

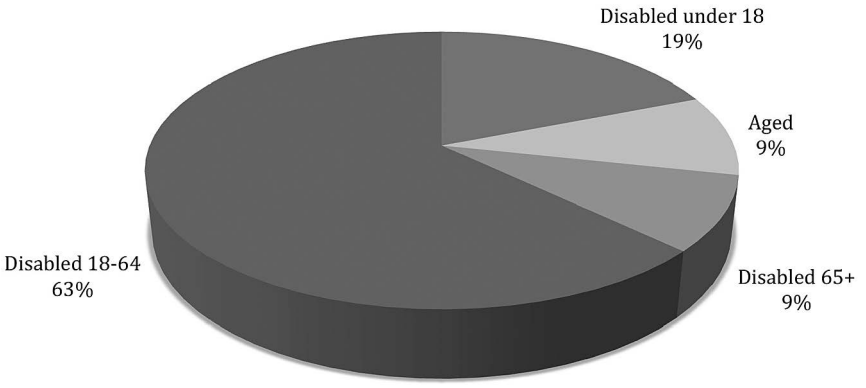


Figure 4.2 Federal SSI payments, 2013, $53.4 billion. (SSA, 2014a, Annual Report of the Supplemental Security Income Program)

to provide cash assistance to eligible needy individuals at a level deemed "practicable." This federal/state policy responsibility resulted in an elaborate patchwork of requirements, provisions, and funding levels that varied substantially across the states. Unlike the retired worker, dependent, and survivor benefits under Social Security, which ensured uniform benefits across the United States, the federal-state partnership guaranteed wildly different experiences among recipients, depending upon the state in which they resided. The 1972 SSI program was established with the goal of providing assurance that the elderly, blind, and disabled across the country would not struggle to subsist on incomes below the poverty line.

SSI is built on the Social Security model (and is administered through the SSA) of federally established and funded monthly income support, although it differs from traditional Social Security benefits in several important respects. First, Social Security is a social insurance entitlement program, whereas receiving SSI benefits is contingent on establishing the need for benefits through extreme poverty (lack of both income and assets) or permanent incapacity to be employed. Second, SSI is funded through general taxation, while SS is funded through a special payroll tax earmarked for the purpose of providing SS benefits. Finally, unlike the uniform national experience of Social Security benefits, individual states have the option of supplementing the base federal SSI payment. In 2015, SSI provided $733 of Federal monthly income to eligible individuals living in their own households with no other countable income; for a couple with two eligible members the benefit was $1,100 per month. Taking into account adjustments that reduce the benefit, the actual average monthly income in 2014 was $535. Since 1975, SSI benefits have increased with the same cost-of-living adjustment applied to Social Security (SSA, 2014a; CWM, 2014).

The SSI program is complex, with layers of requirements determining eligibility and actual benefit levels. Individuals are not eligible for SSI benefits if their countable resources exceed $2,000, or $3,000 for a couple. But what are countable resources? Broadly, anything that can be converted to cash to support oneself, such as bank accounts, stocks, or bonds, is considered a countable resource. Only a few assets are not counted in the means test, including life insurance, burial plots, cars valued at less than $4,500, and the value of an owner-occupied home (McGarry & Schoeni, 2015). Congress has repeatedly amended the law to add new resource exclusions, adding to the complexity. When determining an individual's monthly benefit, all potential sources of income, including occasional cash gifts and living arrangements are also considered and may result in a reduced monthly payment. Income includes cash income, such as wages, Social Security benefits, and unemployment compensation, but also in-kind income, which includes things like food or shelter. Cash and in-kind

income are both deducted from the Federal benefit rate. If living arrangements change, the monthly SSI benefit also changes. The complexity of the system adds to administrative costs, creates confusion for recipients, and makes the program difficult to explain to potential beneficiaries (Herd, 2009c).

In essence, SSI was intended to establish the minimum benefit discussed earlier, the lowest monthly income regarded as socially tolerable for elderly people living in the United States. The poorest older Americans should expect to receive additional income from SSI to keep them from living in extreme poverty. The program, however, has failed to establish this minimum benefit because somewhere from 40 percent to 50 percent of individuals eligible for SSI do not apply (Herd, 2009c; McGarry & Schoeni, 2015). Such low levels of participation have persisted throughout the history of the SSI program. Some eligible individuals do not apply simply because they are unaware that they might be eligible for SSI benefits. Others do not apply because they feel stigmatized and ashamed by the humiliating means test, or because they cannot manage the cumbersome eligibility paperwork. McGarry and Schoeni (2015) also found that elderly people who are eligible are less likely to enroll if they have higher-income children or receive transfers from a child. Being married and having higher levels of education also make an eligible individual less likely to enroll, indicating that stigma may play at least as important a role as confusion about whether a person might be eligible for the complex program (McGarry & Schoeni, 2015). When compared with similar programs in other developed countries, the U.S. SSI program offers the lowest minimum benefit, set at around 25 percent of median household income. The United States is also one of the only places that uses an asset test in addition to income guidelines to determine eligibility for a minimum benefit (Herd, 2009c).

SSI does fill in some of the gaps in SS coverage for vulnerable elders, particularly for minority individuals, although coverage is still inadequate. Some of the patterns discussed above, such as lower marriage rates and higher incidence of disability among African Americans, can be seen in SSI uptake. Almost a quarter (22.7%) of working-age SSI recipients are black, reflecting high disability rates, and half of black SSI recipients (50.4%) never married, compared to about a third of all SSI recipients who never married (Martin & Murphy, 2014). At first look, these numbers indicate that SSI is doing what it should to address some of the effects of lifelong disadvantage for minority elders by addressing inadequate coverage and benefits in traditional SS. The benefits actually paid to black beneficiaries, however, show troubling inadequacy. For older SSI recipients (62 and over), average annual SSI payments received by all beneficiaries were about 18 percent higher than those received by

blacks (Martin & Murphy, 2014). SSI benefits at the mean and median were about $1,000 less for black recipients than for all recipients ($6,007 vs. $7,097 and $5,300 vs. $6,300, respectively). Black retirement-age SSI recipients were also much more likely to live in poverty than the older SSI population in general, with 43.3 percent of blacks in poverty compared to 32.1 percent overall (Martin & Murphy, 2014). Since SSI is based on need and a federal benefit rate (FBR), not prior work history, consistently lower payments to racial minorities are difficult to explain.

SS and SSI provide inadequate income to alleviate poverty for some of the most vulnerable older people in American society, including many black and Hispanic elders, individuals with low educational attainment, and single mothers. Despite shortcomings, the recent recession, however, shows how critical these income provision programs are. By collectivizing risk and spanning generations, public pensions avoid market volatility and risk that individuals have a difficult time managing (Ginn, Street & Arber, 2001). Herd (2009b) discusses several recent trends that jeopardize income security for older Americans. There has been a trend over the last three decades of shifting risk to the individual, with fewer defined benefit pensions available in any employment sector and a focus on personal savings and matching contributions to retirement accounts. Currently 51 percent of workers have no private pension coverage and 34 percent of workers have no savings for retirement (SSA, 2014b). In the recent recession many middle-class retirees or near-retirees saw huge reductions in their individual retirement accounts; many people in all classes were pushed into foreclosure, losing the most important retirement asset: a home. Housing assets reduce risk in old age, by offsetting the costs associated with the death of a spouse, long-term care, or other medical expenses. This asset, however, is not evenly accessible. Just before the recession, in 2007, nearly 75 percent of whites owned their own home, compared with less than 47 percent of blacks and Hispanics; in addition, the homes owned by blacks and Hispanics have lower average values (Herd, 2009b). Homeowners 65 and older are three times more likely to hold a subprime mortgage than homeowners 35 and younger, placing them at greater risk of foreclosure. Lower-income households and racial minorities are also more likely to hold subprime mortgages (Herd, 2009b). The trend toward individual savings and risk is difficult to manage with limited resources and has the greatest negative effect on blacks, Hispanics, those with limited education, and women. Another trend has been increasing labor-force participation after 65. In previous recessions older workers left paid work in favor of full retirement, opening up jobs for younger workers. However, because retirement risk is so individualized now, this is not an option for many older workers, and the recession has motivated many to continue in

employment rather than retire (Herd, 2009b). Through all of the turmoil created by the 2008–2009 recession, Social Security has proven the most stable and secure source of income for older people, demonstrating the importance of collectivizing risk.

Medicare

Medicare is a federal health insurance program for individuals aged 65 and older and younger people with disabilities. Medicare was established in 1965 during the Johnson presidency's Great Society initiatives, designed to provide affordable, quality health insurance for older people where the private insurance market had failed to do so. With the Social Security Amendments of 1972 the program was expanded to cover some younger people with disabilities who become eligible if they receive SSDI benefits for two years, and those with end-stage renal disease. Prior to the passage of Medicare in 1965, only half of people 65 and older had health insurance. Older people who were insured were paying about three times what younger people paid for their health care for insurance premiums and out-of-pocket expenses, despite having only half the income, on average, of working-aged adults (Zainulbhai & Goldberg, 2014). Since 1965, the Medicare program has been instrumental in establishing health security, and by extension greater income stability, for millions of older Americans. In 2013, Medicare covered 43.5 million people 65 and older and 8.8 million individuals under 65 with disabilities; about 20 percent of enrollees are dually eligible for needs-tested Medicaid (Zainulbhai & Goldberg, 2014).

Almost all Americans 65 and older are eligible for Medicare, based on their, or their spouse's, work history. Working at least 40 quarters, or 10 years, in Medicare-covered employment leads to automatic entitlement at 65. Younger disabled individuals who receive SS benefits qualify for Medicare after a 24-month waiting period. Medicare also covers most people who need a kidney transplant or dialysis, regardless of age. The program has four distinct parts: Part A, which provides hospital insurance (HI), Part B, which is Supplementary Medical Insurance (SMI), Part C, also known as Medicare Advantage (MA), and Part D, the prescription drug benefit (see Table 4.1). The program is administered by the Centers for Medicare and Medicaid Services (CMS). In 2014, Medicare cost about $518 billion, which represents 14 percent of the federal budget (CWM, 2014). Medicare Part A covers hospital stays, posthospital care in a skilled nursing facility, limited home health care, and hospice. The patient is responsible for a deductible ($1,216 in 2014) for each hospital admission benefit period. The benefit period begins with hospital admission

and ends when the patient has not been in the hospital or a skilled nursing facility for 60 days; patients needing care beyond the 60-day period pay additional daily coinsurance. Medicare Part B is optional, but enrollment is high; in 2014, about 49 million older and disabled people were enrolled in SMI. Enrollees pay a monthly premium on a sliding scale, where premiums are higher for those with higher incomes. SMI covers doctors' visits, laboratory services, durable medical equipment, hospital outpatient care, and other medical services (CWM, 2014). Medicare Advantage (Part C) was introduced in 1985 and allows beneficiaries to obtain a private health plan that agrees to provide all services covered by Medicare Part A and B (with the exception of hospice) for a capitated monthly payment. MA is an attractive alternative to many low-income beneficiaries because it provides care with lower out-of-pocket costs (Newhouse & McGuire, 2014). Medicare Part D was added in 2003 through the Medicare Prescription Drug, Improvement, and Modernization Act and allows beneficiaries to enroll in a private prescription drug plan that is required to meet certain minimum benefit requirements (CWM, 2014). MA beneficiaries may enroll in a plan that covers prescription drugs, rather than maintaining a separate policy. Part D is an important addition to the Medicare program but is structured to have a coverage gap, popularly referred to as the doughnut hole, for some of the neediest beneficiaries (see Figure 4.3). Measures have been taken in the Affordable Care Act (ACA) to phase out this coverage gap by 2020 (Ways and Means Committee Democrats, 2015).

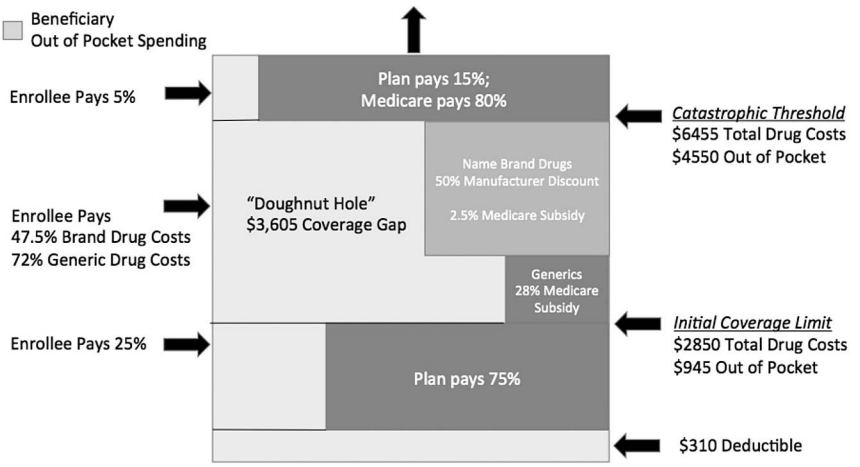


Figure 4.3 2014 Standard Medicare prescription drug benefit. (Congressional Research Service, Medicare Primer [WMC, 2014])

MA has provided an alternative to traditional Medicare (TM, Parts A and B). When the option was added in 1985, only 2 percent of Medicare beneficiaries enrolled; now more than a quarter (28% in 2013) of beneficiaries have chosen MA rather than TM (Newhouse & McGuire, 2014). Many analysts have argued that MA is a policy failure, with problematic selection effects and higher costs than TM, but policy changes in the mid-2000s seem to have resolved some of the key problems (Newhouse & McGuire, 2014). On average MA plans seem to offer higher value than TM at a lower cost, and counties with greater MA penetration also seem to have improved TM performance (Newhouse & McGuire, 2014). MA is preferable for many low-income beneficiaries because it has lower out-of-pocket costs. With average out-of-pocket costs for Medicare beneficiaries around $1,525, MA plans provide an important alternative (Chen et al., 2014). Both TM and MA sometimes overwhelm beneficiaries with choices. When enrolling in TM, a person has to decide if they want to enroll in Part B, if they want to purchase a supplementary plan, and if they want to enroll in Part D, and if so, which prescription drug plan best fits their needs. The choices in MA can be even more overwhelming. As an example, in 2008 in Miami-Dade County, beneficiaries enrolling in MA had to choose from 123 plans; in 2013 if they were in TM, there were 73 supplementary plans offered and 30 Part D plans to choose from (Newhouse & McGuire, 2014).

Medicare faces significant funding challenges as the U.S. population ages. Medicare finances are handled through two trust funds: the Hospital Insurance (HI) Trust Fund, which covers Part A benefits, and the Supplementary Medical Insurance (SMI) Trust Fund, which pays for Part B and Part D benefits (Zainulbhai & Goldberg, 2014). Much like SS, the HI Trust Fund is financed through a payroll tax, set at 2.9 percent in 2015 (OASDI and SSI Program Rates & Limits, 2015). Unlike the ceiling for payroll taxes in Social Security, there is no cap on taxable income for Medicare, and the contributions are split between the employee and employer, 1.45 percent each, with self-employed individuals paying the 2.9 percent. Since 2008 the HI Trust Fund has been running a deficit, and in 2013 expenditures from the HI Trust Fund exceeded revenue by $15 billion (Zainulbhai & Goldberg, 2014). Under current law, the HI Trust Fund will be depleted in 2030, but in the past HI insolvency has been resolved through legislative action. The SMI Trust Fund is always adequately funded because it is financed through general revenue, not payroll tax (Zainulbhai & Goldberg, 2014).

Historically, the perceived high cost of publicly provided Medicare insurance has received a great deal of political attention in the only developed

Table 4.1 Medicare Coverage and Financing

Program Details	Hospital Insurance (HI) Trust Fund (Part A)	Supplementary Medical Insurance (SMI) Trust Fund (Part B and D)
Services Covered	Inpatient hospital stays Skilled nursing facility stays Hospice care Home health visits	Part B: Physician visits, outpatient services, lab test, medical supplies, home health Part D: Prescription drugs
Major Funding Sources	Payroll taxes paid by workers and employers; interest earned on Trust Fund reserves; income taxes on part of Social Security benefits of upper income beneficiaries	Monthly premiums paid by beneficiaries; general revenues composed of federal income taxes; payments from states for premiums
Percentage of Medicare Spending in 2013	46%	Part B: 42% Part D: 12%

Source: Zainulbhai & Goldberg, 2014, National Academy of Social Insurance.

country where most citizens must depend on the private health insurance market for coverage. In general, health-care inflation in the United States has outpaced economic growth for decades. Despite concerns about its cost, Medicare has actually been less expensive and more effective at slowing cost growth than private insurance (Oberlander, 2014). Unsurprisingly, the bulk of Medicare spending is skewed toward a small group of very high-need beneficiaries. In 2009, almost 60 percent of Medicare spending was concentrated on 10 percent of beneficiaries with significant needs (Zainulbhai & Goldberg, 2014). Medicare payments are sensitive to geography, varying dramatically between high- and low-cost areas (Chen et al., 2014). Studies have shown that there is no real improvement in access, mortality, quality, or patient satisfaction in high-cost areas. Surprisingly, however, the Medicare program has been relatively successful at insulating beneficiaries from these spatial cost fluctuations, with no real difference in out-of-pocket expenditures across different geographical areas (Chen et al., 2014).

Medicaid

The Medicaid program provides health coverage to low-income individuals and families. Medicaid covers a variety of people: children and

pregnant women in low-income families, low-income individuals, elderly and disabled individuals, and about 1 million American Indians and Alaska natives. The program also funds the vaccines for children program, multiple forms of long-term care, and payments to hospitals that serve a disproportionate share of low-income individuals. In fiscal year 2012, $251 billion was spent on Medicaid. Although Medicaid provides coverage for poor Americans of all ages, the elderly and disabled account for almost two-thirds of payments for benefits (see Figure 4.4). About 32 percent of Medicaid spending was for long-term services and supports, such as nursing home care and in-home care (CBO, 2013).

In 2010, over 9.6 million older or disabled Americans were covered under Medicare and Medicaid (Young et al., 2013). Medicaid fills in gaps in coverage experienced by low-income Medicare recipients, usually referred to as dual-eligibles, in that they are eligible both for Medicare social insurance and needs-based Medicaid support to meet essential health needs. Medicaid pays for a variety of things not covered by Medicare, ranging from help with paying individual Medicare premiums, to covering part or all of the cost of long-term care, to provision of hearing, vision, and dental services (Young et al., 2013). Because Medicaid programs and eligibility criteria vary by state, the percentage of dually eligible Medicaid recipients varies widely across the country, from 9 percent in Utah to 26 percent in Maine. Spending on dual eligible beneficiaries also

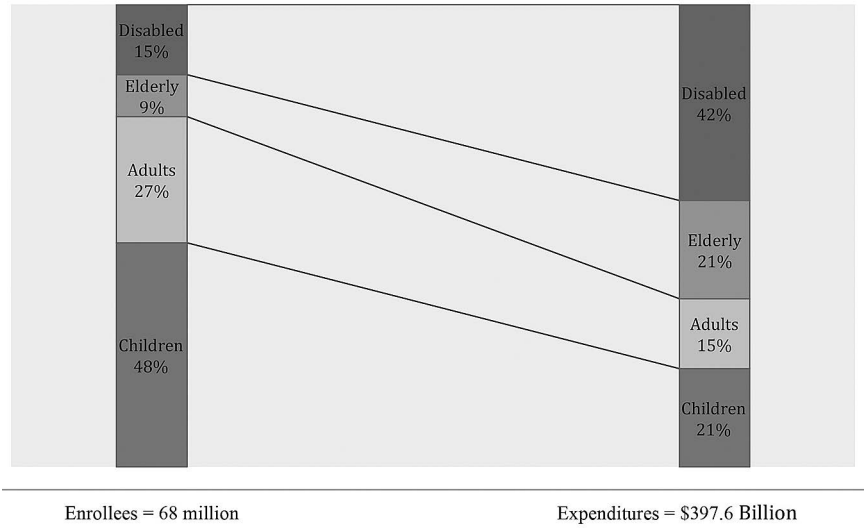


Figure 4.4 Medicaid enrollees and expenditures, FY 2011. (The Henry J. Kaiser Family Foundation, Medicaid Moving Forward, 2015, http://kff.org/health-reform/issue-brief/medicaid-moving-forward/)

varies dramatically, from just 20 percent of Medicaid spending in Arizona to a high of 55 percent of all Medicaid spending in North Dakota (Young et al., 2013). Because Medicare and private insurance provide minimal coverage for long-term care, about two-thirds of the Medicaid spending for dual eligible beneficiaries is for long-term care services (Young et al., 2013). Similar to other health insurance coverage, a small group of high-need dually eligible patients account for a large share of Medicaid spending, particularly when they need long-term services and supports.

The structure of Medicaid eligibility and payment contribute to outcomes that disadvantage some elderly Americans and benefit others. Medicaid reimbursements are lower than private pay for nursing home care in many cases, which can lead to discriminatory admissions processes (Harrington Meyer, 2001). Nursing homes rely on a certain percentage of private payers to maintain cash flow and may be reluctant to admit too many patients who are already Medicaid eligible. Older black and Hispanic individuals are 50 percent more likely to rely on Medicaid at the time of admission to nursing homes than whites, and older single people are about 30 percent more likely than married people to rely on Medicaid at the time of admission (Harrington Meyer, 2001). The bigger the gap between Medicaid payments and private payments in a particular state, the more difficulty those on Medicaid may have quickly getting into a facility.

Marital status is also a structural component of the Medicaid program. Historically, when one spouse became so ill or frail that nursing home admission was unavoidable, the couple would have to spend down virtually all their assets into poverty, so that the spouse who needed long-term care could qualify for Medicaid. This process of getting rid of almost everything the couple owned would leave the community-dwelling spouse in poverty, with no assets to fall back on (Harrington Meyer & Roseamelia, 2007). The 1988 Medicare Catastrophic Coverage Act provided some protection for couples with one spouse entering a nursing home. The community-dwelling spouse's income is no longer included in determining the nursing home resident's eligibility for Medicaid, and if their income is below a federal maintenance allowance (roughly $1,500 / month) then income can be transferred back from the institutionalized spouse's income (Harrington Meyer & Roseamelia, 2007). The community-dwelling spouse is also permitted to retain half of the couple's assets, up to roughly $90,000, a policy change that improves circumstances surrounding Medicaid eligibility for the community-dwelling spouse in long-married couples. However, as discussed above, divorces are more common now than in the past and of particular concern are marriage rates that are declining sharply among specific, already-disadvantaged groups. This is important

for Medicaid eligibility because couples who cohabit rather than marry cannot access any of the protections with respect to spending down to eligibility for long-term care, meaning that the community-dwelling spouse may lose access to the couple's home and assets (Harrington Meyer & Roseamelia, 2007).

Discussion: Future Challenges

The long-term financial prospects for Social Security, Medicare, and Medicaid are worrisome for many. The rising costs associated with Social Security and the major health-care programs come from three main sources: an aging population, with proportionately fewer working-age Americans to provide tax revenues for the programs; rising health-care costs per beneficiary; and ACA expansion of federal subsidies for insurance purchased on the exchange and also through Medicaid expansion (CBO, 2014). Historically, cash-flow surpluses in Medicare and SS were invested in special treasury bonds, creating reserves to cover anticipated tax shortfalls in the future. The problem is that these bonds are liabilities of the general fund; over time selling bonds to the Social Security trust fund has created a smaller de facto deficit than would have otherwise been the case, but when redeemed (which started in 2010) they will constrain the ability of the general fund to cover other things (Palmer, 2006). While funding Social Security through baby boomer retirement is problematic and expenditures already make up a quarter of the federal budget, the cost projections for the health-care programs dwarf any challenges presented by SS. Even assuming slowed health-care cost inflation, Medicare spending is expected to double as a percentage of GDP over just two decades (Palmer, 2006). The cost per enrollee in the health-care programs has grown much more quickly than GDP, an average annual rate near 3 percent in excess of the per capita GDP (Palmer, 2006). Palmer (2006) argues that we cannot grow our way out of these funding challenges, as the long-rung growth rate of GDP per worker has averaged around 1.6 percent annually for the past 50 years and there is no reason to expect a huge increase from that. Under current law, the three entitlement programs are projected to equal the entire federal budget (around 18% of GDP) by 2078 (Palmer, 2006).

Separate from these macroeconomic challenges to the solvency of the old-age welfare state are problems associated with predictable vulnerabilities in old age that so far appear to be intractable. Particularly in terms of having an adequate income to fully participate in their social worlds with dignity, for some subgroups of elderly people—disproportionately single elders, race/ethnic minorities, widowed/single women, and the oldest-old—Social Security and SSI are often not up to the task of compensating

adequately in old age for lifetimes of disadvantage. Perhaps it is too much to expect any social policy to do that. However, policy makers who will debate and enact changes to the old-age welfare state will serve older Americans well if they take into account ways to provide adequate income and robust access to health care that ameliorates some of life's disadvantages at the same time as they work to ensure the affordability and integrity of these essential public programs. Medicare and Medicaid may become less worrisome budget line items if the promise of universal access to health care under ACA brings health costs under control. The ACA provisions are so recent, however, it is impossible to understand what the contours of Medicare and Medicaid are likely to be in a few years and whether ACA will fulfill its promise of covering more Americans and slowing medical inflation. In terms of income, one certainty is that the institution of retirement—the social expectation that most people will be able to retire one day—depends on Americans having dependable sources income in old age. That underscores the importance of thoughtful Social Security and SSI reform, not just for the most vulnerable older Americans, but for average workers and their families, too.

Notes

1. This chapter focuses mainly on programs specifically designed for older Americans. However, there are many nonelderly Social Security beneficiaries. For example, disabled individuals may be entitled to monthly benefits. To qualify for Social Security disability benefits a worker must have accumulated at least six quarters of Social Security-covered employment. Disability, for the purposes of collecting Social Security, includes medically determined physical or mental impairment that is likely to cause death or last longer than 12 months, which prevents an individual from engaging in any substantial work available in the national economy. It is estimated that more than 1 in 4 of today's 20-year-olds is expected to become disabled before reaching the retirement age of 67 (SSA, 2014b).

2. A recent SS innovation means that more men may qualify for spousal benefits in the future. The June 2015 *Obergefell v. Hodges* Supreme Court decision to recognize same-sex marriage for Social Security benefits, followed by the August 2015 Justice Department decision to incorporate same-sex unions within the SS and SSI system, will offer important new protections to spouses (whether men or women) in those newly recognized unions (SSA 2016).

References

Calasanti T., & Slevin K.F. (2001). *Gender, social inequalities, and aging.* Walnut Creek, CA: Alta Mira Press.

Carr, D. (2010). Golden years? Poverty among older Americans. *Contexts,* 9, 62–63.

Centers for Disease Control and Prevention (CDC). (2015). Births: Final Data for 2013. *National Vital Statistics Reports,* 64(1). Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_01.pdf

Chen, L. M., Norton, E. C., Langa, K. M., Le, S., & Epstein, A. M. (2014). Geographic variation in out-of-pocket expenditures of elderly Medicare beneficiaries. *Journal of the American Geriatrics Society,* 62(6), 1097–1104.

Committee on Ways and Means U.S. House of Representatives (CWM). (2014). *Green book: Background material and data on the programs within the jurisdiction of the Committee on Ways and Means.* Retrieved from http://greenbook.waysandmeans.house.gov/2014-green-book

Congressional Budget Office (CBO). (2013). *An overview of the Medicaid program.* Retrieved from http://www.cbo.gov/publication/44588

Congressional Budget Office (CBO). (2014). *CBO's 2014 long-term projections for social security: Additional information*. Retrieved from www.cbo.gov/publication/49795

DeWitt, L. (2010). The decision to exclude agricultural and domestic workers from the 1935 Social Security Act. *Social Security Bulletin (2010),* 70(4), 49–68. Retrieved from http://www.ssa.gov/policy/docs/ssb/v70n4/v70n4p49.html

Fischer, J., & Hayes, J. (2013). The importance of social security in the incomes of older Americans: Differences by gender, age, race/ethnicity, and marital status. Institute for Women's Research Briefing Paper IWPR # D503. Retrieved from http://www.iwpr.org/publications/pubs/the-importance-of-social-security-in-the-incomes-of-older-americans-differences-by-gender-age-race-ethnicity-and-marital-status

Fry, R. (2014). New census data show more Americans are tying the knot, but mostly it's the college educated. Pew Research Center.

Furtado, D., & Theodoropoulos, N. (2013). SSI for disabled immigrants: Why do ethnic networks matter? *American Economic Review: Papers & Proceedings 2013,* 103(3), 462–466.

Ginn, J., Street, D., & Arber, S. (Eds.). (2001). *Women, work, and pensions: International issues and prospects.* Buckingham: Open University Press.

Harrington Meyer, M. (2001). Medicaid reimbursement rates and access to nursing homes: Implications for gender, race, and marital status. *Research on Aging,* 23(5), 532–551.

Harrington Meyer, M., & Herd, P. (2007). *Market friendly or family friendly? The state and gender inequality in old age.* New York: Russell Sage Foundation.

Harrington Meyer, M., & Roseamelia, C. (2007). Emerging issues for older couples: Protecting income and assets, right to intimacy, and end-of-life decisions. *Generations,* 31(3), 66–71.

Harrington Meyer, M., Wolf, D. A., & Himes, C. L. (2005). Linking benefits to marital status: Race and social security in the US. *Feminist Economics,* 11(2), 145–162.

Herd, P. (2005). Reforming a breadwinner welfare state: Gender, race, class and social security reform. *Social Forces,* 83(4), 1365–1393.

Herd, P. (2009a). The problem of poverty among older people in America: Options for reform. *Benefits,* 17(2), 125–135.

Herd, P. (2009b). The two-legged stool: The reconfiguration of risk in retirement income security. *Generations,* 33(3), 12–18.

Herd, P. (2009c). Women, public pensions, and poverty: What can the United States learn from other countries? *Journal of Women, Politics & Policy,* 30(2–3), 301–334.

Hudson, R. B. (2014). The future of old age politics and policy. In R. B. Hudson (Ed.), *The New Politics of Old Age Policy* (3rd ed.). Baltimore, MD: Johns Hopkins University Press.

Macpherson, D., & Hirsch, B. (1995). Wages and gender composition: Why do women's jobs pay less? *Journal of Labour Economics,* 13(3): 426–471.

Martin, P. P., & Murphy, J. L. (2014). African Americans: Description of social security and supplemental security income participation and benefit levels using the American Community Survey. U.S. Social Security Administration Office of Retirement and Disability Policy, Research and Statistics, Note No. 2014–01.

McGarry, K., & Schoeni, R. F. (2015). Understanding participation in SSI. University of Michigan Retirement Research Center (MRRC) Working Paper, WP 2015–319.

Mink, G. (1995). *The wages of motherhood: Inequality in the welfare state, 1917–1942*. Ithaca, NY: Cornell University Press.

Munnell, A. H. (2013). Social security's *real* retirement age is 70. Issue Brief 13–15, Center for Retirement Research at Boston College.

Myles, J. (1989). *Old age in the welfare state: The political economy of public pensions*. Lawrence: University Press of Kansas.

National Academy of Social Insurance (NASI). (2015). *Social security and people of color.* Retrieved from https://www.nasi.org/learn/socialsecurity/people-of-color

Newhouse, J. P., & McGuire, T. G. (2014). How successful is Medicare advantage? *The Milbank Quarterly,* 92(2), 351–394.

OASDI and SSI Program Rates and Limits. (2015). Social security administration. Retrieved from http://www.ssa.gov/policy/docs/quickfacts/prog_highlights/index.html

OASDI and SSI Program Rates and Limits. (2005). Social security administration. Retrieved from http://www.ssa.gov/policy/docs/quickfacts/prog_highlights/RatesLimits2005.html

Oberlander, J. (2014). The long struggle for universal health care. In Thomas R. Oliver (Ed.), *Guide to U.S. health and health care policy* (pp. 23–36). New York: Sage/CQ Press.

O'Neill, J. E., & O'Neill, D. M. (2005). What do wage differentials tell us about labor market discrimination? Working Paper 11240, National Bureau of Economic Research, March 2005.

Palmer, J. L. (2006). Entitlement programs for the aged: The long-term fiscal context. *Research on Aging,* 28(3), 289–302.

Pew Research Center (2013). *On pay gap, millennial women near parity—For now*. Retrieved from http://www.pewsocialtrends.org/2013/12/11/on-pay-gap-millennial-women-near-parity-for-now/

Quadagno, J. (1994). *The color of welfare: How racism undermined the war on poverty*. New York: Oxford University Press.

Sayer, L. (2005). Gender, time and inequality: Trends in women's and men's paid work, unpaid work and free time. *Social Forces,* 84, 285–304.

Social Security Administration (SSA). (2014a). *Annual report of the Supplemental Security Income Program*.

Social Security Administration (SSA). (2014b). *Social Security Administration fact sheet*.

Social Security Administration (SSA). (2016). *GN 00210.100—Same-Sex Marriages and Non-marital Legal Relationships—Benefits for Aged Spouses* https://secure.ssa.gov/poms.nsf/lnx/0200210100

Street, D., & Connidis, I. (2001). Creeping selectivity in Canadian women's pensions. In J. Ginn, D. Street, & S. Arber (Eds.), *Women, work and pensions: International issues and prospects* (pp. 158–178). Buckingham: Open University Press.

Street, D., & Wilmoth, J. (2001). Social insecurity: Women and pensions in the US. In J. Ginn, D. Street, & S. Arber (Eds.), *Women, work and pensions: International issues and prospects* (pp. 120–141). Buckingham: Open University Press.

U.S. Census Bureau. (2012). *Historical marriage trends from 1890–2010: A focus on race differences*. Retrieved from http://www.census.gov/library/working-papers/2012/demo/SEHSD-WP2012–12.html

Ways and Means Committee Democrats. (2015). *Medicare*. Retrieved from http://democrats.waysandmeans.house.gov/issue/medicare

Young, K., Garfield, R., Musumeci, M., Clemans-Cope, L., & Lawton, E. (2013). *Medicaid's role for dual eligible beneficiaries. The Kaiser Commission on Medicaid and the uninsured*. Retrieved from http://kff.org/medicaid/issue-brief/medicaids-role-for-dual-eligible-beneficiaries/

Zainulbhai, S., & Goldberg, L. (2014). Medicare finances: Findings of the 2014 trustees report. *National Academy of Social Insurance, Health Policy Brief, No. 11*.

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CHAPTER FIVE

Gender, Race, and Ethnicity and the Life Course

Jan E. Mutchler and Ceara R. Somerville

Few characteristics have more significance in shaping the life course than gender, race, and ethnicity—social categories penetrating virtually every aspect of social life (Mayer, 2009). From birth, throughout childhood and young adulthood and on into middle age, gender, race, and ethnicity shape the key elements of well-being. The significance of these social categories stems in part from inequities within the social structure, including racism and sexism, which shape opportunities. As well, these social categories flag differences in values, norms, and orientations that impact outcomes and experiences throughout the life course. When they are devalued by society, behaviors associated with cultural or normative orientations can become a basis not only for *difference* but also for *inequality*, such as the example of low public value assigned to caretaking for children and frail older adults.

The goal of this chapter is to explain how gender, race, and ethnicity shape well-being outcomes in later life, guided by the life-course framework. The key insight of this framework is that behaviors, identities, and inequalities associated with social groupings have implications not only for outcomes at a given point in time, but potentially for a lifetime. The life-course approach describes the temporal processes by which early experiences shape late-life outcomes—for example, how opportunities to obtain high-quality health care in childhood and young adulthood shape longevity and late-life wellness. An additional insight of this framework is that individuals make decisions within the context of primary groups, and that late-life outcomes are shaped by these so-called linked lives—for

example, a couple's division of labor regarding paid work and childcare can yield gender differences in late-life income security. While recognizing the importance of human agency—the capacity of each individual to form judgments and act according to his or her own sensibilities—the life-course approach recognizes that choices are constrained not only by social structure in general, but also by the gendered and racialized society within which we live. In our discussion, we also reference theoretical arguments about inequality, especially the cumulative inequality perspective, which has gained traction in recent years. We review literature on selected quality of life issues, including income security, health and health care, and family caregiving and long-term care, as a means of illustrating relevant conceptual themes. Finally, we consider challenges and opportunities for responding to and remediating late-life disparities. We begin our explorations by laying out the demographic context structuring these issues.

The Demographic Context

The gender, race, and ethnic composition of any population are shaped by the confluence of fertility, mortality, and migration. These processes determine both the *number* of people within a population and the demographic *composition* of a population, including the gender, race, and ethnic characteristics of the population at a given time. In the United States, gender composition is shaped primarily by the balance of births and deaths. Currently, the U.S. sex ratio at birth—the ratio of the number of boys to the number of girls born in a given time period—is 1.047, similar to the sex ratio in 1950, which was 1.054, when today's 65-year-olds were born (Martin et al., 2010; Matthews & Hamilton, 2005). Building on these uneven beginnings, gender composition of a cohort is reshaped extensively by mortality. Throughout the life course, males have a higher risk of dying than do females, and as a result, females live longer than men on average; females born in 2013 are expected to live 81 years, on average, compared to 76 years for males (Kochanek et al., 2014). Primarily as a result of these processes, and only minimally shaped by immigration (Fry, 2006), the older population is heavily female. Indeed, the U.S. population includes just 81 men for every 100 women aged 70–79, and only 62 men for each 100 women aged 80–89 (see Figure 5.1).

Race and ethnic composition are also shaped by demographic forces. The terms *race* and *ethnicity* are often used interchangeably, but are thought to describe different attributes. Race typically denotes a status or identity associated with physiological features, especially skin color, while ethnicity reflects an individual's "heritage, nationality group, lineage, or country of birth" (Humes, Jones, & Ramirez, 2011). Racial and ethnic diversity in

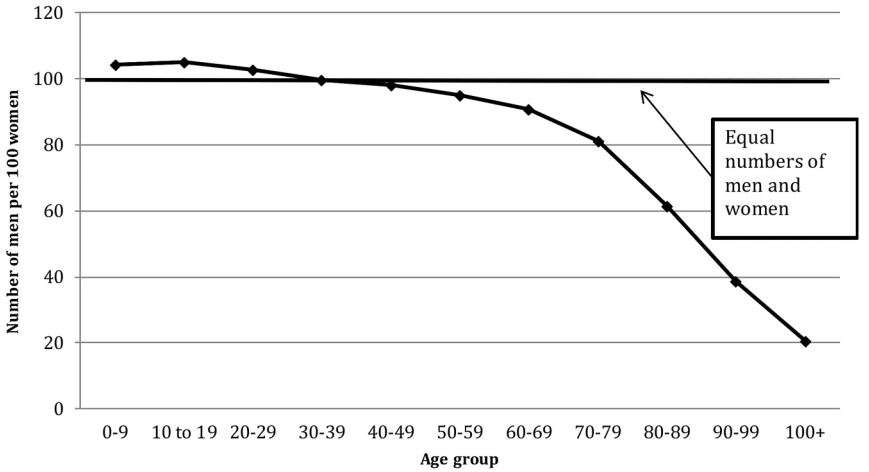


Figure 5.1 Sex ratio by age group, United States, 2010. (U.S. Census Bureau, FactFinder, Census 2010 table QT-P1: [http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml])

the United States have been fueled in part by fertility differences, as birth rates for Hispanic and African American women are higher than for non-Hispanic white and Asian women. For African Americans, this potential for growth is partially offset by a higher risk of dying throughout the life course (Arias, 2014). Yet, other ethnic groups—including Hispanics and many Asian national origin groups—have expectations of life that are *longer* than that experienced by non-Hispanic whites (Kaiser Family Foundation, 2015; Pollard & Scommegna, 2013).

International migration patterns have an especially significant impact on the diversity of the U.S. population; currently, two-thirds of recent immigrants to the United States are from Asia or Latin America (U.S. Department of Homeland Security, 2013). In recent years, the share of legal immigrants who are aged 50 or older has risen and is now approaching 20 percent; many of these late-life entrants are admitted to the United States as relatives, especially parents, of current U.S. residents or citizens. Because immigration policy provisions give preference to family members of U.S. residents, and allow immediate family members of U.S. citizens, including parents, to be admitted without numerical caps, a gradual increase in the age structure of recent immigrants is expected (Carr & Tienda, 2013).

Together, these demographic influences are reshaping the composition of the U.S. population, decade by decade and cohort by cohort. Looking ahead, what can we expect in terms of racial and ethnic diversity within the older population? Figure 5.2 illustrates the expected transformation.

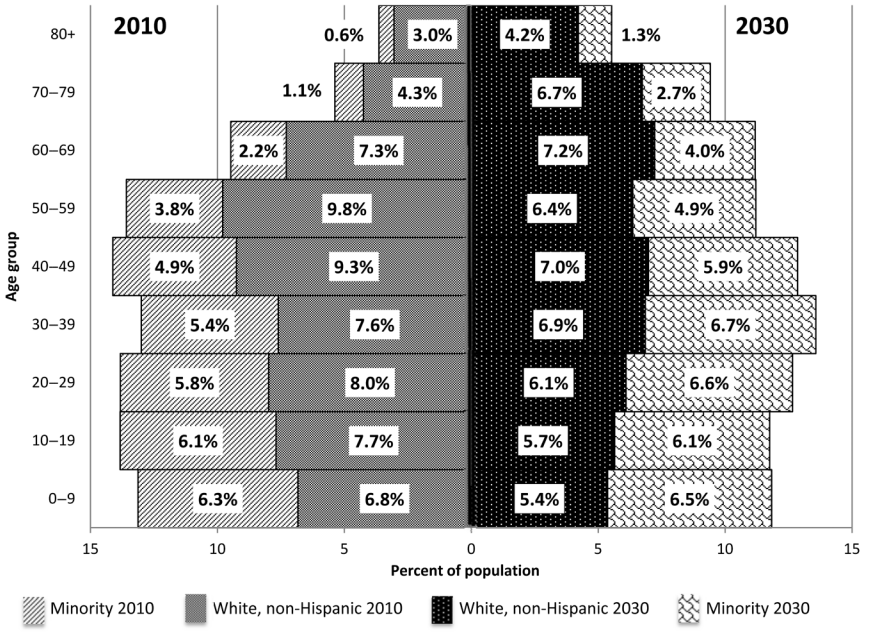


Figure 5.2 Age and ethnicity, United States, 2010 (actual) and 2030 (projected) (2010 data from U.S. Census Bureau, FactFinder, Census 2010 table P12I: [http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml]. 2030 projections from U.S. Census Bureau http://www.census.gov/population/projections/data/national/2014/downloadablefiles.html)

On the left-hand side of the population pyramid, the age structure based on data from Census 2010 is shown, with each age cohort split into components based on race and ethnicity. For example, 13 percent of the U.S. population in 2010 was under the age of 10, and nearly half of this age group—6 percent of the total population—was either Hispanic, nonwhite, or both. Older cohorts in 2010 include progressively smaller shares who are ethnic minorities and in the 80+ population, a large majority is non-Hispanic white. The right-hand side of the pyramid shows projections for the United States in 2030 and suggests a considerable increase in the share of the U.S. population that is nonwhite or Hispanic. All age groups under the age of 30 are expected to be majority-minority by 2030, and the proportion that is non-Hispanic white will decline relative to the 2010 distribution for all but the oldest age groups. This trend is expected to continue, and in the coming decades even larger shares of the older population will be composed of ethnic minorities. The aging of younger, more diverse cohorts who already live in the United States will drive this process; as well, a continued influx of late-life immigrants will contribute to this trend.

Although the demographic forces depicted here are likely to continue for the foreseeable future, the social and political *significance* of this growing diversity depends on the continuing importance of race and ethnicity as factors that shape well-being in later life. Features of the social and economic climate, as well as evolving public policies, may modify the significance of diversity and group membership. Currently, inequalities in education, income, wealth, and access to high-quality jobs with benefits (such as pension coverage) shape lifelong patterns of resource accumulation. As a result, African Americans and Hispanics enter late adulthood with substantially fewer financial resources than do their white non-Hispanic peers. Although reduced racial and ethnic inequalities in childhood and early adulthood have the potential to bridge late-life differences in well-being, among today's older and middle-aged adults, race, and ethnic inequalities persist at a high level.

The Life Course and Late-Life Outcomes: Disparities in Later Life by Gender, Race, and Ethnicity

The scientific literature documents sharp contrasts in the aggregate characteristics of older men and women, as well as contrasts by race and ethnicity. The life-course processes leading to these disparities have been extensively explored; yet debate continues regarding the social, economic, or policy modifications that would be most successful in reducing disparities in later life. Processes relating to identity, culture, and discrimination each shape how and why gender, race, and ethnicity matter in distinctive and sometimes competing ways. For example, gender identity may shape health behaviors (Calasanti, 2010), which, in turn, has consequences for successful management of chronic disease. Cultural factors play a role as well. Examples include health behaviors and beliefs, norms regarding intergenerational support and caretaking, and English language proficiency—all of which shape trajectories into later life, as well as experiences as an older adult. Dynamics of sexism and racism may limit lifelong opportunities for education and subsequent career advancement, resulting in lower economic security in later life among women and some ethnic minorities. Bias and discrimination against individuals based on their membership in given gender, race, or ethnic groups can also limit access to high-quality health care, increasing the risk of accumulating chronic conditions and causing people to enter late-life sicker and more disabled than their more privileged peers.

The life-course perspective offers a well-developed foundation for understanding the ways in which gender, race, and ethnicity shape the dynamics of the aging process. By providing rich conceptualization of the twists and turns of an individual's life, the life-course approach draws our attention to

transitions and trajectories relating to roles and statuses (Hagestad, 1990; Settersten, 2006), which are subject to factors relating to gender, race, and ethnicity. While incorporating the importance of *human agency*—free will and the unique choices made by each individual—the life-course perspective emphasizes that broad social forces, including those linked to gender and race, influence those choices. In addition, gender or ethnic groups may be impacted by the *interconnected lives* of family members and significant others in distinctive ways. Features of the broader social structure relating to educational and work organizations, labor markets, and public policies lend significance to the *timing* at which transitions occur, the *sequence* of transitions relative to one another, and the *duration* of time spent in given statuses (Elder, 1985).

The life-course approach yields insight regarding group-based differentiation in experiences (Settersten, 2006). An expanded theoretical understanding of how inequality throughout the life course impacts late-life disparities requires attention not only to features of the life course at the microlevel—such as individual decision making—but also to social structural processes shaping inequality throughout one's lifetime. Life experiences are shaped by membership in gender, race, or ethnic groups and are carried into later life, where they influence strengths and vulnerabilities with respect to resources, health, and social support (O'Rand, 2006). For example, barriers to obtaining schooling or training associated with group membership contribute to disparities in lifelong accumulation of occupational and economic benefits; these disparities, in turn, have implications for later-life resources in the form of wealth accumulation, pension eligibility and values, Social Security credits, and health outcomes (see Walsemann, Geronimus, & Gee, 2008).

Cumulative advantage/disadvantage (CAD) theory is a useful and well-known approach to explaining how early advantage or disadvantage contributes to trajectories of accumulation (Dannefer, 2003). In recent years, insights from CAD theory have been refined and reformulated into cumulative inequality (CI) theory by Ferraro and colleagues (Ferraro & Shippee, 2009; Ferraro, Shippee, & Schafer, 2009). Blending insights from the life-course approach and cumulative advantage/disadvantage theory, the CI theory offers a nuanced understanding of how social structural inequalities intersect with life changes and trajectories, noting that "age is an index of life changes and the accumulation of inequality" (Ferraro & Shippee, 2009:2).

Although not framed exclusively in terms of gender, race, and ethnicity, several elements of CI theory are especially informative to understanding disparities relating to these attributes. As one example, Ferraro and Shippee (2009) note that both *risks* and available *resources* are socially structured, allowing for the accumulation of both advantage and disadvantage. Group differences in exposure to risk (hazards to health or finances, for example)

and in access to resources are important, but they do not entirely determine trajectories. Individual choices matter too—even when those choices are also structured to an extent by group membership, through norms and socializing influences. As another example, Ferraro and Shippee draw attention to the important role of *perception* of life trajectories, noting that "people view and evaluate their trajectories in comparison to significant others and reference groups" (2009:4). As individuals navigate their own life-course trajectories, progress and success are measured relative to the experience of others. Yet to the extent that reference groups are structured by gender, race, and ethnicity, as well as by age group, those perceptions may be shaped by perceived inequalities as well as reinforced by lived experience. For example, England (2010) argues that women may track their own "success" in reference to that of their mothers, or older women with similar educational accomplishments, rather than to men with similar characteristics.

In the remainder of this section, we will discuss, in more depth, these issues with respect to three topics of key importance to late-life disparities in well-being: economic security, health and health-care access, and caregiving and long-term care. Space limitations prevent extensive review of these topics; as a result, we focus our discussion on key conceptual issues and provide only illustrative citations. We describe selected disparities by gender and across racial and ethnic groups, focusing on key characteristics relating to well-being (see Table 5.1). We acknowledge a high degree of differentiation within the specified groups profiled here; for example, substantial differences in characteristics and resources are evident across national origin groups within the Asian (e.g., Vietnamese vs. Japanese), Hispanic (e.g., Mexican vs. Cuban), and black (e.g., U.S. black vs. Caribbean black) populations. Moreover, we focus our attention on the largest groups; data for Native Americans, seniors reporting multiple races, and other relatively small categories are not presented.

Economic security and the life course. Economic security is achieved when the financial resources to support an acceptable quality of life are stably in place. Among older adults, economic security depends in large part on access to pension income, including both public and private pensions, and on personal savings, financial investments, and other forms of wealth, such as real estate, which either generate income or could serve as a source of funds, if liquidated. Economic security is further promoted when capacity to work at least part time is maintained. Statistics on the amounts and sources of income among older adults highlight that all else equal, having more *sources* of income is associated with having higher *amounts* of income, and consequently greater economic security. Older adults living exclusively on a Social Security pension typically have substantially less income than older adults who also have a private pension, income from savings or investments, and wage or salary income. Recent data suggest that among

Table 5.1 Selected Characteristics of U.S. Older Adults Aged 65+, by Gender, Race, and Ethnicity (2013–2014)

	Non-Hispanic				Gender	
	White	Black	Asian	Hispanic	Men	Women
Socioeconomic resources						
College graduate (%)	26.4	14.8	34.1	9.9	30.2	19.8
Household income[a] (median)	$46,700	$35,700	$67,000	$38,700	$51,400	$40,900
Poor (%)	7.4	18.3	13.3	19.8	7.4	11.3
Homeowner[b] (%)	77.7	56.5	44.9	48.7	77.2	68.3
With pension income[c] (%)	33.1	28.1	17.2	15.7	39.2	23.7
Health and health-care access						
Health status[c]:						
– Excellent/ very good (%)	38.1	25.2	27.6	25.0	36.6	34.5
– Good (%)	34.7	36.1	38.8	34.0	34.7	35.3
– Fair/poor (%)	27.1	38.6	33.6	41.1	28.7	30.1
With a disability (%)	35.3	41.2	32.0	40.3	35.5	36.7
Insurance coverage[c]:						
– No insurance	1.0	2.4	5.1	5.2	1.9	1.5
– Public only	36.1	55.3	52.6	63.6	38.3	42.5
– Private (with or without public)	62.9	42.3	42.3	31.2	59.8	56.0
Limited English proficiency (%)	2.2	2.9	58.2	55.0	8.0	8.9
Linguistically isolated (%)	1.3	1.2	29.4	27.6	4.3	4.5
Living arrangements and long-term care						
Living in an institution (%) (age 75+)	5.4	7.2	2.8	3.4	3.5	6.4

	Non-Hispanic				Gender	
	White	Black	Asian	Hispanic	Men	Women
Living in an intergenerational household (%)	17.4	36.1	49.2	46.4	19.7	24.8
Living alone (%)	28.2	32.2	13.4	19.0	18.5	34.1

Note: Except for % in an institution, all figures exclude group quarters population and are based on adults aged 65 and older.

[a]Household income is based on all households including residents aged 65 and older. The older adult may or may not be the householder.

[b]Homeowners include both householders and their spouses living in an owned home.

[c]The source for these data is the 2014 Current Population Survey microdata, retrieved from the IPUMS website.

Sources: Calculated by authors from data retrieved from the Integrated Public Use Microdata Series (IPUMS; Ruggles et al., 2010). Except as noted, original data source is the 2013 American Community Survey.

older adults with an income of $63,648 or higher in 2012—representing the highest income quintile—half of all income was from earnings (Social Security Administration, 2014). Financial resources in later life, including both income and wealth, are a function of lifelong opportunities and choices relating to both paid and unpaid work, to human capital investments, and to intergenerational transfers of wealth. Because gender, race, and ethnicity are associated with these key dimensions, differences in economic security in later life are substantial.

Decades of research on gender inequality at work and at home documents the ways in which disparate gender roles, socializing influences, and bias combine to yield differences between men and women in access to financial resources and benefits. Most girls growing up in the United States during the 1950s—including today's 65-year-olds—were socialized to expect that they would prioritize family roles over work roles. Indeed, today's older women are less likely than their male counterparts to have completed college (see Table 5.1). Moreover, they are more likely to have experienced interrupted careers as a result of caring for children and other family members (Calasanti, 2010). Perhaps in part due to dominant gender roles at the time, but also as a result of gender discrimination and the devaluation of "women's work" (England, 2010), the jobs most of today's older women held when they did work had lower pay than those held by men and were less likely to provide benefits in the form of pension

coverage (Calasanti, 2010). The tension between paid and unpaid work continues into later life, with older women being more likely than men to reduce work hours in order to care for a disabled or frail loved one (Pleau, 2010), or to care for a grandchild (Harrington Meyer, 2014).

For many women entering late life, these experiences and trajectories have resulted in low economic security. As shown in Table 5.1, older women are considerably more likely to be poor than are older men and less likely to have a pension or to own a home. They are more likely than men to rely largely or exclusively on Social Security as a source of retirement income (Social Security Administration, 2014), making them especially reliant on a single source of income and vulnerable to threats to the Social Security system (Harrington Meyer & Herd, 2007).

Socioeconomic disparities across race and ethnic groups are also substantial. Completing a college degree typically occurs in young adulthood, but the implications of completion and the associated accumulation of economic resources are considerable over a lifetime. Table 5.1 shows that one-third of Asian and one-quarter of non-Hispanic white older adults are college graduates, but only 15 percent of black and 10 percent of Hispanic older adults have completed college. Corresponding disparities in income, poverty, and financial assets are also evident; older blacks and Hispanics live in households with less income and a higher risk of poverty. Older non-Hispanic whites are far more likely than the other ethnic groups to own a home and to have income from a pension. Indeed, African American, Asian, and Hispanic seniors are less likely than their white counterparts to receive Social Security, asset, or pension incomes (Social Security Administration, 2014). These disparities may be partially a result of the high prevalence of immigrants among older Hispanics and Asians, many of whom worked in lower-paying jobs with fewer benefits. Immigrants arriving in the United States at older ages have especially low incomes, having had few opportunities to build an employment history in the United States that provides access to Social Security or a pension (O'Neil & Tienda, 2015). Discrimination throughout the life course undoubtedly plays a role as well, with ethnic minority group members encountering fewer opportunities to pursue higher education and well-paid employment.

Much has changed in recent decades, and some disparities in economic security may be narrowing. Young women now enter adulthood with different expectations and experiences than what was common among their mothers and grandmothers. For example, women are currently more likely than men to enroll in college (Lopez & Gonzalez-Barrera, 2014). Delays in marriage and childbearing, increases in the share of women who remain childless, and increasing involvement of men in household and childrearing activities suggest that men's and women's life-course trajectories may

be converging, at least to some extent (Treas & Marcum, 2011). It is likely that current cohorts of young women will convert these new experiences into stronger economic security in later life, with diminishing gaps between older men and women. Yet there is reason to be cautious in these expectations. Continued wage gaps between working men and women will result in late-life disparities in income indexed to lifetime earnings, including Social Security pension benefits, private pension income, and other forms of wealth (Harrington Meyer & Herd, 2007). Moreover, gender asymmetry at home and work continues (England, 2010). For example, Cha (2010) reports that in dual-earner households, a wife has an increased likelihood of quitting work when her husband works long hours, especially when the couple has children. In contrast, husbands do not respond in a similar way when their wives work long hours. In these and numerous other ways, the lives of men and women remain in partially separate spheres, with powerful implications for late-life disparities in income security.

Disparities in economic security by race and ethnicity may also be narrowing. While acknowledging far lower levels of net worth among older African Americans than whites, a report on well-being among older Americans identifies a narrowing of this gap in recent decades (Federal Interagency Forum on Aging-Related Statistics, 2012). And disparities in high school graduation rates and college attendance are narrowing as well, despite persistent gaps in educational attainment (Fry & Taylor, 2013; Kena et al., 2015). More equitable access to education and jobs would be expected to result in greater parity in late-life resource profiles in coming decades. Yet immigration trends that shape the number and characteristics of new arrivals, along with policies that determine immigrants' access to opportunities and supports that shape economic security, will contribute to disparities moving forward.

Health status and access to medical services. Life-course influences on later-life health are well established in the literature (Pearlin et al., 2005); these findings are largely consistent with the cumulative inequality framework offered by Ferraro and Shippee (2009). A growing literature documents the many ways in which opportunities, risks, and exposures stemming from childhood shape health trajectories, ultimately leading to lower survivorship and poorer health outcomes in later life among some individuals and groups. Gender, race, and ethnic inequality, as well as social and cultural factors that shape health-related experiences in childhood and beyond, have long-lasting impacts on health. Poor late-life health outcomes result from a matrix of exposures throughout the life course, including participating in unhealthy behaviors, being exposed to unhealthy environments, and experiencing poor access to appropriate medical services. Indeed, gender, race, and ethnic differences in health profiles and survivorship are

stubborn reminders of the complex inequalities that continue to permeate American society.

Health disparities. Although women live longer than men on average, health disparities by gender are evident in women's having more chronic illnesses and higher levels of disability (Crimmins, 2004). Health disparities are substantial across race and ethnic groups as well. Members of some groups, most notably African Americans and Native Americans, are less likely to survive to old age and more likely than whites and Asian Americans to be disabled as they enter later life (e.g., Goins et al., 2007; Hayward & Heron, 1999). Fewer blacks, Asians, and Hispanics report their health status as "excellent" or "very good," compared to whites (see Table 5.1). Rates of *frailty*—a cluster of symptoms and deficits occurring especially in later life, and predictive of mortality—are higher among women than men and are substantially higher among African Americans than among whites (Hirsch et al., 2006; Xue, 2011).

A considerable amount of research suggests that populations with lower socioeconomic status—including African Americans and some other ethnic groups—have poorer health and higher death rates; indeed, Link and Phelan (1995) refer to socioeconomic status as a fundamental cause of disease. Yet, the scientific literature highlights the complex matrix of factors shaping health-related outcomes. For example, despite having lower income and education levels, and contrary to the expectation that low-income populations are at higher risk of mortality, U.S. Hispanics have a life expectancy that is *higher* than their non-Hispanic white peers—an observation referred to as the "Hispanic paradox" (Lariscy, Hummer, & Hayward, 2015). Explanations abound as to the source of this anomaly, but a firm conclusion is elusive. Some researchers speculate that health behaviors such as quality of diet and smoking behavior may play a role. Currently, the most likely explanation relates to migration selectivity, as Hispanic immigrants to the United States may be selected for good health, which could in turn confer a measure of advantage for later-life health and survivorship. Moreover, some speculate that Hispanic immigrants may return to their country of origin when their health declines—the so-called salmon bias—thus removing those most at risk of dying from the pool of Hispanics in the United States (Pollard & Scommegna, 2013).

An active area of research in recent years has focused on detecting and measuring *under the skin* mechanisms by which disadvantage leads to health consequences. For example, some evidence suggests that stress associated with low socioeconomic and minority status increases the pace of biological aging such that African Americans and Hispanics take on biological features of later life more rapidly than whites (Diez Roux et al., 2009; Geronimus et al., 2010). As one example of how this might work,

we consider high blood pressure, or hypertension—a dangerous condition for older adults as it is a precursor to a number of deadly heart and health conditions. Nearly two-thirds of Americans who are 60 and older have hypertension (Nwankwo et al., 2013), but prevalence of hypertension is not equally distributed by race. Age-adjusted prevalence rates of hypertension are substantially higher among non-Hispanic blacks than among others. Factors that contribute to high blood pressure include socioeconomic status, health and lifestyle behaviors, environmental factors, and stress; higher levels of exposure to these risks would be expected to produce higher rates of hypertension. But even when controlling for such risk factors, blacks still have a significantly higher prevalence of hypertension compared to their white counterparts (Quinones, Liang, & Ye, 2012). The persistence of higher blood pressure among black Americans is thought to be a result of long-term inequality that has manifested itself biologically (Rooks & Thorpe, 2014)—an example of *under the skin* mechanisms by which social exposures have physiological consequences. Enduring a life course conditioned by chronic and eventful stressors linked to racial disadvantage takes a toll on the physiological response to stress, so by middle- and late-age stages of life, the body functions at a lower capacity than it might have otherwise.

Another active area of research links early-life events—even conditions occurring in childhood and adolescence—to late-life health consequences. Literature exploring this linkage considers both *under the skin* processes and the accumulation of disadvantageous social and economic circumstances into later life (Kuh & Ben-Shlomo, 2004). Evidence has been offered suggesting that childhood disadvantage is associated with higher risk of late-life disability (Montez & Hayward, 2014), greater risk of functional limitations and serious health conditions such as cancer, diabetes, heart disease, hypertension, stroke (Brown, O'Rand, & Adkins, 2012), and poorer physical performance (Haas, Krueger, & Rohlfsen, 2012). Gruenewald et al. (2012) report substantial effects of childhood socioeconomic situation on later-life allostatic load—a concept capturing the wear and tear on the body associated with the experience of and response to stress. How these early-life conditions lead to late-life health outcomes is not fully understood. However, it is clear that populations at higher risk of experiencing poverty, low educational attainment, and other childhood disadvantages disproportionately experience negative health outcomes in older adulthood as a result.

Access to appropriate medical services. Gender, race, and ethnicity shape access to health care in later life and throughout the life course. In part, this relates to the affordability of medical care. Many women are poorly equipped to seek adequate health care in later life, as a result of poor

economic security levels and greater reliance on public forms of health insurance, including Medicare and Medicaid (see Table 5.1). Socioeconomic barriers to obtaining needed care disproportionately impact populations that have lower average levels of education and income, including racial and ethnic minorities. Health-care access may be lower among Asians and Hispanics, both of whom are more likely to lack health insurance coverage. Non-Hispanic whites are more likely to have supplemental coverage through private insurance, which adds a layer of protection and access not shared by other ethnic groups.

The Affordable Care Act (ACA) appears to be having a positive impact on medical care coverage rates, especially among low-income and ethnic minorities (Collins, Rasmussen, & Doty, 2014), but many working-age Americans (and some older adults) still are uninsured. Moreover, many seniors lacked health insurance for substantial periods of time during youth and adulthood, resulting in inadequate preventive care and poor management of chronic disease. These health consequences of early-life disparities in health insurance coverage are carried into later life.

The lack of linguistically or culturally appropriate medical services may also contribute to health disparities, especially for ethnic groups with sizable numbers of immigrants. Many older adults, especially Hispanics and Asians, speak a language other than English at home. Many of them speak English poorly or not at all and more than one-quarter live in linguistically isolated households—that is, households in which no adult member speaks English well (see Table 5.1). For these individuals, limited English proficiency (LEP) may serve as a barrier to obtaining medical services. Medical facilities and practitioners have responded by devising ways to access and use medical interpreters in clinical settings (Chen, Youdelman, & Brooks, 2007). Indeed, using professional medical interpreters improves the quality of care for patients with LEP (Ngo-Metzger et al., 2007), but the use of interpreters across medical settings is uneven (Karliner et al., 2011; Schenker et al., 2011). In practice, family members and other acquaintances are often used as interpreters, despite federal rulings that require providers to ensure language access to all patients (Ginde et al., 2010).

Racism and discrimination in health care also negatively shape health outcomes (Williams, 2012). Institutional racism may contribute to poorer health outcomes among racial minorities; for example, evidence suggests that hospitals that disproportionately serve African Americans yield significantly higher rates of mortality following acute myocardial infarction among Medicare patients (Skinner et al., 2005). Empirically, differences in treatment patterns, and in the process of decision making related to treatment, are well documented across ethnic groups (see, e.g., Freedman

et al., 2009; Prehn et al., 2002), although the extent to which these differences are related to bias, to cultural (in)competence in the provision of care, or to communication barriers is not fully understood.

Looking ahead: health disparities resolved? A considerable amount of past research indicates that disability levels in later life have declined in recent decades (Crimmins, 2004; Manton, Gu, & Lamb, 2006). These declines have been traced to changes in health-related behaviors and to cohort succession, whereby younger, healthier cohorts are moving into later life and replacing less healthy and less affluent persons from earlier cohorts. With the implementation of the ACA, we might expect that access to health-promoting medical care will be more widely and evenly available across racial, ethnic, and socioeconomic groups. Yet looking ahead, we suspect that some disparities in health outcomes are likely to persist, despite improvements across cohorts as a whole. Many chronic conditions, including hypertension, arthritis, and diabetes, continue to be more prevalent among African Americans on the brink of later life (Mutchler & Burr, 2007). Unhealthy behaviors, including excess alcohol consumption, smoking, and physical inactivity, are unevenly distributed across gender, race, and ethnic groups as well (Adams & Schoenborn, 2006; Hummer & Hayward, 2015). Group differences in health behaviors and resources, including appropriate medical care, are likely to persist to some degree in coming years and disparities in health outcomes are expected to result.

Family caregiving and formal long-term care. Long-term services and supports (LTSS), including both formal and informal long-term care, demand growing attention as the population becomes older. Among those who survive to age 85, it is estimated that half need some form of long-term care (Rogers & Komisar, 2003). The majority of care for older adults is provided on an unpaid basis by family members and friends (Scan Foundation, 2012), many of whom are themselves older. The extent to which care needs are met informally, versus formally in a nursing home or other type of facility, depends partly on an older adult's level of frailty; some care demands are so great that they cannot be effectively managed at home. Yet the availability of potential informal caregivers, and the predisposition of those individuals to engage in care activities, can be a deciding factor in determining the extent to which care will be provided formally or informally.

Features of the life course shape the likelihood of an older adult needing long-term care, as well as the type of care accessed. As described earlier in this chapter, assaults to health and well-being early in the life course accumulate throughout a lifetime, and may result in a high risk of needing long-term care. In comparing group-risk profiles, both those who live the longest on average and those who become frail at the youngest ages,

women and African Americans, respectively, will experience the highest risk of needing these supports. Receiving supports informally at home or formally in a facility will be shaped in part by characteristics of one's social network. Recalling the principle of linked lives, care can only be provided informally when one's network includes people who have the capacity to provide care and are willing to do so. Differences by gender, race, and ethnicity in use of formal and informal long-term care result from life-course processes shaping the need for care, as well as the networks available to provide care. As shown in Table 5.1, gender, race, and ethnic groups differ in their relative propensities to live in nursing homes as well as in multigenerational households, which are common platforms for exchange of support, including caregiving. These living arrangement differences may be a result of divergent familistic values regarding coresidence, but also reflect resource differences that make living alone unaffordable for an older adult as well as for others in his or her social network. These differences are significant in shaping the extent to which informal caregivers are relied upon in later life, as well as the degree to which older adults provide care and support to others in their close networks.

Women make up a large majority of both caregivers and care recipients. The most typical informal care provider is either a spouse—most commonly a wife—or an adult child—most commonly a daughter. As well, a large majority of paid care providers—such as homecare workers and CNAs in nursing homes—are female. The most typical care *recipient* is also a woman, both among older adults receiving care at home and those in a long-term care setting. Women are at higher risk than men of frailty, and they are more likely to need support with activities of daily living. As well, because they are more likely to outlive their spouses, women are at increased risk of needing care from another family member or through formal services. Indeed, as shown in Table 5.1, a larger share of women than men live in an intergenerational household or in an institution.

Formal long-term supports and services have long been underutilized by minority families, in part due to strong familial norms associated with caregiving, as well as distrust of large institutions. African Americans tend to focus on the family as a unit rather than the individual, yielding a sense of obligation to care for senior members at home (Bradley et al., 2002). Moreover, some African Americans express mistrust in nursing facility staff (Bradley et al., 2002); when they do choose a nursing facility they prioritize characteristics such as neighborhood location and the race and ethnic background of staff members and other residents (Howard et al., 2002). African Americans who enter a nursing facility may experience a different quality of care compared to non-Hispanic whites, because many live in highly segregated, lower-tier facilities, characterized by a greater

number of Medicaid residents, poorer structural characteristics—such as lighting and cleanliness—and a smaller number of nurses and certified nursing assistants compared to the number of residents (Mor et al., 2004). Since the nursing home is a last resort care option for African American elders, many in nursing facilities have much higher needs for help managing activities of daily living, instrumental activities of daily living, diabetes, and stroke, compared to non-Hispanic whites (Borrayo et al., 2002).

Older Hispanics face similar issues in nursing home utilization as those faced by older African Americans in terms of access and quality of care, but may experience additional obstacles to securing informal care due to acculturation of younger generations. Traditionally, caregiving responsibilities have fallen to the young women in a Hispanic family (Herrera et al., 2008). Young Latinas, however, have begun to seek higher levels of education and enter the workforce rather than remain in the household, thus leaving a gap in care for older members of the family who may then be required to seek formal long-term care services.

Although the proportion of older minorities in nursing homes is growing (Feng et al., 2011), white older adults are at higher risk of entering a nursing home, all else equal. Thomeer, Mudrazija, and Angel (2014) report that African Americans and Hispanics experience a risk of entering a nursing home that is lower than what would be expected based on need for support, relative to non-Hispanic whites, which could be evidence of either cultural preference or health-care inequity. Obstacles to obtaining nursing home care may include the availability of geographically proximate facilities, the availability of linguistically concordant services, or other barriers. These authors also find that the availability of future help—family or friends who would be willing to provide support if needed—does not impact the probability of entering a nursing home for whites or blacks, although it does reduce the risk of nursing home admission for Hispanics, once again highlighting the principle of linked lives.

Challenges and Solutions

Gender, race, and ethnicity exert powerful and enduring influences on virtually every element of the life course, resulting in late-life experiences and opportunities that are highly differentiated across these groups. As discussed in this chapter, many factors condition these differences, including cultural beliefs and practices, socialization, and social norms, as well as discriminatory features of organizations and social institutions. Because circumstances of later life result from experiences, investments, and accumulations throughout the life course, it is unlikely that late-life disparities will be remedied by focusing exclusively on late-life interventions.

Disadvantageous experiences in childhood and young adulthood may set young people on course to uncertain futures in midlife and older adulthood. Despite the potential of choice and human agency for redirecting individual pathways, there is little question but that the accumulation of advantages and disadvantages over time result in later-life experiences and profiles that are distinctively shaped by gender, race, and ethnicity.

How might we remedy this unequal progression? Certainly disrupting patterns of childhood inequality would be beneficial. Programs and policies directed toward leveling the playing field in education, healthcare access and quality, and career entry for youth and young adults will impact late-life inequality. Yet policies and interventions directed toward older adults have potential to remediate inequalities as well. Policy modifications could make a difference in reducing gender disparities in old-age economic security. For example, Social Security policy linking benefits strongly to marital history could be modified, reshaping the implications of marriage for income security in later life and taking important steps toward reducing the gender gap in pension benefits (Harrington Meyer & Herd, 2006). Yet initiatives focusing exclusively on older adults will not reshape the likelihood that older women will bring with them into later life substantially fewer financial resources in the form of private pensions, savings, and investment wealth. For those disparities to be minimized, more fundamental changes to the organization of work, availability and affordability of childcare, and societal support for caregiving will be required.

Policy modifications can also impact disparities in health and healthcare access by broadening access to health insurance and promoting more stable access to health care. The ACA appears to be making progress in securing improved health trajectories for low-income people (Collins et al., 2014), a disproportionate share of whom are ethnic and racial minorities. With time, this improved access should translate to better health, avoidance of disease, and improved management of chronic conditions—all of which should result in reduced disparities in later-life health profiles. Yet additional broad-based policies will be needed. Strategies for increasing the number of medical clinicians who speak a second language in addition to English may reduce current barriers to obtaining high-quality medical care among patients with limited English proficiency, including many elders. Targeting health promotion messages more effectively to racial and ethnic minorities is an important means of remedying gaps in healthy behaviors that account for some health disparities in later life. To the extent that low socioeconomic status is indeed a fundamental cause of poor health (Link & Phelan, 1995), breaking the association between ethnic status and low-SES is a challenging and necessary step.

Securing access to appropriate LTSS will become increasingly important as the older population becomes larger, older, and more diverse. In past decades, formal services (e.g., nursing homes) were primarily used by white elders, with African American, Hispanic, and other ethnic minority older adults relying largely on informal care from family members or close others. In recent years, this has been shifting, in part, through new policies relating to financing long-term care. Feng et al. (2011) suggest that recent efforts to rebalance LTSS (institutional vs. home and community-based services) have not closed the majority/minority gap in nursing home use, but instead have shifted it such that institutions have seen an increase in Medicaid expenditures and reimbursements far greater than has occurred for home-based care (Woodcock et al., 2011). This shift has made institutional care more accessible to lower-income seniors. At the same time, other more costly LTSS options have developed, such as continuing-care retirement communities, assisted living options, and additional home-based care options. White seniors are far more likely to be able to afford these services compared to nonwhites. So as minority seniors are moving into nursing homes, white seniors are staying at home or moving to other LTSS options. Indeed, as shown in Table 5.1 and reported elsewhere (Feng et al., 2011), African Americans are now more represented in nursing homes, a departure from patterns observed in the recent past.

Most elders and their families would prefer informal and community-based options for LTSS over institutional settings. Moreover, noninstitutional supports save payers—including families, insurers, as well as the Medicaid system and taxpayers—billions of dollars annually (Feinberg et al., 2011). Yet these cost savings are secured at the expense of millions of informal, unpaid, family caregivers who quit their jobs, reduce their hours, and in turn, jeopardize their own economic security in order to provide support for loved ones, challenging their ability to prepare for their own old age. Women and members of some ethnic groups are far more likely to participate in unpaid caregiving, incurring the long-term financial implications of those experiences. Strategies and policies are sorely needed to help caregivers reconcile the competing demands of caregiving and paid work, potentially reducing the financial costs of caring (Lee et al., 2014).

A majority of the older population will continue to be female for the foreseeable future. Moreover, demographic trends ensure that the older population will become increasingly diverse in terms of race and ethnic composition. Through cohort succession, we can be sure that the *significance* of being male or female, white or nonwhite, a member of one ethnic minority group or another will be different for older adults in the future than they are today. These differences are ensured in large part because

each cohort entering later life has encountered a unique set of experiences that are relevant to late-life outcomes. Reducing gender-, race-, and ethnic-based risks for poor outcomes in later life requires attention to the ways in which membership in these social groupings shapes life trajectories from the moment of birth, as well as the ways in which social institutions and policies value some pathways over others. Recalibrating old-age policy in anticipation of these new, more diverse cohorts is needed.

References

Adams, P., & Shoenborn, C. (2006). *Health behaviors of adults: United States, 2002–04. Vital Health Statistics, 10* (230). Hyattsville, MD: National Center for Health Statistics.

Arias, E. (2014). *United States life tables, 2009. National vital statistics reports, 62* (7). Hyattsville, MD: National Center for Health Statistics.

Borrayo, E., Salmon, J., Polivka, L., & Dunlop, B. (2002). Utilization across the continuum of long-term care services. *The Gerontologist, 42*, 603–612.

Bradley, E., McGraw, S., Curry, L., Buckser, A., King, K., Kasl, S., & Andersen, R. (2002). Expanding the Andersen model: The role of psychosocial factors in long-term care use. *Health Services Research, 37*, 1221–1242.

Brown, T., O'Rand, A., & Adkins, D. (2012). Race–ethnicity and health trajectories: Tests of three hypotheses across multiple groups and health outcomes. *Journal of Health and Social Behavior, 53*, 359–377.

Calasanti, T. (2010). Gender relations and applied research on aging. *The Gerontologist, 50*, 720–734.

Carr, S., & Tienda, M. (2013). Family sponsorship and late-age immigration in aging America: Revised and expanded estimates of chained migration. *Population Research and Policy Review, 32*, 825–849.

Cha, Y. (2010). Reinforcing separate spheres: The effect of spousal overwork on men's and women's employment in dual-earner households. *American Sociological Review, 75*, 303–329.

Chen, A., Youdelman, M., & Brooks, J. (2007). The legal framework for language access in healthcare settings: Title VI and beyond. *Journal of General Internal Medicine, 22* (Suppl. 2), 362–367.

Collins, S., Rasmussen, P., & Doty, M. (2014). Gaining ground: Americans' health insurance coverage and access to care after the Affordable Care Act's first open enrollment period. *The Commonwealth Fund*. Retrieved from http://www.commonwealthfund.org/~/media/files/publications/issue-brief/2014/jul/1760_collins_gaining_ground_tracking_survey.pdf

Crimmins, E. (2004). Trends in the health of the elderly. *Annual Review of Public Health, 25*, 79–98.

Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. *Journal of Gerontology: Social Sciences, 58*, S327–S338.

Diez Roux, A., Ranjit, N., Jenny, N., Shea, S., Cushman, M., Fitzpatrick, A., & Seeman, T. (2009). Race/ethnicity and telomere length in the multi-ethnic study of atherosclerosis. *Aging Cell, 8*, 251–257.

Elder, G., Jr. (1985). Perspectives on the life course. In G. Elder (Ed.), *Life course dynamics: Trajectories and transitions, 1968–1980* (pp. 23–49). Ithaca, NY: Cornell University Press.

England, P. (2010). The gender revolution: Uneven and stalled. *Gender & Society, 24*, 149–166.

Federal Interagency Forum on Aging-Related Statistics. (2012). *Older Americans 2012: Key indicators of well-being.* Washington, DC: U.S. Government Printing Office. Retrieved from http://www.agingstats.gov/agingstatsdotnet/Main_Site/Data/2012_Documents/docs/EntireChartbook.pdf

Feinberg, L., Reinhard, S., Houser, A., & Choula, R. (2011). *Valuing the invaluable: 2011 update. The growing contributions and costs of family caregiving*. AARP Public Policy Institute. Retrieved from http://assets.aarp.org/rgcenter/ppi/ltc/i51-caregiving.pdf

Feng, Z., Fennell, M., Tyler, D., Clark, M., & Mor, V. (2011). Growth of racial and ethnic minorities in US nursing homes driven by demographics and possible disparities in options. *Health Affairs, 30*, 1358–1365.

Ferraro, K., & Shippee, T. (2009). Aging and cumulative inequality: How does inequality get under the skin? *The Gerontologist, 49*, 333–343.

Ferraro, K., Shippee, T., & Schafer, M. (2009). Cumulative inequality theory for research on aging and the life course. In V. Bengtson, D. Gans, N. Putney, & M. Silverstein (Eds.), *Handbook of theories of aging* (pp. 413–434). New York: Springer.

Freedman, R., He, Y., Winer, E., & Keating, N. (2009). Trends in racial and age disparities in definitive local therapy of early-stage breast cancer. *Journal of Clinical Oncology, 27*, 713–719.

Fry, R. (2006). *Gender and migration*. Washington, DC: Pew Hispanic Center.

Fry, R., & Taylor, P. (2013). *Hispanic high school graduates pass Whites in rate of college enrollment*. Washington, DC: Pew Research Hispanic Center. Retrieved from http://www.pewhispanic.org/files/2013/05/PHC_college_enrollment_2013–05.pdf

Geronimus, A., Hicken, M., Pearson, J., Seashols, S., Brown, K., & Cruz, T. (2010). Do US Black women experience stress-related accelerated biological aging? A novel theory and first population-based test of Black–White differences in telomere length. *Human Nature: An Interdisciplinary Biosocial Perspective, 21*, 19–38.

Ginde, A., Sullivan, A., Corel, B., Caceres, J., & Camargo, C. Jr. (2010). Reevaluation of the effect of mandatory interpreter legislation on use of professional interpreters for ED patients with language barriers. *Patient Education Counseling, 81*, 204–206.

Goins, R., Moss, M., Buchwald, D., & Guralnik, J. (2007). Disability among older American Indians and Alaska Natives: An analysis of the 2000 Census Public Use Microdata Sample. *The Gerontologist, 47*, 690–696.

Gruenewald, T., Karlamangla, A., Hu, P., Stein-Merkin, S., Crandall, C., Koretz, B., & Seeman, T. (2012). History of socioeconomic disadvantage and allostatic load in later life. *Social Science and Medicine, 74*, 75–83.

Haas, S., Krueger, P., & Rohlfsen, L. (2012). Race/ethnic and nativity disparities in later life physical performance: The role of health and socioeconomic status over the life course. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 67*, 238–248.

Hagestad, G. (1990). Social perspectives on the life course. In R. Binstock, & L. George (Eds.), *Handbook of aging and the social sciences* (3rd ed., pp. 151–168). San Diego, CA: Academic Press.

Harrington Meyer, M. (2014). *Grandmothers at work: Juggling families and jobs.* New York: New York University Press.

Harrington Meyer, M., & Herd, P. (2007). *Market friendly or family friendly? The state and gender inequality in old age.* New York: Russell Sage Foundation.

Hayward, M., & Heron, M. (1999). Racial inequality in active life among adult Americans. *Demography, 36*, 77–91.

Herrera, A., Lee, J., Palos, G., & Torres-Vigil, I. (2008). Cultural influences in the patterns of long-term care use among Mexican American family caregivers. *Journal of Applied Gerontology, 27*, 141–165.

Hirsch, C., Anderson, M., Newman, A., Kop, W., Jackson, S., Gottdiener, J., . . . Cardiovascular Health Study Research Group. (2006). The association of race with frailty: The cardiovascular health study. *Annals of Epidemiology, 16*, 545–553.

Howard, D., Sloane, P., Zimmerman, S., Eckert, K., Walsh, J., Burle, V., . . . Koch, G. (2002). Distribution of African Americans in residential care/assisted living and nursing homes: More evidence of racial disparity? *American Journal of Public Health, 92*, 1272–1277.

Humes, K. R., Jones, N. A., & Ramirez, R. R. (2011). Overview of race and Hispanic origin: 2011. *2011 census briefs, C2010BR-02*. Available online at: http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf

Hummer, R. A., & Hayward, M. D. (2015). Hispanic older adult health and longevity in the United States: Current patterns and concerns for the future. *Daedalus, 144*(2), 20–30.

Kaiser Family Foundation. (2015). *Life expectancy at birth by race/ethnicity*. Retrieved from http://kff.org/other/state-indicator/life-expectancy-by-re/#notes

Karliner, L., Hwang, E., Nickleach, D., & Kaplan, C. (2011). Language barriers and patient-centered breast cancer care. *Patient Education Counseling, 84*, 223–228.

Kena, G., Musu-Gillette, L., Robinson, J., Wang, X., Rathbun, A., Zhang, J., Wilkinson-Flicker, S., Barmer, A., & Dunlop Velez, E. (2015). *The condition of education 2015 (NCES 2015–144)*. Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch

Kochanek, K., Murphy, S., Xu, J., & Arias, E. (2014). *Mortality in the United States, 2013. NCHS Data Brief (No. 178)*. Hyattsville, MD: National Center for Health Statistics.

Kuh, D., & Ben-Shlomo, Y. (2004). *A life course approach to chronic diseases epidemiology*. New York: Oxford University Press.

Lariscy, J., Hummer, R., & Hayward, M. (2015). Hispanic older adult mortality in the United States: New estimates and an assessment of factors shaping the Hispanic paradox. *Demography, 52*, 1–14.

Lee, Y., Tang, F., Kim, K., & Albert, S. (2014). The vicious cycle of parental caregiving and financial well-being: A longitudinal study of women. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*. Advance online publication. doi:10.1093/geronb/gbu001

Link, B., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior, 35* (Extra Issue), 80–94.

Lopez, M., & Gonzalez-Barrera, A. (2014). Women's college enrollment gains leave men behind. *Pew research center fact tank*. Retrieved from http://www.pewresearch.org/fact-tank/2014/03/06/womens-college-enrollment-gains-leave-men-behind/

Manton, K., Gu, X., & Lamb, V. (2006). Change in chronic disability from 1982 to 2004/2005 as measured by long-term changes in function and health in the U.S. elderly population. *Proceedings of the National Academy of Sciences of the United States of America, 103*, 18374–18379.

Martin, J., Hamilton, B., Sutton, P., Ventura, S., Mathews, T., Kirmeyer, S., & Osterman, J. (2010). *Births: Final data for 2007*. *National Vital Statistics Reports, 58* (24). Hyattsville, MD: National Center for Health Statistics.

Matthews, T., & Hamilton, B. (2005). *Trend analysis of the sex ratio at birth in the United States*. *National Vital Statistics Reports, 53* (20). Hyattsville, MD: National Center for Health Statistics.

Mayer, K. (2009). New directions in life course research. *Annual Review of Sociology, 35*, 413–433.

Montez, J., & Hayward, M. (2014). Cumulative childhood adversity, education, and active life expectancy among U.S. adults. *Demography, 51*, 413–435.

Mor, V., Zinn, J., Angelelli, J., Teno, J., & Miller, S. (2004). Driven to tiers: Socioeconomic and racial disparities in the quality of nursing home care. *The Milbank Quarterly, 82*, 227–256.

Mutchler, J., & Burr, J. (2007). Varieties of wellbeing: Race, class, gender, and age. In B. Hudson (Ed.), *Boomer bust? Economic and political dynamics of the graying society* (pp. 23–46). New York: Praeger.

Ngo-Metzger, Q., Sorkin, D., Phillips, R., Greenfield, S., Massagli, M., Clarridge, B., & Kaplan, S. (2007). Providing high-quality care for limited English proficient patients: The importance of language concordance and interpreter use. *Journal of General Internal Medicine, 22*(Suppl. 2), 324–330.

Nwankwo, T., Yoon, S., Burt, V., & Gu, Q. (2013). Hypertension among adults in the United States: National health and nutrition examination survey, 2011–2012. *NCHS Data Brief* (133). Hyattsville, MD: National Center for Health Statistics.

O'Neil, K., & Tienda, M. (2015). Age at immigration and the incomes of older immigrants, 1994–2010. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 70*, 291–302.

O'Rand, A. (2006). Stratification and the life course: Life course capital, life course risks, and social inequality. In R. Binstock & L. George (Eds.), *Handbook of aging and the social sciences* (pp. 145–162). San Diego, CA: Elsevier.

Pearlin, L., Schieman, S., Fazio, E., & Meersman, S. (2005). Stress, health, and the life course: Some conceptual perspectives. *Journal of Health and Social Behavior, 46*, 205–219.

Pleau, R. (2010). Gender differences in postretirement employment. *Research on Aging, 32*, 267–303.

Pollard, K., & Scommegna, P. (2013). The health and life expectancy of older blacks and Hispanics in the United States. *Today's Research on Aging* (Issue 28, June). Retrieved from http://www.prb.org/pdf13/TodaysResearchAging28.pdf

Prehn, A., Topol, B., Stewart, S., Glaser, S., O'Connor, L., & West, D. (2002). Differences in treatment patterns for localized breast carcinoma among Asian/Pacific Islander women. *Cancer, 95*, 2268–2275.

Quinones, A., Liang, J., & Ye, W. (2012). Racial and ethnic differences in hypertension risk: New diagnoses after age 50. *Ethnicity and Disease, 22*, 175–180.

Rogers, S., & Komisar, H. (2003). Who needs long-term care? *Long-term care financing project fact sheet*. Retrieved from http://hpi.georgetown.edu/ltc/papers.html#Briefs

Rooks, R., & Thorpe, R. (2014) Understanding age at onset and self-care management to explain racial and ethnic cardiovascular disease disparities in middle- and older-age adults. In K. Whitfield & T. Baker (Eds.), *Handbook of minority aging* (pp. 471–486). New York: Springer.

Ruggles, S., Sobek, M., Alexander, M., Fitch, C., Goeken, R., Hall, P., . . . Ronnander, C. (2010). *Integrated public use microdata series: [Machine-readable database]*. Minneapolis: Minnesota Population Center [producer and distributor].

Scan Foundation. (2012). Who provides long-term care in the U.S.? (Updated). *Fact sheet* (October). Retrieved from http://www.thescanfoundation.org/sites/thescanfoundation.org/files/us_who_provides_ltc_us_oct_2012_fs.pdf

Schenker, Y., Perez-Stable, E., Nickleach, D., & Karliner, L. (2011). Patterns of interpreter use for hospitalized patients with limited English proficiency. *Journal of General Internal Medicine, 26*, 712–717.

Settersten, R., Jr. (2006). Aging and the life course. In R. Binstock & L. George (Eds.), *Handbook of aging and the social sciences* (6th ed., pp. 3–19). New York: Academic Press.

Skinner, J., Chandra, A., Staiger, D., Lee, J., & McClellan, J. (2005). Mortality after acute myocardial infarction in hospitals that disproportionately treat black patients. *Circulation, 112*, 2634–2641.

Social Security Administration. (2014). *Income of the aged chartbook, 2012*. Washington, DC: Social Security Administration. Retrieved from http://www.ssa.gov/policy/docs/chartbooks/income_aged/2012/

Thomeer, M., Mudrazija, S., & Angel, J. (2014). How do race and Hispanic ethnicity affect nursing home admission? Evidence from the Health and Retirement Study. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*. Advance online publication. doi:10.1093/geronb/gbu114

Treas, J., & Marcum, C. (2011). Diversity and family relations in an aging society. In R. Settersten & J. Angel (Eds.), *Handbook of sociology of aging* (pp. 131–141). New York: Springer.

U.S. Department of Homeland Security. (2013). *Yearbook of immigration statistics: 2012*. Washington, DC: U.S. Department of Homeland Security. Retrieved from http://www.dhs.gov/immigration-statistics

Walsemann, K., Geronimus, A., & Gee, G. (2008). Accumulating disadvantage over the life course: Evidence from a longitudinal study investigating the relationship between educational advantage in youth and health in middle age. *Research on Aging, 30*, 169–199.

Williams, D. (2012). Miles to go before we sleep: Racial inequities in health. *Journal of Health and Social Behavior, 53*, 279–295.

Woodcock, C., Stockwell, I., Tripp, A., & Milligan, C. (2011). *Rebalancing long-term services and supports: Progress to date and a research agenda for the future*. Baltimore, MD: The Hilltop Institute, UMBC. Retrieved from http://www.hilltopinstitute.org/publications/RebalancingLTSS-ProgressToDateAndResearchAgendaForFuture-June2011.pdf

Xue, Q. (2011). The frailty syndrome: Definition and natural history. *Clinical Geriatric Medicine, 27*, 1–15.

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CHAPTER SIX

Poverty, Income, and Wealth across the Life Course

Andrea E. Willson and Nicole Etherington

The economic status of the older population in the United States has improved over recent decades; however, levels of economic inequality remain highest in later life (Crystal & Shea, 1990; O'Rand & Henretta, 1999; Reno & Veghte, 2011). Some groups, including women and racial-ethnic minorities, are much more likely to experience poverty (Bastos et al., 2009; Hogan & Perrucci, 2007). Economic well-being, measured by income, wealth, and experiences of poverty over the life course, is shaped by complex and diverse life events as well as interactions with social institutions. Therefore, inequality in economic status among older Americans is the result of long-term processes that unfold over the life course that have both systematic and random aspects (Crystal & Shea, 2002). When faced with the task of explaining heterogeneity among older persons, gerontologists came to recognize the value in studying unequal access to resources that resulted in inequalities that persisted and accumulated over time (O'Rand, 1996). Social relations that produce inequality are reinforced by institutions and social policy and change with age, leading to varying levels of economic inequality over the life course (e.g., McDonough & Berglund, 2003). At the aggregate level, inequality within a population can be viewed as the end product of an accumulative process of exposure to risks and opportunities that unfold across the life course.

In this chapter, we focus on the connection of later-life economic outcomes to earlier stages in the life course. We first review key elements of

the life-course perspective (Elder & Johnson, 2003), which has proven useful for understanding economic outcomes and the inequality that is evident in the aging process. Next, we discuss poverty, income, and wealth dynamics across the life course in the United States and how inequality in each is shaped by age, gender, and race-ethnicity. Economic outcomes influence many aspects of well-being over one's life course, but in the last decade, perhaps none has received as much attention from the social sciences as health. We, therefore, briefly introduce research on the relationship between socioeconomic status and health across the life course. We conclude with a discussion of the changing dynamics of poverty, income, wealth, and inequality in later life and challenges to its study. Our intent is not to provide an exhaustive review of the literature on the poverty status, income, and wealth of older Americans, but instead to provide a framework for understanding economic outcomes over the life course and to highlight examples that demonstrate the potential of life-course approaches to the study of inequality in later life.

The Life-Course Perspective, Economic Outcomes, and Inequality in Later Life

The life-course perspective provides an analytical framework for studies of the processes that shape inequality in economic outcomes in old age, as well as the effects of pathways of economic advantage and disadvantage on a variety of other outcomes, such as health. The life-course perspective generally refers to "the age-graded sequence of roles, opportunities, constraints, and events that shape biography from birth to death" (Shanahan & Macmillan, 2008:40). Foremost, the life-course perspective is grounded in the recognition that individual lives are embedded in both historical and biographical context. There are five key principles of the life course that are useful for our understanding of economic outcomes and inequality in later life (Elder & Johnson, 2003).

First, the life-course perspective offers a longitudinal view of economic security, not only based on income or wealth at a particular life stage, such as old age, but rather as a process that begins in childhood through to old age. Human development and aging are lifelong processes; thus, no single stage of an individual's life can be understood without its antecedents and consequences (Dannefer et al., 2005). The magnitude of intracohort economic inequality by statuses such as gender and race-ethnicity varies over the life course, and studies in the social sciences have focused on the individual and social patterning of trajectories of income and wealth over time (e.g., Crystal & Shea, 1990; Pampel, 1994; Willson, 2003) as well as movement in and out of poverty over the life course (see Western et al., 2012 for a review).

Second, to understand economic outcomes, individual agency within the constraints of structure/history must be considered, as pathways of economic hardship or advantage are not fixed. While considerable research demonstrates the impact of structural variables on economic outcomes, there still exists the possibility of individual resilience or agency in changing life-course trajectories. At the individual level, agency can be understood as willful action or choices undertaken on the actor's own behalf to shape his or her life trajectory, in response to macro-, meso-, or micro-level constraints (Hitlin & Elder, 2007). The interaction between the state, the market, and the family as systems of resource distribution determine opportunities and constraints across the individual life course and create social inequality between groups and individuals (O'Rand, 1996).

Turning points may also change pathways and may occur as the result of individual action (Sampson & Laub, 1996). Life events, such as divorce or widowhood, or changing economic environments, such as the Great Recession, may moderate life-course pathways of advantage, while positive events such as mentoring in adolescence may offer compensatory resources for disadvantaged youth (Erickson, McDonald, & Elder, 2009).

Third, the idea that human lives are linked to others recognizes the importance of taking into consideration the interdependence of lives and the intergenerational context of life-course processes (Elder & Johnson, 2003). These tenets are rooted in the classical social stratification literature, for which a central problematic is the intergenerational transmission of social inequality. Research in sociology on the transmission of inequality across generations has historically focused on class mobility, often by examining educational attainment and occupational location (for a review see Erikson & Goldthorpe, 2002). Most sociological studies have focused on the linkages between childhood socioeconomic status and educational attainment (e.g., Duncan et al., 1998; Wagmiller et al., 2006).

Fourth, the life course is embedded in historical time and place, which shapes unique experiences for each cohort. The experience and effects of historical events differ across birth cohorts based on the distinct point in the life course at which they occur. For example, as a result of the Great Recession and plummeting home values, the wealth of younger households was hit harder than that of older households because their homes constituted a larger share of their wealth portfolio (Wolff, 2014). On the other hand, many older workers were forced to delay retirement due to enormous losses to retirement plans that were market-based (McFall, 2011). Thus, the effects of the Great Recession varied by birth cohort.

Fifth, the timing of particular transitions in the life course affects both their meaning and their consequences. For example, early educational achievements allow for higher occupational status at entry into the labor

force, the subsequent compounding effects of wages and asset accumulation, and other resources such as occupational benefits and social capital (Elman & O'Rand, 2004). Elder's (1987) study on the impact of war mobilization on the lives of men which revealed that men recruited in World War II at later ages were more negatively affected than younger men, as their lives were more likely to be disrupted in terms of both family and career. And findings that adolescent childbirth increases a mother's risk of dropping out of school and working in low-paying jobs with less job security, which has long-term implications for income security, also highlight the importance of timing (Teti & Lamb, 1989).

Overall, these principles call attention to the flexible and continuous nature of human lives and serve as a guide to life-course research. Accordingly, life-course research on stratification and inequality strives to take into account time, context, and process (Shuey & Willson, 2014). Cumulative advantage/disadvantage theory (CAD) is a key framework that emerged from the life-course perspective and is used to inform studies that examine social mobility at the individual level and changing dynamics of inequality as cohorts age (Dannefer, 2003; O'Rand, 1996). The CAD framework, rooted in the theoretical literature on stratification and status attainment, suggests an intraindividual accumulative process through which initial relative advantage associated with structural location and resources generates further gains across the life course. This, in turn, results in systematic divergence in life-course outcomes across individuals or groups over time and increases interindividual inequality, particularly within cohorts. Time is the complex organizing principal of CAD, as it emphasizes the process of change over the life course, both in terms of human development and in levels of resources, such as income, and the cumulative consequences of the timing of life transitions (O'Rand, 2002).

Various forms of life-course capital, or resources that can be used to "meet human needs and wants" (O'Rand, 2006:146), interact over the life course to shape divergent pathways of poverty, income, and wealth. Life-course capital can take various forms and includes one's accumulating stock of human capital, or skills and productive knowledge; social capital, which includes direct and indirect social ties; psychophysical capital, one's health and well-being; and personal capital, including efficacy and confidence (O'Rand, 2001:200). Further, the accumulation and depletion of life-course capital occurs at variable rates across social groups based on statuses such as social class and race-ethnicity with early and high attainments in education and the labor market supporting the accumulation of life-course capital and the compounding of economic advantage with age (O'Rand, 1996).

Life-course risks are associated with the unequal exposure to adverse conditions or structural opportunities (DiPrete, 2002; O'Rand, 2006). Emanating from structural sources, these risks shape exposure to opportunities and risks that begin in childhood and accumulate across the life course. Among them, the first of life-course risks experienced stems from an individual's social origins (Currie, 2011). Early-life advantage provides opportunities to obtain access to additional resources as well as to avoid many sources of adversity, while disadvantage increases exposure to risk (O'Rand, 2006). Early dis/advantage does not, however, predetermine one's life experiences as trajectories can change or reverse course. Educational attainment can mediate the impact of childhood disadvantage (Hayward & Gorman, 2004), and psychosocial resources can enhance one's ability to cope with adversity (Ferraro & Shippee, 2009). Conversely, although advantage may send an individual on an upward trajectory of increased advantage, transitions related to family structure and employment, such as divorce or job loss, increase the risk of downward mobility and poverty (Western et al., 2012). Moreover, turning points resulting from human agency, random structural opportunities, or some other cause can trigger a reverse in the direction of a trajectory (Sampson & Laub, 1996).

Economic well-being and mobility is determined by the interrelation of various dynamic forms of life-course capital and life-course risks which are shaped by opportunity structures that are stratified by race and gender (DiPrete, 2002; Vandecasteele, 2011; Western et al., 2012). Life events and transitions across the life course can have different implications for later-life outcomes depending on dimensions of social location, including social class, race/ethnicity, and gender, and these dimensions intersect to shape economic vulnerability over the life course (Vartanian & McNamara, 2002). Negative life-course risks, such as job loss, have differential effects on subgroups of the population, and vulnerable and disadvantaged populations endure the highest relative costs of these events (e.g., Vandecasteele, 2011). The lifelong poverty, income, and wealth disadvantage experienced by women and racial-ethnic minorities in the United States reflect processes of CAD and result in women and racial minorities facing increasing disadvantage with age (Angel, Prickett, & Angel, 2014).

Life-Course Influences on Gender and Racial-Ethnic Disparities in Income, Poverty, and Wealth in Later Life

Poverty, income, and wealth are highly stratified by gender and race-ethnicity. Discrimination in employment as well as in housing and mortgage markets, coupled with the fact that racial-ethnic minorities are less likely than

whites to obtain inheritances (Shapiro, 2004), results in racial-ethnic inequality in income and wealth accumulation and composition (Campbell & Kaufman, 2006). Figure 6.1 displays U.S. poverty rates in 2013 by selected characteristics, and Figure 6.2 graphs median household income in 2013 for various groups. The percentage of African Americans living in poverty was more than twice that of whites in 2013 (27% vs. 10%) (DeNavas-Walt & Proctor, 2014). In 2013, the median income for white households was $58,270 compared to $34,598 for black households (DeNavas-Walt & Proctor, 2014). The racial wealth gap is especially pronounced and wealth disparities are larger than income inequalities (Campbell & Kaufman, 2006). The average wealth of white families was over $500,000 higher than that of African American and Hispanic families in 2013 (Bricker et al., 2014), and racial-ethnic inequality in wealth has widened in the years following the Great Recession (Wolff, 2014). The

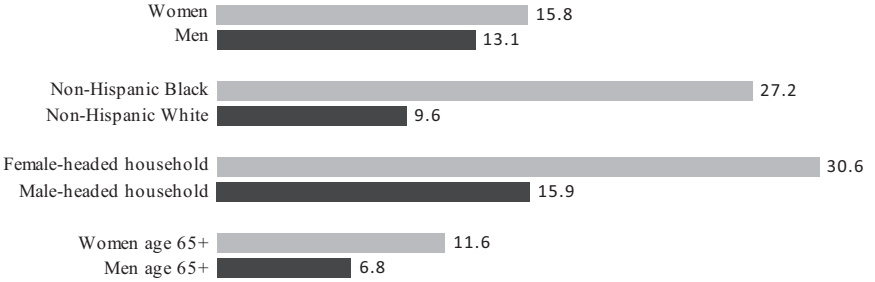


Figure 6.1 Poverty rates by selected characteristics, United States, 2013. (U.S. Census Bureau, Current Population Survey, 2014 Annual Social and Economic Supplement)

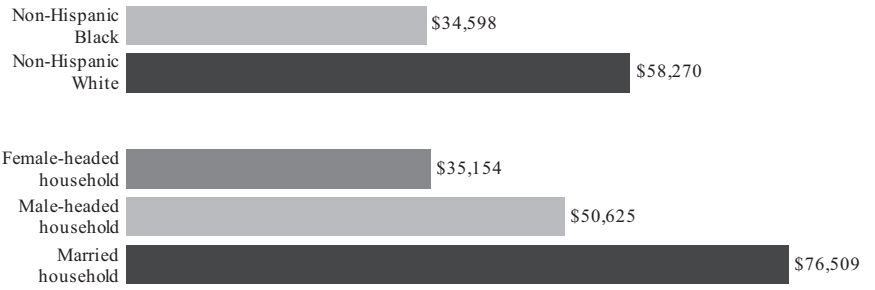


Figure 6.2 Real median household income by selected characteristics, United States, 2013. (U.S. Census Bureau, Current Population Survey, 2014 Annual Social and Economic Supplement)

race gap in wealth remains after taking into account various demographic and socioeconomic factors (Shapiro, 2004).

Because racial-ethnic minorities have lower average incomes they must therefore allocate a greater proportion of their income to essential items, such as housing and food, leaving less to invest in savings and other portfolios (Oliver & Shapiro, 1997). Hispanics and blacks are less likely to own stocks or bonds or to have any cash savings (Kochhar, 2004). Moreover, although home equity comprises a major part of net worth, less than half of Hispanics and blacks own their own homes compared to 74 percent of whites (Kochhar, 2004). The average home equity value for whites is double that of blacks, as blacks are more likely to reside in poorer neighborhoods, to experience devaluation of home values, and to face limited access to mortgage loans, resulting in asset inequality between middle-class blacks and whites (Shapiro, 2004). Not surprisingly, blacks experience less wealth growth than whites, and the racial wealth gap increases dramatically with age (Gittleman & Wolff, 2004).

Gender differences in poverty, income, and wealth are pronounced as well. As shown in Figure 6.1, although the poverty rate for women and men is similar (approximately 16% vs. 13%), the rate for female-headed family households is almost twice that of male-headed households with no wife present: 31 percent compared to 16 percent (DeNavas-Walt & Proctor, 2014). In 2013, the median household income for female-headed family households was $35,154, compared to $50,625 for male-headed households with no wife present, and $76,509 for married couples (Figure 6.2; DeNavas-Walt & Proctor, 2014).

Evidence suggests that gender disparities in income contribute to the gender gap in wealth; however, wealth is typically measured as a household rather than an individual characteristic, and analyses of gender differences in wealth are relatively rare (Deere & Doss, 2006). As a household measure, the effect of gender on wealth accumulation must be examined in combination with marital status and parenthood status (Yamokoski & Keister, 2006). Among young baby boomers, single females and single males are almost equally disadvantaged compared to married couples (Yamokoski & Keister, 2006). Single mothers and fathers also are economically disadvantaged compared to their married counterparts and to adults without children, but unmarried women with children experience the most severe disadvantage in household wealth accumulation (Yamokoski & Keister, 2006).

The one form of wealth data collected at the individual level is pension information, and from that we know women are less likely than men to have a pension plan or retirement savings account, and have lower levels of pension wealth when they do have pension plans (O'Rand & Shuey,

2007). A lack of wealth accumulation contributes to the high rate of poverty experienced by women in later life, and gender disparities in poverty rates are particularly evident among those individuals 65 years of age and older. Approximately 12 percent of women 65 and older live in poverty compared to 7 percent of men (DeNavas-Walt & Proctor, 2014). Older minority women, in particular, face serious economic insecurity given the lack of substantial wealth accumulation by minority couples despite great improvement to the overall economic situation of older Americans in recent decades (Angel, Jiménez, & Angel, 2007; Brown, 2012). As a result, poverty rates among older African American and Hispanic women are more than double the rate for white women (Lee, 2009).

In sum, gender, racial-ethnic, and class relations result in interlocking inequalities in economic resources over the life course (Reskin, 2012; Ruel & Hauser, 2013). We next discuss the importance of employment and marital history in shaping access to life-course capital and exposure to risks that are uniquely impacted by the intersection of gender and race-ethnicity.

Gender, Race-Ethnicity, and Employment History

Poverty, income, and wealth levels in old age are largely determined by employment histories. Significant differences exist in employment rates and returns between women and men as well as among women and men of various race-ethnicities. The ratio of women's to men's earnings varies by race and ethnicity (Bureau of Labor Statistics, 2015a). For example, in 2014 women's median weekly earnings were 81 percent as much as white men's and compared to 90 percent as much as black men's. Black women's earnings are about 82 percent that of white women, while median earnings of Hispanics who worked full time are the lowest (Bureau of Labor Statistics, 2015b). Women earn less than men even after controlling for education, work experience, employment status, and marital status, providing evidence of gender discrimination in compensation (Hogan & Perrucci, 2007).

In addition to the wage gap, employment rates and exposure to nonstandard and precarious employment is also gendered and racialized. Blacks are twice as likely as whites to be unemployed (Bureau of Labor Statistics, 2015a), and African American and Hispanic women are less likely to be employed than white women (Lee, 2009). Research highlights the greater precariousness of nonstandard employment arrangements, which are often defined in juxtaposition to the standard employment relations typical of the postwar period involving full-time work with a single employer that provided statutory benefits and job security (Kalleberg, 2000). In contrast, nonstandard arrangements that have grown over time

are associated with greater job insecurity, reduced access to training, lower and less stable wages, and the absence of pensions and other forms of compensation (Kalleberg, 2000, 2009; Vosko, 2006). The stratification of precarious work mirrors other patterns of labor-market inequality, with women and racial-ethnic minority workers dominating temporary and part-time jobs and disproportionately affected by the risks of nonstandard employment, such as low wages (Prokos, Padavic, & Schmidt, 2009; Fuller & Vosko, 2008; Vosko, 2006).

Women's lives are inextricably linked to the lives of others, the effects of which manifest predominantly in employment trajectories. Due to their role as primary caregivers, women are more likely to experience discontinuity in employment over the life course (Moen, Robison, & Fields, 1994). Women are more likely than men to work part time and to work in jobs that do not include fringe benefits such as employer pensions and health insurance, and even women with access to pension plans receive significantly lower benefits (O'Rand & Shuey, 2007). Later in the life course, elder care affects women's labor-force attachment and wages as well. The negative effects of caregiving on employment are especially pronounced for married women with low levels of education (Wakabayashi & Donato, 2006). Women in midlife are more likely than noncaregivers to reduce hours of employment or leave the labor force once they start caregiving for an ill or disabled family member (Pavalko & Artis, 1997). Therefore, annual earnings are substantially reduced when women begin caregiving, and it is difficult for women to recover employment losses once caregiving is terminated (Wakabayashi & Donato, 2006).

This disadvantage in employment is in turn associated with further economic insecurity over time, as labor-market participation shapes access to pensions, Social Security, and other related benefits. Consequently, women do not accumulate as much wealth as men over the life course and do not obtain the same economic benefits from the Social Security system (Ruel & Hauser, 2013). The Social Security system is particularly important for economic security in later life. It is a contribution-based, nearly universal social insurance program, funded through a flat tax on workers' earnings that is matched by employers (Social Security Administration, 2010). It is especially important for women and racial-ethnic minorities, who rely on Social Security for 60 percent and 90 percent or more of their income, respectively (Social Security Administration, 2010). Most strikingly, one in five older women depends on Social Security for 100 percent of their income (Social Security Administration, 2010). However, black and Hispanic women less often qualify for Social Security because they have not made the requisite 10 years of contributions (U.S. General Accounting Office, 1997), and if they do receive Social Security they

often receive only the minimum payment (Social Security Administration, 2010). As a result of these compounding disadvantages, older black women, in particular, face poverty and economic insecurity over the life course (Brown & Warner, 2008).

Gender, Race-Ethnicity, and Marital History

Although unmarried women are more likely than married women to live in poverty across all racial-ethnic groups, there are important racial-ethnic differences within each marital status (Lee, 2009). For example, a larger percentage of married African American and Hispanic women are poor compared to married white women. The decline in household income and assets following marital disruption is far greater for black and Hispanic widowed women than for whites (Angel, Jiménez, & Angel, 2007). Marriage rates are lower among Hispanics and blacks compared to whites, and rates of marital dissolution are higher (Angel, Jiménez, & Angel, 2007). African American women therefore spend more of their lives single than white women and are less likely to live with a partner in old age (Harrington Meyer, Wolf, & Himes, 2005). Disadvantages in Social Security benefits occur as a result, given the requirement of at least a 10-year marriage for spousal benefits eligibility. This also contributes to racial disparities in wealth given much higher per capita levels of wealth among married couples. Further, unmarried older black women are more likely to take in younger family members who are also experiencing financial difficulties, resulting in a high risk of poverty when living in an extended household (Lee & Shaw, 2008).

Widowhood is the most common marital transition faced by older women. For many widows, retirement security is dependent upon their husband's employment history and asset accumulation (Angel, Prickett, & Angel, 2014). Currently, the majority of older women receive Social Security spouse or widow benefits, which equals 50 percent of their spouse's benefit, or 100 percent of their husband's benefit if widowed, rather than benefits based on their own work histories (Harrington Meyer, Wolf, & Himes, 2005). Therefore, racial-ethnic disparities in women's spouse and widow benefits are reflective of racial-ethnic differences in men's wages. High unemployment among black men means marriage offers less financial security for married black women than white women (Willson, 2003). African American and Hispanic women are more likely to rely on Social Security income after retirement, and lower earnings among them as well as their husbands result in much less sufficient levels of benefits and a greater risk of poverty (Lee, 2009).

The Importance of Poverty, Income, and Wealth for Health over the Life Course

Economic advantage and disadvantage influence many aspects of well-being over the life course, but perhaps the clearest and most documented relationship is to health. The strong and enduring influence of economic status on health has been long established, and recent research demonstrates that economic conditions in childhood have enduring effects throughout the life course (see Pavalko & Caputo, 2013 for a review). Mortality and morbidity rates are inversely related to income, wealth, and poverty across all age groups (see Robert Wood Johnson Foundation, 2011 for a review) and individuals with lower socioeconomic status are more likely to experience chronic disease and functional limitations at younger ages (House, Lantz, & Herd, 2005). Poor adults are almost five times more likely to report fair/poor health as those with family incomes at or above 400 percent of the federal poverty line and three times more likely to experience activity limitations as the result of chronic illness (Robert Wood Johnson Foundation, 2011).

According to Fundamental Cause Theory, high socioeconomic status offers a broad range of flexible resources that can be used to protect against health threats in any given historical period. Thus, the link between socioeconomic status and health has persisted despite changes in causes of mortality and morbidity (Phelan, Link, & Tehranifar, 2010). Research on the social determinants of health from a life-course perspective has emphasized that health inequality in later life is the result of an accumulative process of exposure to risks and opportunities that operate across the individual life course and generates diverging trajectories of health and widening disparities (see Ferraro, 2011; Willson, Shuey, & Elder, 2007 for reviews). A recent focus on the childhood origins of health inequality has revealed the importance of when and how this accumulative process begins and emphasizes the effects of the timing, duration, and transitions in economic hardship in childhood on health in adulthood (Shuey & Willson, 2014). This growing literature demonstrates the importance of focusing on long-term processes to inform our understanding of the mechanisms through which stratification affects individual well-being over the life course.

Changes in Life-Course Poverty, Income and Wealth, and Challenges to Research

The dynamics of poverty, income, and wealth over the life course, and subsequent inequality in these outcomes, evolve over time with changes in demographic, social, and political trends. In the United States, poverty in old age declined dramatically in the 1960s and 1970s as more older

Americans had worked long enough to qualify for Social Security benefits, Supplemental Security Income for the elderly was implemented, and the level of benefits was increased (Burkhauser, Holden, & Feaster, 1988). However, as discussed earlier, these gains were not experienced universally, as many older people, particularly unmarried women, African Americans, and Latinos, remain more likely to be in poverty or near-poverty, and income inequality is at its highest among older Americans.

Economic inequality is complex but systematic due to the interaction of individual biography with social institutions (Crystal & Shea, 2002). Today, several trends—in demography, family structure, and women's employment—coincide to influence the late-life economic well-being of future generations in ways that are not yet completely clear. Because these trends have been discussed in depth elsewhere (e.g., Martin, 2011), rather than provide a thorough review, we focus on their implications for poverty, income, and wealth in later life. In addition, we highlight the importance of the role of the welfare state and the current trend toward the devolution of risk for economic well-being in later life. We conclude this section with a discussion of several challenges to research on poverty, income, and wealth from a life-course perspective.

Demographic Trends

For some time now, social gerontologists and social scientists from almost every discipline have investigated the implications of population aging. Population aging, defined as the growth in the proportion of the population over age 65 (see Martin, 2011 for a review) is occurring worldwide, in both more- and less-developed countries (United Nations: Department of Social and Economic Affairs, 2013). The United States, and many rich countries, experienced high fertility rates following World War II, and subsequent birth cohorts were significantly smaller. Because many social programs, including Social Security, depend on current workers to fund the retirement income of retirees through tax contributions, an imbalance in the ratio of the number of people aged 65 and older to those of traditional working age, referred to as the old-age dependency ratio, provides insight into the implications of population aging. This ratio has changed over time from 15 in 1955, to 22 in 2010 and is projected to rise to 35 in 2030 (Vincent & Velkoff, 2010). Although dependency ratios provide only a rough indicator of the extent to which one group in a population is dependent on another, trends in the old-age dependency ratio may be useful in understanding the implications of population aging on the viability of Social Security.

Compared to other OECD countries that face greater population aging and more urgent and severe challenges to maintaining the solvency of public pension systems, the United States is expected to be only moderately affected (Reno & Veghte, 2011). Population aging and debates over the future of Social Security are relevant to the economic security of older Americans because Social Security benefits are critical for keeping many retirees above the poverty line. Social Security comprises a substantial portion of household income for most households, including middle- and upper-middle income households; however, it represents a much larger proportion of the retirement income of disadvantaged groups. Because a larger proportion of women and racial-ethnic minorities retire due to poor health or as the result of a period of unemployment before they are eligible for full benefits, increases to the age of eligibility and concurrent increases in the penalty for taking early benefits function to increase disadvantage for these already vulnerable groups (Harrington Meyer & Parker, 2011). In sum, disadvantaged elders are most likely to be negatively impacted by any reduction in Social Security benefits that occurs in response to population aging.

Trends in Family Structure and Women's Employment

Although some social and demographic changes in the United States in recent decades have led to a narrowing of gender inequality in wages and labor-force participation, other trends may lead to greater financial vulnerability for women in later life. Since the 1970s, the proportion of women, particularly young mothers, in the labor force has increased and occupational segregation based on gender has decreased (Dunn & Skaggs, 2006). Average and median female earnings have increased at the same time that male wages have fallen or stagnated resulting in the narrowing of the gender wage gap (Wolff et al., 2012). Greater labor-force attachment also has increased women's participation in occupational pensions and eligibility for Social Security benefits (O'Rand & Shuey, 2007). Nonetheless, women continue to earn less than men, are more likely to work part time, and experience considerable time out of the labor force due to unpaid caregiving responsibilities, which will contribute to economic vulnerability in old age.

Additionally, younger Americans are experiencing more complex family arrangements and marital histories than previous generations (Manning & Brown, 2011). There are higher levels of divorce and remarriage (Kennedy & Ruggles, 2014), which tend to negatively affect the accumulation of assets (O'Rand & Shuey, 2007). Increases in nonmarital childbearing have been dramatic; for example, among women under 40, the share

of births to unmarried mothers—single or cohabiting—doubled between 1980 and 2013 (Manning, Brown, & Stykes, 2015). As single parenting is linked to poverty, and particularly so for black and Hispanic mothers, these women are at a high risk of poverty or near-poverty in old age (Harrington Meyer & Parker, 2011).

Two other nontraditional trends in living arrangements have emerged in recent decades: cohabitation and the rise of same-sex families. Because access to a partner's Social Security benefits and other entitlements in old age are linked to marital status, these trends have implications for the economic well-being experienced in old age by growing numbers of Americans. First, rates of cohabitation have increased dramatically in the United States, with the percentage of women who have ever cohabited doubling to almost two-thirds over the 25-year period ending in 2013 (Manning & Stykes, 2015). Currently, over one-fourth of all unions among young to middle-aged women are cohabiting unions (Manning & Stykes, 2015). Cohabitation is common across all demographic subgroups; however, important gaps in economic well-being exist among cohabiters based on educational attainment. While among the college-educated the median-adjusted household income of cohabiters is slightly higher than that of married couples, it is lower among adults without college degrees. College-educated cohabiters are much less likely to live with children in the household than their counterparts without college degrees, and both partners are more likely to be employed (Fry & Cohn, 2011).

Second, historically, same-sex couples have been economically vulnerable in old age due to the lack of legal rights afforded by marriage, as marriage determines access to a partner's pension and Social Security benefits, as well as tax rates on inheritance and the ability to remain in one's home following a partner's move to a nursing home or death (Manning & Brown, 2011). As same-sex couples gain legal recognition in the United States, the security of these families has improved; however, rights remain state specific, and benefits at the federal level, such as Social Security, are not yet universally available. As of this writing, 37 states allow same-sex marriage, with judicial rulings pending in others and the U.S. Supreme Court poised to decide whether or not nationwide marriage equality will become law.

In sum, changes in family structure and in women's labor-force participation potentially have both potentially positive and negative implications for the future financial security of disadvantaged groups. Women have made gains in the labor force that could lead to greater income and wealth in later life; however, earnings inequality and continued employment disruptions make the magnitude of these gains unclear. Because current policies regarding income in later life assume a stable history of marriage over the life course, recent cohorts' shift away from marriage to more diverse family forms could lead to greater insecurity in old age for women and

racial-ethnic minorities. However, one historically disadvantaged family form, same-sex families, continues to achieve greater recognition under the law, which, in turn, could lead to greater economic security for these families in old age.

The Role of the Welfare State and the Devolution of Risk

As these examples demonstrate, welfare states help mitigate unexpected and unavoidable risks, such as sickness, unemployment, and old age through risk-sharing and risk-spreading mechanisms, such as Social Security (O'Rand, 2011). Welfare state benefits reduce uncertainty and buffer the influence of the market, and most individuals and families make their long-term plans for old age within the context of the welfare state entitlements in place during their working years (Weymann, 2009). Welfare states also function as "mechanisms of social stratification" as, depending on the structure of entitlements, social programs can reduce market-driven inequality over the life course. Welfare state entitlements also mean inclusion for some individuals and groups and exclusion for others, as eligibility for benefits such as pensions are tied to earnings, work history, and marital status (O'Connor, Orloff, & Shaver, 1999; Weymann, 2009).

While the first part of the twentieth century witnessed an expansion of welfare state programs, a trend toward retrenchment of welfare state entitlements has emerged in recent decades. At the same time, private employer pensions are increasingly shifting to individualized, market-based plans that place more responsibility for managing risk on workers and their families, and some families have greater resources to absorb these risks than others (O'Rand, 2011; Quesnel-Vallée, Willson, & Reiter-Campeau, 2015). In sum, although Social Security and occupational pensions have reduced poverty among the older population, the current trend toward the "devolution of risk" from states to individuals will potentially result in greater inequality (O'Rand, 2011).

These rapidly changing social and demographic trends require us to monitor the implications of macrolevel change on the individual life course and the influence of social policy and the welfare state on patterns of economic inequality by gender, race-ethnicity and family structure. In the following section, we highlight methodological challenges to research on poverty, income, and wealth over the life course.

Challenges to Research in on Poverty, Income, and Wealth over the Life Course

At least three challenges are faced by researchers studying poverty, income, and wealth from a life-course perspective: measurement of key concepts, data and modeling requirements, and theoretical and

methodological incorporation of both the individual and institutions into research. First, determining the most appropriate measure has been the subject of much debate (for a review, see Haveman, 2009). The official U.S. poverty measure has stood nearly unchanged since 1964, and despite efforts almost since its inception, there has been no commonly accepted improved approach to measuring poverty. Income only provides a partial picture of the relative well-being of one demographic group compared to another (Wolff et al., 2012) and, ideally, measures of poverty would move beyond the concept of income poverty to include other measures of material hardship and of deprivation, such as social exclusion (Haveman, 2009). However, this is both conceptually and methodologically challenging, as ideally, detailed survey data including a wide range of living conditions over a long period of time would be required (Haveman, 2009). In addition, variations in measurement across countries make comparative research difficult. Beyond these basic problems with measuring poverty, official poverty rates, and much academic research, measure poverty rates at a single point in time, which does not distinguish temporary from persistent poverty (Western et al., 2012). Most poverty at the household level is temporary, lasting for two years or less, so that point-in-time measures capture only a small fraction of people who experience poverty at some time in their lives (Western et al., 2012). The long-term effects of these varying experiences remain largely unknown.

Problems with the measurement of other key concepts, such as income, wealth, and retirement are almost equally vexing. Income is notoriously difficult to measure in surveys, as respondents may be reluctant to reveal their income, and it is difficult to remember income from many different sources accurately (Smith, 2002). As a result, income is often not reported at all and survey data is plagued with high levels of missing income data, making it unreliable. Estimates of levels of household wealth vary depending on how comprehensive the measure of wealth is—the inclusion of housing wealth, a variety of financial assets, business equity, wealth that generates annuity income are all wealth components that influence estimates of the extent of wealth and therefore inequality (Smith, 2002).

Finally, women's historically sporadic work patterns challenge the utility of conventional measures of retirement. Traditional stratification research has assumed a male-model of work and family based on white, middle-class men's experiences consisting of a stable work history, with a clear beginning and end, followed by retirement income (Calasanti, 1996). Research demonstrates that these assumptions do not hold for a substantial minority and fail to adequately capture the experience of many older people (Hardy, 2011). Conceptualizing and measuring retirement is becoming even more difficult as employment patterns become increasingly

complex and variable and the transition to retirement becomes more blurred. Today, definitions of retirement are moving beyond categories of employment status to emphasize patterns of changing sources of income over the life course, health transitions, and employment histories that are experienced jointly (Hardy, 2011).

As our concepts become more comprehensive and complex, so do our data requirements and statistical models. For example, CAD postulates that the duration, timing, and sequencing of children's exposure to economic hardship during childhood are important for developmental processes and outcomes such as socioeconomic attainment in young adulthood and midlife (Wagmiller et al., 2006). In most analyses, however, changes in individual circumstances, such as whether childhood conditions are improving or deteriorating, or issues of timing—whether disadvantage occurs early or later in childhood—are not captured. A primary difficulty for life-course researchers lies in the lack of adequate data sources that allow such observations, and the challenges associated with developing models that measure more than average effects and normative patterns (Shuey & Willson, 2014). Life-course researchers continue to employ creative data and analysis techniques to address these challenges.

Finally, the life-course perspective emphasizes the interaction of micro-, meso- and macrolevels of society, and this is particularly difficult for research to incorporate (Mayer, 2009). One example is the challenge of incorporating macrolevel processes into models of individual behavior and outcomes (Mayer & Schoepflin, 1989). With its stronger "state tradition" (Leisering, 2003), Europe has been at the center of life-course investigations of the impact of governmental policies on the life course of individuals (e.g., Allmendinger & Hinz, 2003) while the North American approach has tended to focus on the individual life course. As possibilities improve for linking longitudinal microdata with policy data and cross-country comparable data, opportunities for analyses of the role of social policies in shaping work and family experiences and relationships between life-course experiences and socioeconomic outcomes continue to emerge (Corna, 2013).

Conclusion

Existing disparities in economic outcomes based on relations of gender and race-ethnicity culminate in a greater risk of disadvantage for racial-ethnic minority women across the life course and in later life. Examining poverty, income, and wealth from a life-course perspective allows us to better understand the variability in individual outcomes by recognizing that later life is shaped by cumulative experiences, such as labor-force participation

and marital history that produce distinctive life patterns. Assumptions regarding gender roles and family structure reflected in institutions and policies contribute to the structuring of inequality in old age and are often not reflective of the realities of older Americans (Apfel, 2011). As a result of processes of social change, new social risks have emerged. The transition from an industrial to postindustrial mode of production has led to new labor-market uncertainties and higher unemployment; family instability has grown, and the aging of the population places increasing pressure on families and states. Coupled with these processes is a trend toward the devolution of risk, placing greater responsibility on workers and their families to absorb life-course risks associated with income security (O'Rand, 2011). Life-course research focusing on the influence of social institutions and policies on life-course outcomes provides a framework for understanding the dynamic interplay of social policy and cumulative advantage/disadvantage over the life course, in contrast to the view of social exclusion and poverty as a deviation from the normal life course (Dewilde, 2009). As new opportunities arise from long-term studies of individuals and families as they age, as well as advances in the availability of statistical tools to analyze complex data, social scientists continue to further our understanding of unanswered questions regarding the stability of socioeconomic conditions and dynamics of life trajectories, and long-term effects of childhood conditions on middle and later adulthood.

References

Allmendinger, J., & Hinz, T. (2003). Occupational careers under different welfare regimes. In W.R. Heinz, A. Weymann, & J. Huinink (Eds.), *The Life Course Reader: Individuals and Societies Across Time* (pp. 234–251). New York: Campus Verlag.

Angel, J.L., Prickett, K.C., & Angel, R.J. (2014). Retirement security for Black, non-Hispanic White, and Mexican-origin women: The changing roles of marriage and work. *Journal of Women, Politics & Policy*, *35*(3), 222–241.

Apfel, K. (2011). Policy foreword. In R.A. Settersten & J.L. Angel (Eds.), *Handbook of Sociology of Aging* (pp. ix–xii). New York: Springer.

Bastos, A., Casaca, S.F., Nunes, F., & Pereirinha, J. (2009). Women and poverty: A gender-sensitive approach. *Journal of Socio-Economics*, *38*, 764–778.

Bricker, J., Dettling, L.J., Henriques, A., Hsu, J.W., Moore, K.B., Sabelhaus, J., & Windle, R.A. (2014). *Changes in US family finances from 2010 to 2013: Evidence from the Survey of Consumer Finances*. *Federal Reserve Bulletin* (Vol. 100). Washington, DC. Retrieved from http://www.federalreserve.gov/pubs/bulletin/2012/PDF/scf12.pdf

Brown, Tyson H. (2012). The intersection and accumulation of racial and gender inequality: Black women's wealth trajectories. *The Review of Black Political Economy, 39*, 239–258.

Brown, T. H., & Warner, D. F. (2008). Divergent pathways? Racial/ethnic differences in older women's labor force withdrawal. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *63*(3), S122–S134.

Bureau of Labor Statistics. (2015a). Table A-2. *Employment status of the civilian population by race, sex, and age*. Retrieved March 1, 2015, from http://www.bls.gov/news.release/empsit.t02.htm

Bureau of Labor Statistics. (2015b). *Usual weekly earnings of wage and salary workers: Fourth Quarter 2014*. Washington, DC.

Burkhauser, R. V., Holden, K. C., & Feaster, D. (1988). Incidence, timing, and events associated with poverty: A dynamic view of poverty in retirement. *Journal of Gerontology*, *43*(2), S46–S52.

Calasanti, T. (1996). Incorporating diversity: Meaning, levels of research, and implications for theory. *The Gerontologist*, *36*(2), 147–156.

Campbell, L. A., & Kaufman, R. L. (2006). Racial differences in household wealth: Beyond Black and White. *Research in Social Stratification and Mobility*, *24*(2), 131–152.

Corna, L. M. (2013). A life course perspective on socioeconomic inequalities in health: A critical review of conceptual frameworks. *Advances in Life Course Research*, *18*(2), 150–159.

Crystal, S., & Shea, D. G. (1990). Cumulative advantage, cumulative disadvantage, and inequality among elderly people. *The Gerontologist*, *30*(4), 437–443.

Crystal, S., & Shea, D. G. (2002). Introduction: Cumulative advantage, public policy, and inequality in later life. In S. Crystal, D. Shea, & K. W. Schaie (Eds.), *Annual Review of Gerontology and Geriatrics: Focus on Economic Outcomes in Later Life* (22nd ed., pp. 1–13). New York: Springer Publishing Company.

Currie, J. (2011). Inequalities at birth: Some causes and consequences. *Ungleichheiten Bei Der Geburt: Einige Ursachen Und Folgen*, *12*, 42–65.

Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. *Journal of Gerontology*, *58B*(6), S327–337.

Dannefer, D., Uhlenberg, P., Foner, A., & Abeles, R. P. (2005). On the shoulders of a giant: The legacy of Matilda White Riley for gerontology. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *60*(6), S296–S304.

Deere, C. D., & Doss, C. R. (2006). The gender asset gap: What do we know and why does it matter? *Feminist Economics*, *12*(1–2), 1–50. doi:10.1080/13545700500508056.

DeNavas-Walt, C., & Proctor, B. D. (2014). *Income and poverty in the United States: 2013 Current Population Reports* (No. P60–249). Washington, DC.

Dewilde, C. (2009). A life course perspective on social inclusion and poverty. In W. R. Heinz, J. Huinink, & A. Weymann (Eds.), *The Life Course Reader: Individuals and Societies Across Time* (pp. 252–269). Frankfurt: Campus Reader.

DiPrete, T. A. (2002). Life course risks, mobility regimes, and mobility consequences: A comparison of Sweden, Germany, and the United States. *American Journal of Sociology*, *108*, 267–309.

Duncan, G. J., Yeung, W. J., Brooks-Gunn, J., & Smith, J. R. (1998). How much does childhood poverty affect the life chances of children? *American Sociological Review*, *63*(3), 406–423.

Dunn, D., & Skaggs, S. (2006). Gender and paid work in industrial nations. In J. Saltzman Chafetz (Ed.), *Handbook of the Sociology of Gender* (pp. 321–342). New York: Springer.

Elder, G. H., Jr. (1987). War mobilization and the life course: A cohort of World War II veterans. *Sociological Forum*, *2*(3): 449–472.

Elder, G. H., Jr., & Johnson, M. K. (2003). The life course and aging: Challenges, lessons, and new directions. In R. A. Settersten (Ed.), *Invitation to Life Course: Toward New Understandings of Later Life* (pp. 1–52). Amityville, NY: Baywood.

Elman, C., & O'Rand, A. M. (2004). The race is to the swift: Socioeconomic origins, adult education, and wage attainment. *American Journal of Sociology*, *110*(1), 123–160.

Erickson, L. D., McDonald, S., & Elder, G. H. (2009). Informal mentors and education: Complementary or compensatory resources? *Sociology of Education*, *82*, 344–367.

Erikson, R., & Goldthorpe, J. H. (2002). Intergenerational inequality: A sociological perspective. *The Journal of Economic Perspectives*, *16*(3), 31–44.

Ferraro, K. F. (2011). Health and Aging: Early origins, persistent inequalities? In R. A. Settersten and J. Angel (Eds.), *Handbook of Sociology of Aging* (pp. 465-475). New York: Springer.

Ferraro, K. F., & Shippee, T. P. (2009). Aging and cumulative inequality: How does inequality get under the skin? *The Gerontologist*, *49*(3), 333–343.

Fry, R., & Cohn, D. (2011). *Living Together: The Economics of Cohabitation*. Washington, DC. Retrieved from http://www.pewsocialtrends.org/2011/06/27/living-together-the-economics-of-cohabitation/

Fuller, S., & Vosko, L. F. (2008). Temporary employment and social inequality in Canada: Exploring intersections of gender, race, and migration. *Social Indicators Research*, *88*(1), 31–50.

Gittleman, M., & Wolff, E. N. (2004). Racial differences in patterns of wealth accumulation. *Journal of Human Resources*, *39*(1), 193–227.

Hardy, M. A. (2011). Rethinking retirement. In R. A. Settersten & J. L. Angel (Eds.), *Handbook of the Sociology of Aging and the Life Course* (pp. 213–227). New York: Springer Publishing Company.

Harrington Meyer, M., & Parker, W. M. (2011). Gender, aging, and social policy. In R. H. Binstock & L. K. George (Eds.), *Handbook of Aging and the Social Sciences* (7th ed., pp. 323–336). New York: Elsevier.

Harrington Meyer, M., Wolf, D. A, & Himes, C. L. (2005). Linking benefits to marital status: Race and social security in the US. *Feminist Economics*, *11*(2), 145–162.

Haveman, R. (2009). What does it mean to be poor in a rich society? *Focus*, *26*(2), 81–86.

Hayward, M. D., & Gorman, B. K. (2004). The long arm of childhood: The influence of early life social conditions on men's mortality. *Demography*, *41*(1), 87–107.

Hitlin, S., & Elder, G. H., Jr. (2007). Time, self, and the curiously abstract concept of agency. *Sociological Theory*, *25*, 170–191.

Hogan, R., & Perrucci, C. C. (2007). Black women: Truly disadvantaged in the transition from employment to retirement income. *Social Science Research*, *36*, 1184–1199.

House, J. S., Lantz, P. M., & Herd, P. (2005). Continuity and change in the social stratification of aging and health over the life course: Evidence from a national representative longitudinal study from 1986 to 2001/2002 (Americans' Changing Lives Study). *The Journals of Gerontology*, *60B*, 15–25.

Kalleberg, A. L. (2000). Non-standard employment relations: Part-time, temporary, and contract work. *Annual Review of Sociology, 26*, 341–365.

Kalleberg, A. L. (2009). Precarious work, insecure workers: Employment relations in transition. *American Sociological Review, 74,* 1–22.

Kennedy, S., & Ruggles, S. J. (2014). Breaking up is hard to count: The rise of divorce in the United States, 1980–2010. *Demography*, *51*(2), 587–598. doi:10.1007/s13524–013–0270–9.

Kochhar, R. (2004). *The wealth of Hispanic households: 1996 to 2002*, (October), 1–44. Retrieved from http://www.sas.upenn.edu/~dludden/HispanicWealthREPORT.pdf

Lee, S. (2009). Racial and ethnic differences in women's retirement security. *Journal of Women, Politics & Policy*, *30*, 141–172.

Lee, S., & Shaw, L. (2008). *From Work to Retirement: Tracking Changes in Women's Poverty Status*. Washington, DC.

Leisering, L. (2003). Government and the life course. In M. J. Shanahan & J. Mortimer (Eds.), *Handbook of the Life Course* (pp. 205–228). New York: Springer Publishing Company.

Manning, W. D., & Brown, S. L. (2011). The demography of unions among older Americans 1980-present: A family change approach. In R. A. Settersten & J. L. Angel (Eds.), *Handbook of the Sociology of Aging* (pp. 193–212). New York: Springer.

Manning, W. D., Brown, S. L., & Stykes, B. (2015). *Trends in Births to Single and Cohabiting Mothers, 1980–2013*. Bowling Green, OH: National Center for Marriage and Family Research.

Manning, W. D., & Stykes, B. (2015). *Twenty-Five Years of Change in Cohabitation in the U.S., 1987–2013*. Bowling Green, OH: National Center for Marriage and Family Research.

Martin, L. G. (2011). Demography of aging. In R. H. Binstock & L. K. George (Eds.), *Handbook of Aging and the Social Sciences* (7th ed., pp. 33–46). New York: Elsevier.

Mayer, K. U. (2009). New directions in life course research. *Annual Review of Sociology*, *35*, 413–433.

Mayer, K. U., & Schoepflin, U. (1989). The state and the life course. *Annual Review of Sociology*, *15*(1), 187–209.

McDonough, P., & Berglund, P. (2003). Histories of poverty and self-rated health trajectories. *Journal of Health and Social Behavior*, *44*(2), 198–214.

McFall, B. H. (2011). Crash and wait? The impact of the Great Recession on the retirement plans of older Americans. *American Economic Review*, *101*, 40–44.

Moen, P., Robison, J., & Fields, V. (1994). Women's work and caregiving roles: A life course approach. *Journal of Gerontology*, *49*(4), S176–S186.

O'Connor, J., Orloff, A., & Shaver, S. (1999). *States, Markets, Families: Gender, Liberalism and Social Policy in Australia, Canada, Great Britain, and the United States*. Cambridge, England: Cambridge University Press.

O'Rand, A. M. (1996). The precious and the precocious: Understanding cumulative disadvantage and cumulative advantage over the life course. *The Gerontologist*, *36*(2), 230–238.

O'Rand, A. M. (2001). Stratification and the life course: The forms of life-course capital and their interrelationships. In R. H. Binstock & L. K. George (Eds.), *Handbook of Aging and the Social Sciences* (5th ed., pp. 197–210). San Diego, CA: Academic Press.

O'Rand, A. M. (2002). Cumulative advantage and gerontological theory. In S. Crystal & D. Shea (Eds.), *Annual Review of Gerontology and Geriatrics* (Vol. 22, pp. 14–30). New York: Springer Publishing Company.

O'Rand, A. M. (2006). Stratification and the life course: Life course capital, life course risks, and social inequality. In R. H. Binstock & L. K. George (Eds.), *Handbook of Aging and the Social Sciences* (6th ed., pp. 145–162). Burlington, MA: Academic Press.

O'Rand, A. M. (2011). The devolution of risk and the changing life course in the United States. *Social Forces*, *90*(1), 1–16.

O'Rand, A. M., & Henretta, J. C. (1999). *Age and Inequality: Diverse Pathways through Later Life*. Boulder, CO: Westview.

O'Rand, A. M., & Shuey, K. M. (2007). Gender and the devolution of pension risks in the US. *Current Sociology*, *55*, 287–304.

Oliver, M. L., & Shapiro, T. M. (1997). *Black Wealth/White Wealth: A New Perspective on Racial Inequality*. New York: Routledge.

Pampel, F. C. (1994). Changes in income inequality during old age. *Research in Social Stratification and Mobility*, *13*, 239–263.

Pavalko, E. K., & Artis, J. E. (1997). Women's caregiving and paid work: Causal relationship in late midlife. *Journal of Gerontology*, *52B*(4), S170–S179.

Pavalko, E. K., & Caputo, J. (2013). Social inequality and health across the life course. *American Behavioral Scientist*, *57*(8), 1040–1056.

Phelan, J. C., Link, B. G., & Tehranifar, P. (2010). Social conditions as fundamental causes of health inequalities: Theory, evidence, and policy implications. *Journal of Health and Social Behavior*, *51 Suppl.*, S28–S40.

Prokos, A. H., Padavic, I., & Schmidt, A. (2009). Nonstandard work arrangements among women and men scientists and engineers. *Sex Roles, 61,* 653–665.

Quesnel-Vallée, A., Willson, A. E., & Reiter-Campeau, S. (2015). Health inequalities among older adults in developed countries: Reconciling theories and policy approaches. In L. K. George & K. F. Ferraro (Eds.), *Handbook of Aging and the Social Sciences* (8th ed., pp. 483–498). New York: Elsevier.

Reno, V. P., & Veghte, B. (2011). Economic status of the aged in the United States. In R. H. Binstock & L. K. George (Eds.), *Handbook of Aging and the Social Sciences* (7th ed., pp. 175–192). Boston: Elsevier.

Reskin, B. (2012). The race discrimination system. *Annual Review of Sociology*, *38*, 17–35.

Robert Wood Johnson Foundation. (2011). *Income,Wealth, and Health*. San Francisco, CA: Author.

Ruel, E., & Hauser, R. M. (2013). Explaining the gender wealth gap. *Demography*, *50* (December 2012), 1155–1176.

Sampson, R. J., & Laub, J. H. (1996). Socioeconomic achievement in the life course of disadvantaged men: Military service as a turning point, circa 1940–1965. *American Sociological Review*, *61*(3), 347–367.

Shanahan, M. J., & Macmillan, R. (2008). *Biography and the Sociological imagination*. New York: W.W. Norton and Company.

Shapiro, T. M. (2004). *The Hidden Cost of Being African American: How Wealth Perpetuates Inequality*. New York: Oxford University Press.

Shuey, K. M., & Willson, A. E. (2014). Economic hardship in childhood and adult health trajectories : An alternative approach to investigating life-course. *Advances in Life Course Research*, *22*, 49–61.

Smith, J. P. (2002). Measurement of late-life income and wealth. In S. Crystal, D. G. Shea, & K. W. Schaie (Eds.), *Annual Review of Gerontology and Geriatrics: Focus on Economic Outcomes in Later Life* (Vol. 22, pp. 95–115). New York: Springer Publishing Company.

Social Security Administration. (2010). *Annual Statistical Supplement to the Social Social Security Bulletin*. Washington, DC.

Teti, D. M., & Lamb, M. E. (1989). Socioeconomic and marital outcomes of adolescent marriage, adolescent childbirth, and their co-occurrence. *Journal of Marriage and the Family*, *51*(1), 203–212.

U.S. General Accounting Office. (1997). *Social Security Reform*: *Implications for Women's Retirement Income*. Washington, DC: Author.

United Nations: Department of Social and Economic Affairs. (2013). *World Population Prospects: The 2012 Revision*. Retrieved from http://esa.un.org/unpd/wpp/Excel-Data/population.htm

Vandecasteele, L. (2011). Life course risks or cumulative disadvantage? The structuring effect of social stratification determinants and life course events on poverty transitions in Europe. *European Sociological Review*, *27*(2), 246–263.

Vartanian, T. P., & McNamara, J. M. (2002). Older women in poverty: The impact of midlife factors. *Journal of Marriage and Family*, *64*(2), 532–548.

Vincent, G. K., & Velkoff, V. A. (2010). *The Older Population in the United States: 2010 to 2050*. Washington, DC. Retrieved from https://www.census.gov/prod/2010pubs/p25–1138.pdf

Vosko, L. F. (2006). *Precarious Employment: Understanding Labour Market Insecurity in Canada*. Montreal and Kingston: McGill-Queen's University Press.

Wagmiller, R. L., Lennon, M. C., Kuang, L., Alberti, P. M., & Aber, J. L. (2006). The dynamics of economic disadvantage and children's life chances. *American Sociological Review*, *71*(5), 847–866.

Wakabayashi, C., & Donato, K. M. (2006). Does caregiving increase poverty among women in later life? Evidence from the Health and Retirement Survey. *Journal of Health and Social Behavior*, *47*(3), 258–274.

Western, B., Bloome, D., Sosnaud, B., & Tach, L. (2012). Economic insecurity and social stratification. *Annual Review of Sociology*, *38*, 341–359.

Weymann, A. (2009). The life course, institutions, and life course policy. In W. R. Heinz, J. Huinink, & A. Weymann (Eds.), *The Life Course Reader: Individuals and Societies Across Time* (pp. 139–158). Frankfurt: Campus Reader.

Willson, A. E. (2003). Race and women's income trajectories: Employment, marriage, and income. *Social Problems*, *50*(1), 87–110.

Willson, A. E., Shuey, K. M., & Elder, G. H. (2007). Cumulative advantage processes as mechanisms of inequality in life course health. *American Journal of Sociology*, *112*(6), 1886–1924.

Wolff, E. N. (2014). *Household Wealth Trends in the United States, 1962–2013: What Happened over the Great Recession?* (No. 20733). Cambridge, MA: National Bureau of Economic Research.

Wolff, E. N., Zacharias, A., Masterson, T., & Eren, S. (2012). *A Comparison of Inequality and Living Standards in Canada and the United States using an Expanded Measure of Economic Well-Being* (No. 703). Annandale-on-Hudson, NY: Levy Economics Institute.

Yamokoski, A., & Keister, L. A. (2006). The wealth of single women: Marital status and parenthood in the asset accumulation of young baby boomers in the United States. *Feminist Economics*, *12*(1), 167–194.

CHAPTER SEVEN

Work and Retirement

Jeanette M. Zoeckler and Michael Silverstein

The aging workforce is redefining both work and retirement. Older workers are remaining in the labor force longer, and the process of retirement is becoming messier. This chapter characterizes the demographics of the workforce with an emphasis on variation by age, gender, race, ethnicity, and nativity. We explore key sociological theories that assist in understanding the links between employment, health, and well-being. We then assess the risks and accommodations necessary for older workers. Finally, we analyze the factors that shape retirement decisions and satisfaction.

Demographics of the Aging Workforce

The U.S. labor force has been growing steadily, and much of the increase has been among older workers. Employment patterns vary significantly by age, gender, race, ethnicity, and nativity. Some groups are more likely to work full time while others are more likely to work part time or to be unemployed. Even though wages are rising, persistent patterns in wage inequality remain. These disparities can be partially explained by differential exposure to unstable jobs in the New Economy, which is related to different levels of education and different returns on educational investments.

Labor-Force Participation

The total labor force has grown from approximately 60 million in 1950 to 154 million in 2011 (Hayutin et al., 2013; p. 11). But labor-force participation, defined as the proportion of the population that is either employed or seeking to be employed, has declined for everyone except older workers in

recent decades. Figure 7.1 shows labor-force participation by age since 1992. While employment declined slightly between 1992 and 2013 for those aged 25–54, it increased, and is expected to continue increasing, for all workers aged 55 and older (Toossi, 2013). From 2002 to 2014, the steepest increase in labor-force participation occurred for workers aged 65–74, and this rate of increase is expected to be maintained through 2022 (Toossi, 2013). These are unprecedented levels of labor-force participation among middle- and older-aged workers, and they are helping to redefine the golden years.

Among those in the labor force, the amount of hours worked varies dramatically. Roughly 80 percent work full time and 20 percent work part time. Younger workers and older workers are both more likely than middle-aged workers to be employed part time (Toossi, 2015a,b). Moreover, many in the labor force are actually unemployed. Persons are classified as unemployed in the Current Population Survey if they do not have a job, have actively looked for work in the prior four weeks, and are currently available for work. Unemployment rates soared from 4.4 percent in May of 2007 to a high of 10 percent in October 2009 due to the Great Recession. Overall, unemployment remained high for 2010 and 2011 and then began to gradually decrease to 5.5 percent in 2015 (Toossi, 2015a,b).

Teen labor-force participation has been on the decline for many years. Additionally, teens have the highest rates of unemployment, and those rates increased even further during the recessionary period. Workers aged

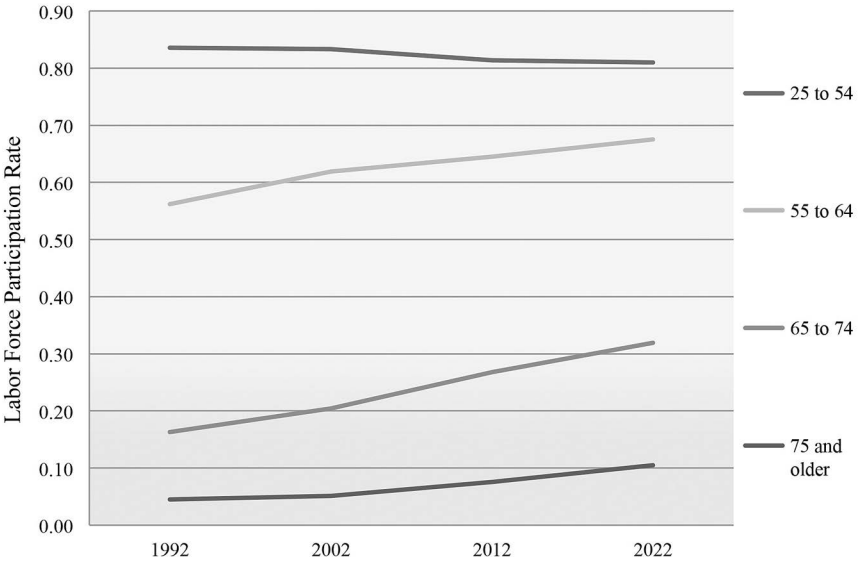


Figure 7.1 Percentage participating in the labor force, by age, 1992–2022. (BLS, 2013)

20–24 experience relatively high unemployment rates, but in the last year, the unemployment rate for this group dropped from 12.7 percent to 10.6 percent. Workers aged 55 and over consistently report lower unemployment rates, between 4.2 and 4.5 percent; however, those statistics are interpreted with caution because older workers tend to retire rather than become unemployed (Toossi, 2015a,b).

Historically, men's labor-force participation rates have been significantly higher than women's but the gap is closing. The most dramatic increase in labor-force participation rate occurred in women aged 55–64, which increased from 47 percent to 55 percent between 1992 and 2002, representing a 9 percentage point increase in just a decade. During that same time frame, men's participation rate rose only from 67 to 71 percent. As Figure 7.2 shows, labor-force participation rates vary by gender and age.

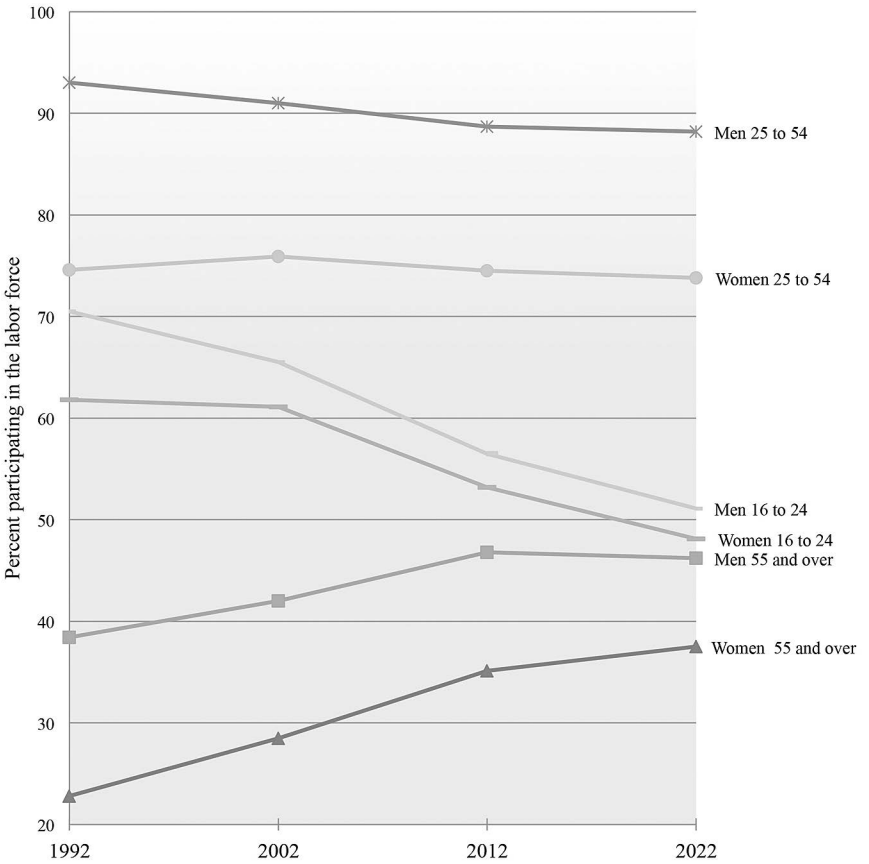


Figure 7.2 Percentage participating in the labor force, by age and gender, 1992–2022. (BLS, 2013)

Young workers, aged 16 to 24, have declining labor-force participation rates. In 2013, these rates declined from 71 percent to 51 percent for men and, less dramatically, from 61 percent to 48 percent for women. The gender gap in participation rates between men and women are the smallest in this group.

The highest labor-force participation rates are for adults aged 25 to 54 and this group has also been experiencing a slow decline since 1992. This decline is expected to continue through 2022 with both men and women declining. Men's participation rate is expected to drop from 93 percent in 1992 to 88 percent in 2022, while women's participation rate is expected to remain fairly stable, from 75 percent in 1992 to 74 percent in 2022 (Toossi, 2013).

Labor-force participation rates for workers aged 55 and older have risen substantially. Men's participation rates rose from 38 percent in 1992 to 47 percent in 2012 and is projected to taper off to a projected 46 percent in 2022. Women's labor-force participation rate for that age group is expected to rise from 23 percent to 38 percent over that same period. Furthermore, the Bureau of Labor Statistics projects that by 2022, fully 36 percent of men and 28 percent of women will be working at ages 65–74 (Toossi, 2013).

Part-time work is defined as usually working less than 35 hours per week by the Bureau of Labor Statistics, and women are more likely to work part time than men. In 2013, 26 percent of all working women worked part time, compared to only 13 percent of men (BLS, 2014a). In May 2015, for example, there were 9 million men 20 years of age and older working part time, compared to 16 million women (Toossi, 2015a,b). Though there are marked gender differences in part-time work rates, there is little gender difference in unemployment rates. Over the last two years, the seasonally adjusted unemployment rate for men averaged 5.4 percent and women 5.2 percent (Toossi, 2015 a,b).

Labor-force rates are similar, and declining, for all race and ethnic groups, but unemployment rates vary starkly by race and ethnicity. For whites aged 16 and over, labor-force participation rates are expected to drop from 67 percent in 1992 to 62 percent in 2022 (Toossi, 2013). During the same period, rates for blacks are expected to fall from 64 percent to 60 percent. Labor-force participation for Asians is projected to decline from 67 percent in 1992 to 63 percent in 2022. Hispanic labor-force participation is expected to decline the least, from 67 percent in 1992 to 66 percent in 2022.

With respect to full- or part-time work, there are only very small differences by race or ethnicity (Shaefer, 2009); however, unemployment rates vary markedly by race and ethnicity. Generally all ethnicities have

trended in the same pattern of seasonally adjusted unemployment rates with historic lows prior to the recession and high spiking unemployment in 2010, followed by a slow decline as the economy began to recover. But the rates are dramatically higher for some groups than others. Asians experienced the lowest average unemployment rate from 2005 to 2014 at 5 percent (BLS, Current Population Survey, 2014). During the same period, the average unemployment rate for whites was 6 percent, for Latinos was nearly 9 percent, and for blacks was over 12 percent. Historically black unemployment rates have been consistently double those of whites. Moreover, black workers experienced the most dramatic rise in unemployment during the Great Recession. In March of 2010, blacks experienced a striking 17 percent unemployment rate (Toossi, 2015a,b).

Foreign-born workers comprised nearly 11 percent of the labor force in 1992 and nearly 17 percent in 2014 (BLS, 2014b). Latinos account for 48 percent and Asians account for 24 percent of all foreign-born workers. Recent immigrants are more likely than those who have been here for more years to be working only part time or for only part of the year (Seghal, 1985; Rose & Hartmann, 2008). Also, foreign-born workers are more likely than native-born workers to be employed in service occupations, which tend to have lower pay and offer fewer benefits. In general, the unemployment rate for foreign-born is very similar to native-born people (BLS, 2014b).

Wages

Wages have been rising for men and women of all ages in the United States, but they vary markedly by age, gender, race, ethnicity, and nativity. Generally wages increase across the life course, until age 65 when many reduce hours or change jobs and therefore accrue lower earnings. Until recently, workers, aged 65 and older, have reported lower weekly earnings than other adults. But as Figure 7.3 demonstrates, workers over 65 caught up with 25–54-year-olds in 2014. While this is good news for older workers' incomes, it may result in some pressure from employers for older workers to retire earlier than they may desire. Employers value the experience of older workers but may be reluctant to have such high-paying workers on the payroll for increasing numbers of years.

Though median earnings rose between 2000 and 2014 for men and women alike, Figure 7.3 shows that women's median earnings are well below men's at all ages. In 2014, among workers aged 25–54, men's median weekly earnings are 20 percent higher than women's; among workers aged 55–64, they are 26 percent higher than women's; and among those aged 65 and older, they are 24 percent higher (BLS, 2014a). The

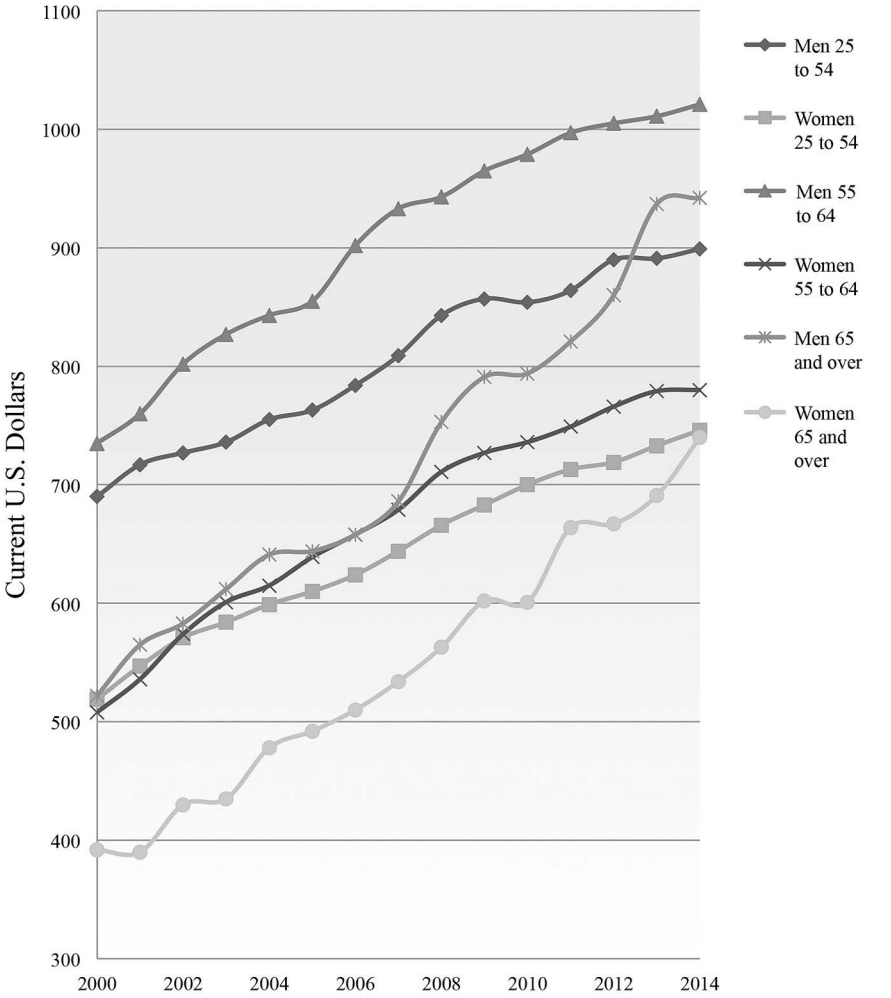


Figure 7.3 Median usual weekly earnings, by age and gender, 2000–2014. (BLS, 2014)

stubborn gender gap in wages leaves women more economically vulnerable than men in old age. The gender gap in wages is linked to gender differences in responsibilities for unpaid care work and housework, gender differences in full- and part-time status, and gender discrimination (Harrington Meyer & Parker, 2012). There is little pay equity in the labor force. Women tend to be segregated into lower-paying jobs, they tend to earn less than men when they work jobs traditionally held by men, and even when women are employed in comparable jobs, they tend to earn significantly less than men (Rose & Hartmann, 2008; Hegewich & Ellis,

2015). Thus at any point in time, women's earnings average just 70 percent of men's, but over the course of the 15 years between ages 25 and 40, Hartmann, Rose, & Lovell (2006) found women's cumulative wages averaged just 38 percent of men's.

Median usual weekly earnings differ significantly by race and ethnicity, with whites of all ages significantly out-earning blacks and Latinos (BLS, 2014c). Figure 7.4 shows that from 2000 to 2014, whites aged 55 and over earned the most, followed by whites aged 25 to 54. Median weekly earnings for whites aged 55 were 22 percent more than for comparable blacks and 32 percent more than for comparable Latinos (BLS, 2014c). Similarly, median weekly earnings for whites aged 25 to 54 were 21 percent more than for comparable blacks and 29 percent more than for comparable

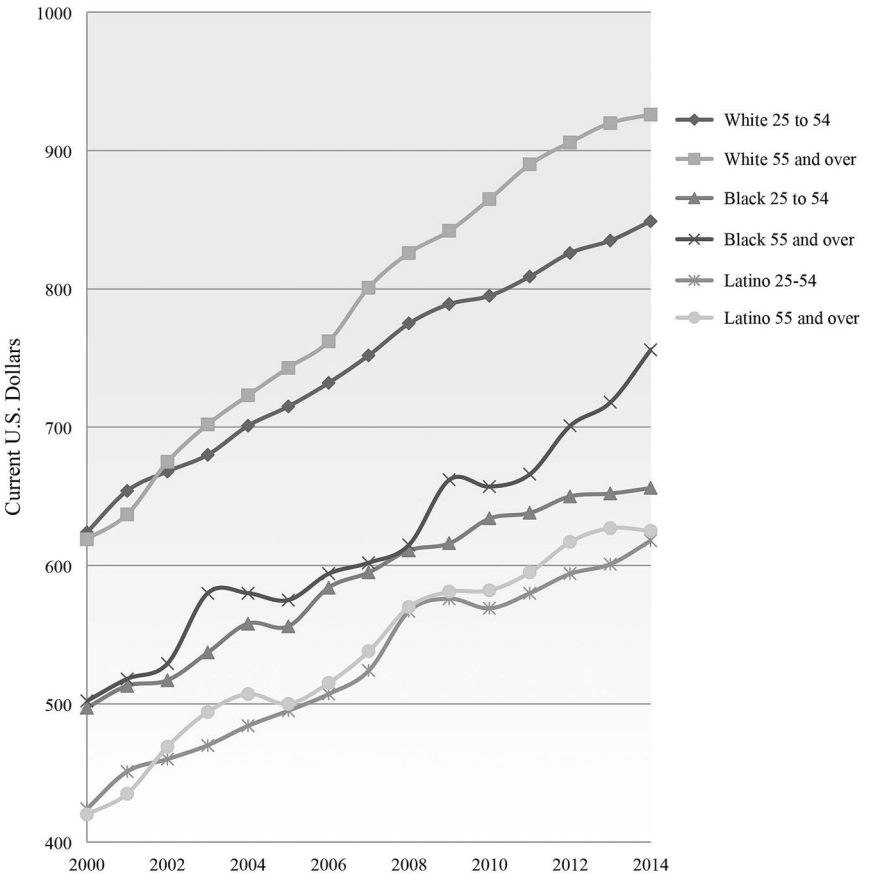


Figure 7.4 Median usual weekly earnings, by age and ethnicity, 2000–2014. (BLS, 2014)

Latinos (BLS, 2014c). Blacks and Latinos both experienced wage stagnation, particularly during the Great Recession, but Latinos consistently experienced the lowest levels of earnings. Moreover, Latinos 55 years of age and older experienced decreasing wages between 2013 and 2014, the only group to experience such losses (BLS, 2014c).

Those emigrating to the United States from other countries generally earn less than native-born members of the workforce. Although the flow of unauthorized immigrants slowed during the economic downturn of 2008, the United States has in excess of 11 million immigrants without official documentation (Passel et al., 2014). In 2014, the median usual weekly earnings of foreign-born were $664, compared with $820 for workers born in the United States (BLS, 2014b).

As would be expected, those with more education earn significantly more than those with less education. Figure 7.5 displays the dramatic impact that education has on earning potential. For example, those with bachelor's degrees earn 2.4 times as much, and those with an advanced degree earn 2.8 times as much, as those with less than a high school diploma (BLS, 2014). Perhaps even more importantly, returns on investments in

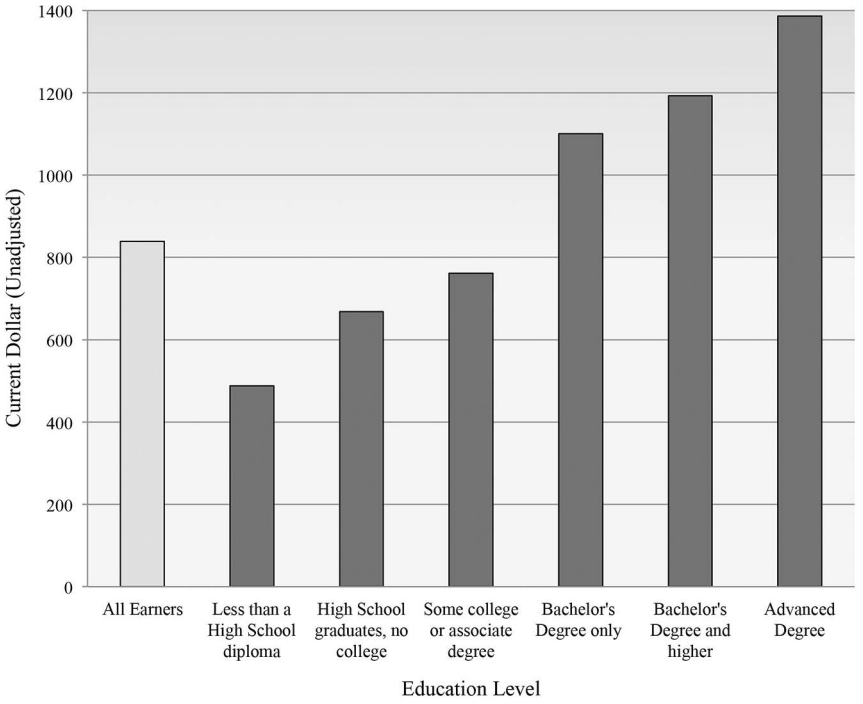


Figure 7.5 Median usual weekly earnings, by education, 2014. (BLS, 2014)

education vary substantially by gender, race and ethnicity, and socioeconomic status. For example, even though women are more likely than men to complete high school, B.A., M.A., and most PhD degrees, they often receive substantially less than equally educated men. Women with less than a high school diploma earn 81 percent, with a BA earn 78 percent, with an MA earn 74 percent, and with a PhD earn 79 percent of what comparably educated men earn (BLS, 2014a).

Not all jobs are good jobs. Some provide high salaries and generous fringe benefits, while others provide neither. The financial crisis of 2008 led to a recession, decreased demands for labor, and a sluggish recovery. It also led to the creation of more bad jobs. Fewer jobs hold the promise of long-term commitment on the part of the employer. Rising numbers of bad jobs with short-term work arrangements in the temporary work industry have generated low pay, low benefit, and low-security jobs (Quinlan, Mayhew, & Bohle, 2001; Kalleberg, 2013). These bad jobs change the landscape for workers of all ages by increasing the supply of low wage and unstable work. Their impact is even greater, however, for older workers because it is within that context that they make decisions about whether to work or retire (Clarke et al., 2007; Cahill, Giandrea, & Quinn, 2012).

Major globalization trends have been impacting U.S. workers through vast economic, technological, legal, and political changes (Sauter et al., 2002; Phillipson, 2004a, 2004b, 2013). These changes not only influence labor-force participation rates (Downs et al., 2006), but they have redefined the types of work available and the way work is organized. Increasingly liberal trade regulations have given rise to more global operations, intensifying competition, and tightening labor markets. For workforce members, declines in manufacturing jobs and changing technologies have led to the development of a menu of lower-paying jobs, mostly in the service sector. Many of these jobs are devoid of meaning or satisfaction while at the same time posing health and safety risks. Amidst rapid deunionization, corporations have become more intent on reengineering their business processes to shed experienced workers in favor of just-in-time hiring, favoring flexibility over retention (Cappelli, 1995). So, both middle-aged and older workers face problems maintaining wages and increasing job insecurity (Cahill et al., 2012). Even through median usual weekly earnings have been slowly increasing, substantial numbers of workers of all ages are not able to garner a living wage (Leigh, 2012). Experts fear that the proliferation of low-wage jobs may become fixed at a level that has not been evident since before the Great Depression. In the New Economy, incomes have been rising and more people are working, but patterns of inequality are striking, and there is little discussion of implementing policies that would protect workers from the rising insecurities of the New Economy.

Theoretical Links between Work, Retirement, Health, and Well-Being

The relationship between work and retirement on health is central to individual, family, and community life. Research on this relationship requires the assistance of many fields and a wide variety of theoretical gazes. Ideally, information should flow freely between the biological sciences such as epidemiology, medicine, environmental science, and the social sciences such as psychology, sociology, and political economy. Taken together, these professional domains clarify the socioeconomic and political pathways between the economy, work organization, work and retirement patterns, and health.

Many researchers have adopted a rosy picture that older workers have better physical health, mental health, and more meaning in their lives by working longer (Butrica, 2011; Freund & Baltes, 1998). These empirical studies demonstrate that older workers experience improved well-being and stave off physical, cognitive, and mental health declines by remaining in the workforce longer (Soumerai & Avorn, 1983; Mein et al., 2003; Andel et al., 2007; Wickrama et al., 1997, 2013). There is evidence that prolonged work life and gradual retirement increase sense of control and increase future happiness (Calvo, Haverstick, & Sass, 2009). For example, Successful Aging theories emphasize how older people might maximize the potential of the golden years (Baltes & Smith, 2003; Robson & Hansson, 2007). Selection, optimization, and compensation theories advance similar arguments (Abraham & Hansson, 1995; Unson & Richardson, 2013). From these perspectives, lengthening labor-force attachment and engagement tends to lengthen healthier and more productive living.

Not all researchers' findings create such optimism about the links between work and old-age health and well-being, particularly in light of the cumulative effects of certain types of work on health over time. Among those raising questions about older workers' occupational health, some have relied upon epidemiological traditions (Kuh et al., 2003). Others have drawn from more sociological traditions (George, 1993; Mirowsky & Ross, 1999; Elder, Johnson, & Crosnoe, 2003; Dannefer, 2003) and from demographical standpoints (McDonough and Berglund, 2003). Longitudinal cohort studies have given rise to important findings elucidating the social determinants of health. Occupational and environmental factors do impact health over time. Much of the research regarding aging and work-related health is focused on injury rates. This data is easy to collect because it is frequently acute trauma and easily recorded and quantified. On average, older workers have lower rates of injury, but they have more severe injuries and lengthier recoveries. Falls at work are more likely to result in fractures or fatality for workers over 65 (Rogers & Wiatrowski, 2005).

The complex nature of establishing work-relatedness causes occupational disease to be underappreciated. Occupational cancers such as mesothelioma can express decades after exposure to the hazardous substance. Job type is the strongest predictor of poor occupational health outcomes in old age, and there are emerging concerns about older workers who increasingly work in service sectors especially because of the financial vulnerability an injury may cause (Zwerling et al., 1996; Kenny et al., 2008; Bohle, Pitts, & Quinlan, 2010). Because work-related illness and injury must be considered in the context of a life history, longitudinal work in these areas is especially important for determining the impact of work on health for the long term.

Life-course researchers have analyzed health inequalities from the perspective that "retirement is a complex process that occurs over individuals' working lives" (Szinovacz, Martin, & Davey, 2014, p. 245). Life-course research emphasizes trajectories and supports the idea that decisions are embedded deeply in contextuality. Life-course researchers think about work and retirement decisions in terms of pivotal junctures. For example, they examine the way unexpected poor health, changing options emanating from the employer, and historical and/or economic events such as the Great Recession influence the retirement experience (Dannefer, 2003; Moen, 1996; Szinovacz et al., 2014). From the life-course approach, "individuals' retirement plans will balance a lifetime of retirement preferences with the mandates of current events both at the individual and societal levels" (Szinovacz et al., 2014, p. 246). Empirical studies on work and health find that wealth accumulation and upward social mobility are inversely related to the incidence of coronary heart disease (Hallqvist et al., 2004; Loucks et al., 2009). Chronic pain, on the other hand, is related to lower socioeconomic status and manual work (Lacey, Belcher, & Croft, 2013). Certainly occupational trajectories have critical life junctures and cumulative effects on health, shaping worker health very differently for older workers from different socioeconomic classes.

Finally, gerontologists examine power relations originating from political and economic frameworks to more fully explain gerontological patterns. While many studies focus intently and almost exclusively on econometric measures, critical theorists examine social location and social stratification to question the status quo. By considering the impacts of global changes on local economies (Calasanti, 2002), work in these areas not only acknowledges the inherent disempowerment found in the heterogeneous workforce, but also acknowledges the interdependence of formal and informal economies, migration patterns, and the impact of profit-seeking policies of private business on local working populations (Estes, 2001; Estes & Phillipson, 2002; Phillipson, 2013). With regard to analyzing the impact

of work and retirement on health and well-being, gerontologists identify sources of alienation and changing social structures that foster displacement and marginalization of vulnerable groups. They explore how macrolevel political and economic decisions shape individual-level physical, mental, and social well-being. These theorists generally view redistributive features of economic programs like Social Security as essential policies for offsetting the inequalities generated by the labor market and for supporting an aging population in need of material means to prevent deep poverty and poor health (Quadagno, 2004; Harrington Meyer & Herd, 2007; Harrington Meyer, 2013).

The Occupational Health of Older Workers

Work in middle and old age can be good for health, but that is certainly not always the case. Work has the potential to provide deep engagement, social identity, and basic satisfaction. Generally older Americans are in better health than they have been at any time in history and many are considered healthy enough to work. However, many researchers have questioned just how healthy work is at old ages. How do aging, health, and work intersect (Behncke, 2012; Bohle et al., 2008; Bohle, Pitts, & Quinlan, 2010)? Health inequalities are systematically being created or reinforced because older workers are working more frequently in low-wage work, and education levels limit work opportunities (Baron et al., 2014; Zajacova, Montez, & Herd, 2014). Older workers face a plethora of common worrisome circumstances. High quality of work life is not guaranteed as older workers face changes in technology with accompanying skill set requirements. Often poor attitudes toward older workers and outright discrimination persist in the workplace (Posthuma & Campion, 2009; Roscigno et al., 2007; McMullin & Bereger, 2006). Though older workers tend to work safer, when they are injured, recovery is slower (Wegman, 1999; Wegman & McGee, 2004; Silverstein, 2008). Older workers often manage multiple chronic health concerns such as arthritis or depression while on the job (Lee & Smith, 2009). Low-wage work picked up for extra income in retirement can be demeaning or dangerous. Most occupational health researchers suggest that accommodation is a necessary component of keeping older workers in the labor force. Too often, the workplace creates or sustains health inequalities, and meaningful accommodation of older workers may not be a high priority for employers.

Remaining engaged in the labor force has many important potential benefits. Some remain in lifelong careers, while others change careers entirely. The later practice, known as creating encore careers, is growing increasingly popular as an exit strategy. In any case, working during

older ages brings generativity and social ties (MorBarak, 1995; Freedman, 2006). Creating alternative income streams often provides new flexibility in later life (Platman 2004; McNamara et al., 2012, 2013). Work gives identity, and attachment to work is often reassessed in the complex process of retirement (Strangleman, 2012). Satisfaction may come from the realization that the workers' lengthy experience may be valuable to their employer given that it helps the company to retain knowledge that might otherwise be lost (Voelpel & Dous, 2006). Providing assistance in the employer's transition to the next generation is likely beneficial to all involved (Taylor et al., 2010). Finally, adapting to the ever-changing demands of the workplace may create new challenges and new types of activities that are highly valued (Moen, Flood, & Louis, 2011).

Older workers with lower socioeconomic status have greater economic incentives to remain working past traditional retirement age, but they tend to be in worse health and have less healthy work options available to them. Less-advantaged workers tend to have higher rates of chronic conditions including arthritis and heart disease, mobility problems, and mental health problems such as depression (Smith, Bielecky, & Mustard, 2012). Moreover, lower-paying jobs tend to include more physical stress and strain, repetition, supervision, and other characteristics that can take a toll on health (Krause, Scherzer, & Rugulies, 2005). In recent decades, the quality of low-wage work has diminished as union influence waned and the economy reconfigured. This combination set the stage for increased health and safety risks at a time when older people began to work even longer (Mulatu & Schooler, 1999; Mutchler et al., 1999; Quinlan, Mayhew, & Bohle, 2001; Pransky, Benjamin, & Savageau, 2005; Peeters & van Emmerik, 2008). Given their reliance on high turnover to keep wages low, employers of low-wage workers have few incentives to create workplaces that accommodate older workers (Head et al., 2006). Older workers are often viewed as problems to be managed properly (Morrow, 2011; Brooke & Taylor, 2005). Aging workers under chronic financial strain are already at risk for poorer physical and mental health and reliance on low-wage work may exacerbate that tendency.

Older workers with higher socioeconomic status may have less financial incentive to keep working at old ages, but they tend to have better health and healthier options for work. Indeed, occupational health is not experienced equally across socioeconomic groups and those from higher classes have a decided health advantage (Steege et al., 2014; Baron et al., 2014). In 2008, some estimate that 73 percent of those who had retired or were not working for some other reason were actually healthy enough to work (Hayutin et al., 2013). Because a high percentage of workers entering their 60s remain healthy enough to work, even more older men and women

may elect to remain employed longer (Hayutin, Beals, & Borges, 2013). Of less concern are those whose life paths have afforded them education and attainment in ways that enhance their approach to health and aging (Ross & Wu, 1996). These are workforce members who have numerous work and retirement options (Cahill, Giandrea, & Quinn, 2006) and may freely elect to make decisions about continuing to work in well-paying jobs with elevated social benefits. The relatively affluent person may see a convergence of good health, pleasing opportunities for generating later stages of life. The three planes of their health, work, and aging are intersecting well for them (Kim & Durden, 2007), whereas those who have accumulated less advantage face fewer options.

Older workers are more vulnerable than younger workers to layoffs and firings during economic downturns and that may adversely affect psychological well-being (Hao, 2008; Dave, Rashad, & Spasojevic, 2008). Older workers were hit hard by the recent recessionary period. Almost 13 million workers were displaced from their jobs between 2009 and 2012. Older workers comprised nearly 20 percent; however, only 15 percent were reemployed (BLS, 2014d). Recurring involuntary job loss is deleterious to mental health, bringing on persistent depression (Gallo et al., 2003, 2006) and/or increasing alcohol consumption (Gallo et al., 2001). Work is thought to be protective against depression (Christ et al., 2007), cognitive declines, memory loss (Wickrama et al., 2013), intellectual functioning (Schooler, Mulau, & Oates, 1999), and cognition. That said, the impact of work depends on primary lifetime occupation (Frisoni et al., 2007; Andel et al., 2007). There is little doubt that working longer in meaningful and rewarding positions, for those who are healthy enough, stimulates social connection, reduces physical decline, and increases mental acuity. Though it is also clear that working for pay is not the only way to generate these gains. It some instances, volunteering or caregiving may be as effective (Moen et al., 2011; Moen, Robinson, & Fields, 1994) and more accommodating.

The benefits to working in old age may be elusive, however, for those who are unable to secure or retain employment. Older workers may be particularly valuable to employers, but their labor-force attachments may be tenuous because employers may be reluctant to train them properly. Recent findings indicate that while older workers are more loyal, conscientious, and possess strong interpersonal skills, these soft skills are not valued as highly as hard skills such as technical knowledge or ability to produce specific deliverables required by the job. Many employers prefer to hire younger workers (Brooke et al., 2013). More comprehensive technological training would enhance the ability of older workers to remain engaged and to reap the associated health rewards. Experts emphasize the need for employers to develop appropriate training models for the

intergenerational transfer of technology (Lazazzara, Karpinska, & Henkens, 2013), particularly related to Internet use, product adoption, information environment, and skill acquisition among older workers (Nair, Czaja, & Sharit, 2007; Sharit et al., 2008).

Accommodating Aging Workers

Understanding what it means to accommodate older workers in the workplace is in its infancy even though simple solutions might enhance the work experience. Specific forms of accommodation may include changes to workplace lighting to account for normal changes in vision among older workers; recognizing that older workers may require elder care rather than childcare; or allowing more frequent opportunities to work from a seated rather than standing position (Head et al., 2006; Hill et al., 2008; Lynch, 2012). Occupational health risks faced by older workers are challenging to measure. Aging itself is a highly variable process and reductions in capacities are often compensated for by efficient use of resources and well-established skills. It is not surprising that jobs requiring heavy lifting produce the highest injury rates with increasing age. Falls from the level are more likely in older workers (Kenny et al., 2008; Wegman & McGee, 2004). Common work arrangements such as contingency work or shift work have caused increased risks (Costa & Di Milia, 2008). Certain fields, such as construction, agriculture, and/or truck driving, generate problems for older workers (Choi, 2009; Arcury et al., 2014). Physical and cognitive changes predispose older workers to injury, but poor work organization or working conditions also create preventable exposures. Meeting the physical, mental, and social demands of any given job leads to better health outcomes for older workers.

Although workers of all ages have similar occupational health and safety issues, older workers sustain fewer injuries. However, when they become injured, older workers are more likely to sustain fatal injuries and more severe injuries (Kenny et al., 2008; Algarni et al., 2015). In addition, older workers require longer recovery times and therefore have poorer return-to-work rates than younger workers (Kiss, DeMeester, & Braeckman, 2008). Occupational health issues may be harder to address especially if access to quality medical care and strong advocacy is not in place to support a full recovery and return to meaningful work (Crook & Moldofsky, 1994; Kisner & Pratt, 1999; Bailer et al., 2003). The development of an illness or injury that is related to work puts in motion a cascade of financial, personal, and work-related stressors. These concerns are especially burdensome because workers' compensation systems are extremely difficult to navigate (Lax & Klein, 2008; Kilgour et al., 2015). Studies entertaining

all aspects of health—social, psychological, behavioral, and ecological—give reason for caution. Working longer may negatively impact short- and long-term health when there is risk of injury or work-related illnesses (Mulatu & Schooler, 1999; Kenny et al., 2008).

The case of arthritis highlights the necessity for occupational health professionals to engage in problem solving around chronic diseases common in old age. The prevalence of arthritis reaches 50 percent for persons aged 65 and older (Caban-Martinez et al., 2011). Arthritis is marked by progressively worsening pain and inflammation of the joints, deleteriously affecting employment rates (Allaire, Al Heresh, & Keysor, 2013). Many musculoskeletal problems in older workers are work-related, while most arthritis cases are probably not caused by work but may be exacerbated by working conditions. Assessing the impact of work on health in older workers requires careful attention to working conditions and accurate assessment of work-relatedness of common conditions like arthritis. Arthritis is related to increased job strain, increased job instability, and negative workplace experiences that may affect men differently than women (Gignac et al., 2013). Workers sometimes work long after it would have been in their best interests to stop working.

Old age is not considered a disability covered under the Americans with Disabilities Act (ADA), but older workers would benefit from attention to accommodation (Head et al., 2006; Vickerstaff, Phillipson, & Wilkie, 2013). In 1967, the Age Discrimination in Employment Act was signed into law, protecting workers aged 40–65. The ADEA protects certain applicants and employees 40 years of age and older from discrimination on the basis of age in hiring, promotion, discharge, compensation, or terms, conditions, or privileges of employment. Prior to the enactment of ADEA, it was legal to discriminate against workers on the basis of age. Many companies had mandatory retirement ages and workers were forced to retire regardless of their abilities. The 1986 amendment to the ADEA eliminated the upper age limit, effectively halting mandatory retirement except for a few select occupations. The ADEA does not require accommodations for age-related needs in the same way that the ADA does for disabilities, but it does prohibit employer policies that may appear to be age neutral but which may have a disparate impact on older workers. For example, older workers tend to have lower tolerance for heat and may therefore require more breaks than younger workers in a hot working environment. However, the protection afforded by the ADEA is difficult to obtain, since a complaint would need to be filed with the EEOC, and the process for obtaining relief is likely to be complex and prolonged. ADEA cases have generally involved hiring or firing and the case law on workplace accommodations is not well developed.

Accommodation includes attention to a wide range of factors influencing the quality of work life such as work arrangements, job attributes, organizational climate, safety culture, job security, and work-life balance. Adjustments can lead to the retention of older workers and improve the health by reducing long-term health and disability (Sauter, Streit, & Hanseman, 2009; Reinhardt, Wahrendorf, & Siegrist, 2013). Realizing that older people may be readily accommodated, researchers assess work design and redesign (Sauter, Streit, & Hanseman, 2009; Sharit & Czaja, 2012). Significant gaps in our understanding of the physiological, biomechanical, and psychosocial elements affecting older workers (Wegman & McGee, 2004) must be addressed.

Redefining the Process of Retirement

Retirement is constantly being redefined. The earliest conceptions were more focused on retirement as a status, while modern expectations for retirement evoke a protracted stage of life with good health enjoyed in the absence of work-related responsibilities. Over time, the concept of retirement has changed in many other ways as well. Notably, it has evolved from a milestone event to a bridging process that takes place over a period of time. Retirement decisions are characterized by pushes and pulls usually centered on fairly obvious financial trade-offs. These factors have been shaped and reshaped by social, economic, and political contexts over the last several decades. Retirees' decisions about retirement continue to be impacted by a changing employment landscape and increasingly diverse types of living arrangements.

In, "Rethinking Retirement," Melissa Hardy (2011) describes how retirement has been conceptualized over several decades. In 1935, the United States created the Social Security system that actively encouraged older covered workers to retire. For the next few decades, various pro-retirement policies shaped a layer of protection around vulnerable elders to ensure a federal system of economic security and supportive health benefits into old age. In the 1970s, industries were providing early exit strategies through pensions. Retirement as a life event eventually became an accepted norm, especially for those who had built substantial financial security. Then in the 1980s, problems with the Social Security program began to emerge especially over the way the dependency ratio was affecting funding (Polivka & Luo, 2015; DuBoff, 1997). As more retirees took benefits, the program's fiscal challenges grew. At the same time, private pensions offered by companies began to face serious fiscal shortfalls. The United States faced a period of deindustrialization, growing service economies, and growing legions of retirees drawing benefits. As public and

private pensions retrenched, retirement became less of an event and more of a process. Some older workers took retirement packages rather than face unemployment while others were simply displaced or laid off. As the U.S. economy shifted, so did the process of retiring.

Since the 1990s, prowork policies have dominated policy shifts and are of major importance to organized labor, employers, and the government especially because they have been "transferring risks from employers and government to workers" (McNamara, Sano, & Williamson, 2012). The elimination of mandatory retirement ages served as a prowork strategy. Examples of other prowork policies that shifted risks during the 1990s include the relaxation of the Social Security earnings test, which encourages income even among beneficiaries, and the trend away from defined-benefit pensions and toward defined-contribution pensions, which shifts investment risks from companies to individuals making them less financially secure as they approach old age (McNamara, Sano, & Williamson, 2012).

Most retirees now face complex retirement decisions highly dependent on financial literacy. Transitions to retirement now included bridge employment and returning to work after retirement. For some, these blurred lines may have provided a kind of weaning from satisfying work roles by responding to desires for flexible employment arrangements; however, for others these transitions were driven by narrowing opportunities. Aging workers make retirement decisions in the face of skill obsolescence and corporate downsizing. Some employers strive to retain older workers through accommodation, but others rely on job insecurity in the labor market to pressure workers to remain in stressful jobs (Phillipson, 2013).

The process of retirement is clearly influenced by economic contexts, but it is far from being unidimensional. Ideas about retirement form over the entire working lifetime and are embedded in family circumstances, institutional factors, and more general social norms (Clark & Mitchell, 2005; Ekerdt, Kosloski, & DeViney, 2000). Expected retirement age shifted later with the concern over the economic downturn, but also was influenced by other factors such as individual debt, work conditions, work arrangements, ADL limitations, and spouse's work status (Dew & Yorgason, 2010; Szinovacz, Davey, & Martin, 2014). For some, remaining in the workforce longer creates positive gains from multiple social attachments and roles that provide opportunities for mastery and work/family enhancement. Often work simply becomes too physically demanding, other caregiving responsibilities take precedence over working, or the older worker is marginalized at the workplace and feels pressured to leave. Retirement planning involves an array of decisions driven by balancing financial needs, social opportunities, and institutional constraints.

The experience of retirement is highly gendered (Moen, 1996, 2005). Retirement timing often takes into account partner's retirement and care

work responsibilities. Indeed, marital status influences retirement as spouses attempt to synchronize their work and family life (Svinovacz & DeViney, 2000; Szinovacz & Davey, 2005). Whether married or single, older men and women make decisions within the context of financial obligations, care needs of the family, traditional social roles, and great disparities in health and income.

Women have been consistently more involved with care work and domestic responsibilities and frequently occupy lower-paying positions relative to men. Since they have not been able to garner strong enough financial security due to less labor-force participation over their life course, many are working after age 65 to catch up. Intentions to continue working beyond retirement age are rooted in circumstances emerging from the midlife years (Shacklock, Brunetto, & Nelson, 2009; Damman, Henkens, & Kalmijn, 2011, 2013). Retirement takes on different meanings and levels of satisfaction based on domestic contexts (Loretto & Vickerstaff, 2013; Smith & Moen, 2004).

The average retirement age has been stable for the last decade at age 64 for men and 62 for women (Munnell, 2015). Over 41 million retired workers are drawing Social Security Retirement benefits. Today's preretirees have a different landscape in which to make their retirement decisions. Women are less financially prepared for retirement than men (Wang & Scultz, 2010). Blacks and Latinos also retire with fewer savings than whites (Rhee, 2013). Poor health strongly motivates people to leave the workforce (McGarry, 2002); however, some work longer because they enjoy their work or desire to engage in a new type of career or entrepreneurial pursuit. Others report that they plan to retire later due to immediate financial constraint, persistent debts, or concerns about the inadequacy of Social Security benefits (Greenhouse, 2013). Often disability in one spouse prompts retirement, but for those in good health, longevity provides a stage for a period of reevaluation of personal and financial goals. There is evidence that voluntary transitions over time promote enhanced self-efficacy and life satisfaction over involuntary and fixed retirement schemes (Dingemans & Henkens, 2015). As expected, those with greater economic resources and better health tend to report greater satisfaction during retirement; those with fewer economic resources and poorer health face greater challenges.

Discussion

Americans are working longer than ever before, and the health and economic impacts of these trends, vary significantly by age, gender, race, ethnicity, and nativity. The relationship between work and health over the life course continues to be challenging as aging individuals make decisions in an ever-changing employment landscape. Working into the later

decades of life may have numerous positive benefits on health and well-being for those with good enough health and good enough employment options. But for those for whom health is already compromised, and for whom jobs are physically or emotionally demanding, the impact on health may indeed be negative. More work is needed by researchers and employers alike to understand the needs of older workers and the best ways to accommodate them. Moreover, as key economic and political factors have changed, so has the practice and meaning of retirement. More changes are expected in the decades ahead.

Retirement has been redesigned. It has achieved a fluidity that blurs traditional career stages. This reworking of a historic work status raises significant policy questions with relevance to many disciplines at the intersection of aging, work, and health. Examining the current economic contexts with the accompanying proliferation of low-wage work and noting strong concerns about the occupational health of older workers, this chapter considered how the aging workforce is redefining work and retirement. Attention was paid to critical gerontology, the life-course paradigm, and public health lenses.

As political and economic pressures mount to keep people working longer, it will be increasingly important to keep in mind that the United States has never kept an aging workforce engaged under current economic and social conditions. On the one hand, for many, cumulative disadvantages in the form of chronic comorbidities, decreased wealth attainment, and poor occupational choices may prove highly burdensome. On the other hand, with good accommodation practices, working longer may be an attractive option leading to increased health and meaning in later life, greater social integration, and maximized financial security. If we value elders intrinsically, then more meaningful futures in both work and retirement arenas could be crafted by identifying and rectifying significant gaps that exist in the knowledge about workplace accommodation, about how aging workers acquire skills, and how to engage the older workers' voice in the formation of retirement options.

References

Abraham, J. D., & Hansson, R. O. (1995). Successful aging at work: An applied study of selection, optimization, and compensation through impression management. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *50*(2), 94–103.

Algarni, F. S., Gross, D. P., Senthilselvan, A., & Battie, M. C. (2015). Ageing workers with work-related musculoskeletal injuries. *Occupational Medicine (London)*, 65(3), 229–237. doi:10.1093/occmed/kqu213

Allaire, S. J., AlHeresh, R., & Keysor, J. J. (2013). Effect of arthritis and other rheumatic conditions on employment. *Work: A Journal of Prevention Assessment & Rehabilitation*, *45*(3), 417–420. doi:10.3233/wor-131629

Andel, R., Kareholt, I., Parker, M. G., Thorslund, M., & Gatz, M. (2007). Complexity of primary lifetime occupation and cognition in advanced old age. *Journal of Aging and Health*, *19*(3), 397–415. doi:10.1177/0898264307300171

Arcury, T. A., Grzywacz, J. G., Chen, H., Mora, D. C., & Quandt, S. A. (2014). Work organization and health among immigrant women: Latina manual workers in North Carolina. *American Journal of Public Health*, *104*(12), 2445–2452. doi:10.2105/ajph.2013.301587

Bailer, A. J., Bena, J. F., Stayner, L. T., Halperin, W. E., & Park, R. M. (2003). External cause-specific summaries of occupational fatal injuries. Part II: An analysis of years of potential life lost. *American Journal of Industrial Medicine*, *43*(3), 251–261. doi:10.1002/ajim.10190

Baltes, P. B., & Smith, J. (2003). New frontiers in the future of aging: From successful aging of the young old to the dilemmas of the fourth age. *Gerontology*, *49*(2), 123–135. doi:10.1159/000067946

Baron, S. L., Beard, S., Davis, L. K., Delp, L., Forst, L., Kidd-Taylor, A., . . . Welch, L. S. (2014). Promoting integrated approaches to reducing health inequities among low-income workers: Applying a social ecological framework. *American Journal of Industrial Medicine*. doi:0.1002/ajim.22174

Behncke, S. (2012). Does retirement trigger ill health? *Health Economics*, *21*(3), 282–300. doi:10.1002/hec.1712

Bohle, P., Di Milia, L., Fletcher, A., & Rajaratnam, S. (2008). Introduction: Aging and the multifaceted influences on adaptation to working time. *Chronobiology International*, *25*, 155–164.

Bohle, P., Pitts, C., & Quinlan, M. (2010). Time to call it quits? The safety and health of older workers. *International Journal of Health Services*, *40*(1), 23–41.

Brooke, L., & Taylor, P. (2005). Older workers and employment: Managing age relations. *Ageing and Society*, *25*, 415–429. doi:10.1017/s0144686x05003466

Brooke, E., Taylor, P., McLoughlin, C., & Di Biase, T. I. A. (2013). Managing the working body: Active ageing and limits to the "flexible" firm. *Ageing and Society*, *33*(8), 1295–1314. doi:http://dx.doi.org/10.1017/S0144686X12000426

Bureau of Labor Statistics. (2013). Foreign-born workers: Labor force characteristics 2013. http://www.bls.gov/news.release/pdf/forbrn.pdf

Bureau of Labor Statistics. (2014a). Displaced workers summary. http://www.bls.gov/news.release/disp.nr0.htm

Bureau of Labor Statistics. (2014b). Foreign-born workers: Labor force characteristics 2014. http://www.bls.gov/news.release/pdf/forbrn.pdf

Bureau of Labor Statistics (2014c). Highlights of women's earnings in 2013. Report 1051. http://www.bls.gov/opub/reports/cps/highlights-of-womens-earnings-in-2013.pdf

Bureau of Labor Statistics. (2014d). Labor force statistics from the Current Population Survey. http://www.bls.gov/cps/cpsaat37.htm

Bureau of Labor Statistics (2014e). U.S. Census Bureau, Current Population Survey. Annual Social and Economic Supplement.

Butrica, B. (2011). Making a case for working longer at older ages. *Public Policy & Aging Report*, *21*(2), 22–26. doi:10.1093/ppar/21.2.22

Caban-Martinez, A.J., Lee, D.J., Fleming, L.E., Tancredi, D.J., Arheart, K.L., LeBlanc, W.G., . . . Muennig, P.A. (2011). Arthritis, occupational class, and the aging US workforce. *American Journal of Public Health*, *101*(9), 1729–1734. doi:10.2105/AJPH.2011.300173

Cahill, K.E., Giandrea, M.D., & Quinn, J.F. (2006). Retirement patterns from career employment. *Gerontologist*, *46*(4), 514–523.

Cahill, K.E., Giandrea, M.D., & Quinn, J.F. (2012). Older workers and short-term jobs: Patterns and determinants. *Monthly Labor Review*, *135*(5), 19–32.

Cahill, K.E., Pitt-Catsouphes, M., McNamara, T.K., & Valcour, M. (2012). Employment experiences of older workers in the context of shifts in the national economy. *Gerontologist*, *52*, 676.

Calasanti, T.P. (2002). Work and retirement in the 21st century: Integrating issues of diversity and globalization. *Ageing International, 27*(3), 3–20. doi:10.1007/s12126-003-1000-1

Calvo, E., Haverstick, K., & Sass, S.A. (2009). Gradual retirement, sense of control, and retirees' happiness. *Research on Aging*, *31*(1), 112–135. doi:10.1177/0164027508324704

Cappelli, P. (1995). Rethinking employment. *British Journal of Industrial Relations, 33*(4), 563–602.

Choi, S.D. (2009). Safety and ergonomic considerations for an aging workforce in the US construction industry. *Work, 33*(3), 307–315. doi:10.3233/wor-2009-0878

Christ, S.L., Lee, D.J., Fleming, L.E., LeBlanc, W.G., Arheart, K.L., Chung-Bridges, K., . . . McCollister, K.E. (2007). Employment and occupation effects on depressive symptoms in older Americans: Does working past age 65 protect against depression? *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 62*(6), S399–S403.

Clark, R.L., & Mitchell, O.S. (2005). *Reinventing the retirement paradigm*. New York; Oxford, UK: Oxford University Press.

Clarke, M., Lewchuk, W., de Wolff, A., & King, A. (2007). 'This just isn't sustainable': Precarious employment, stress and workers' health. *International Journal of Law and Psychiatry, 30*(4–5), 311–326. doi:10.1016/j.ijlp.2007.06.005

Costa, G., & Di Milia, L. (2008). Aging and shift work: A complex problem to face. *Chronobiology International: The Journal of Biological & Medical Rhythm Research, 25*(2/3), 165–181.

Crook, J., & Moldofsky, H. (1994). The probability of recovery and return to work from work disability as a function of time. *Quality of Life Research, 3*(Suppl. 1), S97–S109.

Damman, M., Henkens, K., & Kalmijn, M. (2011). The impact of midlife educational, work, health, and family experiences on men's early retirement. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 66B*(5), 617–627. doi:10.1093/geronb/gbr092

Damman, M., Henkens, K., & Kalmijn, M. (2013). Late-career work disengagement: The role of proximity to retirement and career experiences. *The Journals*

of Gerontology Series B: Psychological Sciences and Social Sciences, 68(3), 455–463. doi:10.1093/geronb/gbt001

Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 58*(6), S327–S337.

Dave, D., Rashad, I., & Spasojevic, J. (2008). The effects of retirement on physical and mental health outcomes. *Southern Economic Journal, 75*(2), 497–523.

Dew, J., & Yorgason, J. (2010). Economic pressure and marital conflict in retirement-aged couples. *Journal of Family Issues, 31*(2), 164–188. doi:10.1177/0192513x09344168

Dingemans, E., & Henkens, K. (2015). How do retirement dynamics influence mental well-being in later life? A 10-year panel study. *Scandinavian Journal of Work, Environment & Health*, *41*(1): 16–23.

Downs, M., Phillipson, C., Vincent, J.A., & British Society of, G. (2006). *The Futures of Old Age*. London: SAGE Publications Ltd.

DuBoff, R.B. (1997). A slippery slope: Economist and social insurance in the United States. *International Journal of Health Services, 27*(3), 297–408. doi:10.2190/1UF9-T8QC-3G3X-9KU0

Elder, G.H., Johnson, M.K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 3–19). New York: Kluwer Academic/Plenum Publishers.

Ekerdt, D.J., Kosloski, K., & DeViney, S. (2000). The normative anticipation of retirement by older workers. *Research on Aging, 22*(1), 3–22. doi:10.1177/0164027500221001

Estes, C.L. (2001). *Social policy & aging: A critical perspective*. Thousand Oaks, CA: Sage Publications.

Estes, C.L., & Phillipson, C. (2002). The globalization of capital, the welfare state, and old age policy. *International Journal of Health Services, 32*(2), 279–297.

Freedman, M. (2006). The social purpose encore career: Baby boomers, civic engagement, and the next stage of work. *Generations—Journal of the American Society on Aging, 30*(4), 43–46.

Freund, A.M., & Baltes, P.B. (1998). Selection, optimization, and compensation as strategies of life management: Correlations with subjective indicators of successful aging. *Psychology and Aging, 13*(4), 531–543. doi:10.1037//0882-7974.13.4.531

Frisoni, G.B., Rozzini, R., Bianchetti, A., & Trabucchi, M. (1993). Principal lifetime occupation and MMSE score in elderly persons. *Journal of Gerontology, 48*(6), S310–S314. doi:10.1093/geronj/48.6.S310

Gallo, W., Bradley, E., Dubin, J., Jones, R., Falba, T., Cramer, L., & Kasl, S. (2003). The persistence of depressive symptoms in older workers who experience involuntary job loss. *Gerontologist, 43*, 329.

Gallo, W.T., Bradley, E.H., Siegel, M., & Kasl, S.V. (2001). The impact of involuntary job loss on subsequent alcohol consumption by older workers: Findings from the health and retirement survey. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 56*(1), S3–S9.

Gallo, W.T., Teng, H.M., Falba, T.A., Kasl, S.V., Krumholz, H.M., & Bradley, E.H. (2006). The impact of late career job loss on myocardial infarction and stroke: A 10 year follow up using the health and retirement survey. *Occupational and Environmental Medicine, 63*(10), 683–687. doi:10.1136/oem.2006.026823

George, L.K. (1993). Sociological perspectives on life transitions. *Annual Review of Sociology, 19*, 353–373.

Gignac, M.A., Badley, E.M., Moore, L., Bowring, J., & Cao, X. (2013). The employment experience of people with arthritis: Findings from an on-line survey. *Arthritis and Rheumatism, 65*, S1221–S1221.

Greenhouse, Steven. Pushing back retirement, and not always for money. *New York Times*. March 12, 2013.

Hallqvist, J., Lynch, J., Bartley, M., Lang, T., & Blane, D. (2004). Can we disentangle life course processes of accumulation, critical period and social mobility? An analysis of disadvantaged socio-economic positions and myocardial infarction in the Stockholm Heart Epidemiology Program. *Social Science and Medicine, 58*(8), 1555–1562. doi:10.1016/s0277-9536(03)00344-7

Hao, Y. (2008). Productive activities and psychological well-being among older adults. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 63*(2), S64–S72.

Hardy, M. (2011). Rethinking retirement. In R. A. Settersten & J. L. Angel (Eds.) *Handbook of Sociology of Aging*. New York: Springer.

Harrington Meyer, M. (2013). Changing social security in the US: Rising insecurity? *Social Policy and Society, 12*(01), 135–146. doi:10.1017/S1474746412000486

Harrington Meyer, M., & Herd, P. (2007). *Market friendly or family friendly? The state and gender inequality in old age*. New York: Russell Sage Foundation.

Harrington Meyer, M., & Parker, W.M. (2012). The changing worlds of family and work. In R. A. Settersten & J. L. Angel (Eds.), *Handbook of sociology and aging.* New York: Springer.

Hartmann, H., Rose, S., & Lovell, V. (2006). How much progress in closing the long-term earnings gap? In Blau, F.D., Brington, M.C., & Grusky, D.B. (Eds.), *The declining significance of gender?* New York: Russell Sage Foundation.

Hayutin, A., Beals, M., & Borges, E. (2013). *The aging US workforce: A chartbook of demographic shifts*. Stanford, CA: Stanford Center on Longevity.

Hayutin, A., Beals, M., & Borges, E. (April 9, 2013). Demographics of the aging workforce—summary. Paper presented at the Stanford Center on Longevity Conference: Adapting to an Aging Workforce. Conference Proceedings, Stanford, CA.

Head, L., Baker, P.M.A., Bagwell, B., & Moon, N.W. (2006). Barriers to evidence based practice in accommodations for an aging workforce. *Work (Reading, Mass.), 27*(4), 391–396.

Hegewich, A., Ellis, E. (2015). The gender gap by occupation 2014 and by race and ethnicity. Institute for Women's Policy Research. Washington, DC.

Hill, E.J., Grzywacz, J.G., Allen, S., Blanchard, V.L., Matz-Costa, C., Shulkin, S., & Pitt-Catsouphes. (2008). Defining and conceptualizing workplace flexibility. *Community, Work and Family, 11*(2), 149–163. doi:10.1080/13668800802024678

Kalleberg, A. L. (2013). Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s to 2000s. *Work Employment and Society, 27*(5), 896–898. doi:10.1177/0950017013480403

Kenny, G. P., Yardley, J. E., Martineau, L., & Jay, O. (2008). Physical work capacity in older adults: Implications for the aging worker. *American Journal of Industrial Medicine, 51*(8), 610–625. doi:10.1002/ajim.20600

Kilgour, E., Kosny, A., McKenzie, D., & Collie, A. (2015). Healing or harming? Healthcare provider interactions with injured workers and insurers in workers'compensation systems. *Journal of Occupational Rehabilitation, 25*(1), 220–39. doi:10.1007/s10926-014-9521-x

Kim, J., & Durden, E. (2007). Socioeconomic status and age trajectories of health. *Social Science & Medicine, 65*(12), 2489–2502. doi:10.1016/j.socscimed.2007.07.022

Kisner, S. M., & Pratt, S. G. (1999). Occupational injury fatalities among older workers in the United States, 1980–1994. *American Journal of Industrial Medicine, Supplement 1*, 24–25.

Kiss, P., De Meester, M., & Braeckman, L. (2008). Differences between younger and older workers in the need for recovery after work. *International Archives of Occupational and Environmental Health, 81*(3), 311–320. doi:10.1007/s00420-007-0215-y

Krause, N., Scherzer, T., & Rugulies, R. (2005). Physical workload, work intensification, and prevalence of pain in low wage workers: Results from a participatory research project with hotel room cleaners in Las Vegas. *American Journal of Industrial Medicine, 48*(5), 326–337.

Kuh, D., Ben-Shlomo, Y., Lynch, J., Hallqvist, J., & Power, C. (2003). Life course epidemiology. *Journal of Epidemiology and Community Health, 57*(10), 778–783.

Lacey, R. J., Belcher, J., & Croft, P. R. (2013). Does life course socio-economic position influence chronic disabling pain in older adults? A general population study. *European Journal of Public Health, 23*(4), 534–540. doi:10.1093/eurpub/cks056

Lax, M. B., & Klein, R. (2008). More than meets the eye: Social, economic, and emotional impacts of work-related injury and illness. *New Solutions: A Journal of Environmental and Occupational Health Policy, 18*(3), 343–360. doi:10.2190/NS.18.3.i

Lazazzara, A., Karpinska, K., & Henkens, K. (2013). What factors influence training opportunities for older workers? Three factorial surveys exploring the attitudes of HR professionals. *International Journal of Human Resource Management, 24*(11), 2154–2172. doi:10.1080/09585192.2012.725077

Lee, J., & Smith, J. P. (2009). Work, retirement, and depression. *Journal of Population Ageing, 2*(1–2), 57–71. doi:http://dx.doi.org/10.1007/s12062-010-9018-0

Leigh, J. P. (2012). Numbers and costs of occupational injury and illness in low-wage occupations. Center for Poverty Research and Center for Health Care Policy Research, University of California Davis.

Loretto, W., & Vickerstaff, S. (2013). The domestic and gendered context for retirement. *Human Relations, 66*(1), 65–86. doi:10.1177/0018726712455832

Loucks, E. B., Lynch, J. W., Pilote, L., Fuhrer, R., Almeida, N. D., Richard, H., . . . Benjamin, E. J. (2009). Life-course socioeconomic position and incidence of coronary heart disease. *American Journal of Epidemiology, 169*(7), 829–836. doi:10.1093/aje/kwn403

Lynch, C. (2012). *Retirement on the line: Age, work, and value in an American factory*. Ithaca, NY: Cornell University Press.

McDonough, P., & Berglund, P. (2003). Histories of poverty and self-rated health trajectories. *Journal of Health and Social Behavior, 44*(2), 198–214.

McGarry, K. (2002). Health and retirement: Do changes in health affect retirement expectations? *National Bureau of Economic Research Working Paper 9317*, Cambridge, MA.

McMullin, J. A., & Bereger, E. D. (2006). Gendered ageism/age(ed) sexism: The case of unemployed older workers. In Calasanti, T. M. & Slevin, K. F. (Eds.), *Age matters*. New York: Routledge.

McNamara, T. K., Sano, J. M., & Williamson, J. B. (2012). The pros and cons of pro-work policies and programs for older workers. In Hedge, J. W. & Borman, W. C. (Eds.), *The Oxford handbook of work and aging*. New York: Oxford University Press, Publishers.

McNamara, T. K., Brown, M., Aumann, K., Pitt-Catsouphes, M., Galinsky, E., & Bond, J. T. (2013). Working in retirement: A brief report. *Journal of Applied Gerontology, 32*(1), 120–132. doi:10.1177/0733464811408085

McNamara, T. K., Pitt-Catsouphes, M., Brown, M., & Matz-Costa, C. (2012). Access to and utilization of flexible work options. *Industrial Relations, 51*(4), 936–965. doi:10.1111/j.1468-232X.2012.00703.x

Mein, G., Martikainen, P., Hemingway, H., Stansfeld, S., & Marmot, M. (2003). Is retirement good or bad for mental and physical health functioning? Whitehall II longitudinal study of civil servants. *Journal of Epidemiology and Community Health, 57*(1), 46–49.

Mirowsky, J., & Ross, C. E. (1999). Economic hardship across the life course. *American Sociological Review, 64*(4), 548–569. doi:10.2307/2657255

Moen, P. (1996). A life course perspective on retirement, gender, and well-being. *Journal of Occupational Health Psychology, 1*(2), 131–144. doi:10.1037/1076-8998.1.2.131

Moen, P. (2005). Beyond the career mystique: "Time in," "Time out," and "Second Acts." *Sociological Forum, 20*(2), 189–208. doi:10.2307/4540892

Moen, P., Flood, S., & Louis, V. (2011). A third age of the life course? Gendered time working and volunteering, ages 50 to 75. *Gerontologist, 51*, 19–20.

Moen, P., Robison, J., & Fields, V. (1994). Women's work and caregiving roles: A life course approach. *Journals of Gerontology, 49*(4), S176–S186.

MorBarak, M. E. (1995). The meaning of work for older adults seeking employment: The generativity factor. *International Journal of Aging & Human Development, 41*(4), 325–344. doi:10.2190/vgtg-epk6-q4bh-q67q

Morrow, I. J. (2011). Managing the older worker: How to prepare for the new organizational order. *Personnel Psychology, 64*(4), 1053–1056. doi:10.1111/j.1744-6570.2011.01228_2.x

Mulatu, M. S., & Schooler, C. (1999). Longitudinal effects of occupational, psychological, and social background characteristics on health of older workers.

In N. E. Adler, Marmot, M., McEwen, B. & Stewart, J. (Eds.), *Socioeconomic status and health in industrial nations: Social, psychological, and biological pathways* (Vol. 896, pp. 406–408).

Munnell, A.J. (2015). *The average retirement age—An update.* (Report No. 15–4). Chestnut Hill, MA: Center for Retirement Research at Boston College. http://crr.bc.edu/wp-content/uploads/2015/03/IB_15–4.pdf

Mutchler, J.E., Burr, J.A., Massagli, M.P., & Pienta, A. (1999). Work transitions and health in later life. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 54B*(5), S252–S261. doi:10.1093/geronb/54B.5.S252

Nair, S.N., Czaja, S.J., & Sharit, J. (2007). A multilevel modeling approach to examining individual differences in skill acquisition for a computer-based task. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 62*, 85–96.

Passel, Jeffrey S., Cohn, D'Vera, Krogstad, Jens Manuel, & Gonzalez-Barrera, Ana (2014). As growth stalls, unauthorized immigrant population becomes more settled. Washington, DC: Pew Research Center's Hispanic Trends Project.

Peeters, M.C.W., & van Emmerik, H. (2008). An introduction to the work and well-being of older workers—From managing threats to creating opportunities. *Journal of Managerial Psychology, 23*(4), 353–363. doi:10.1108/02693940810869006

Phillipson, C. (2004a). Older workers and retirement: Critical perspectives on the research literature and policy implications. *Social Policy and Society, 3*(02), 189–195. doi:doi:10.1017/S1474746403001659

Phillipson, C. (2004b). Work and retirement transitions: Changing sociological and social policy contexts. *Social Policy and Society, 3*(02), 155–162. doi:doi:10.1017/S1474746403001611

Phillipson, C. (2013). Commentary: The future of work and retirement. *Human Relations, 66*(1), 143–153. doi:10.1177/0018726712465453

Platman, K. (2004). 'Portfolio careers' and the search for flexibility in later life. *Work Employment and Society, 18*(3), 573–599. doi:10.1177/0950017004045551

Polivka, L., & Luo, B.Z. (2015). The neoliberal political economy and erosion of retirement security. *Gerontologist, 55*(2), 183–190.

Posthuma, R.A., & Campion, M.A. (2009). Age stereotypes in the workplace: Common stereotypes, moderators, and future research directions. *Journal of Management, 35*(1), 158–188. doi:10.1177/0149206308318617

Pransky, G.S., Benjamin, K.L., & Savageau, J.A. (2005). Early retirement due to occupational injury: Who is at risk? *American Journal of Industrial Medicine, 47*(4), 285–295. doi:10.1002/ajim.20149

Pransky, G.S., Benjamin, K.L., Savageau, J.A., Currivan, D., & Fletcher, K. (2005). Outcomes in work-related injuries: A comparison of older and younger workers. *American Journal of Industrial Medicine, 47*(2), 104–112. doi:10.1002/ajim.20122

Quadagno, J. (2004). Why the United States has no national health insurance: Stakeholder mobilization against the welfare state, 1945–1996. *Journal of Health and Social Behavior, 45 Supplement*, 25–44.

Quinlan, M., Mayhew, C., & Bohle, P. (2001). The global expansion of precarious employment, work disorganization, and consequences for occupational

health: A review of recent research. *International Journal of Health Services, 31*(2), 335–414.

Reinhardt, J. D., Wahrendorf, M., & Siegrist, J. (2013). Socioeconomic position, psychosocial work environment and disability in an ageing workforce: A longitudinal analysis of SHARE data from 11 European countries. *Occupational and Environmental Medicine, 70*(3), 156–163. doi:10.1136/oemed-2012-100924

Rhee, N. (2013). Race and Retirement Insecurity in the United States. National Institute on Retirement Security. Washington, DC.

Robson, S. M., & Hansson, R. O. (2007). Strategic self development for successful aging at work. *International Journal of Aging & Human Development, 64*(4), 331–359. doi:10.2190/q303-171u-7686-8517

Rogers, E., & Wiatrowski, W. J. (2005). Injuries, illnesses, and fatalities among older workers. *Monthly Labor Review, 128*(10), 24–30.

Roscigno, V. J., Mong, S., Byron, R., & Tester, G. (2007). Age discrimination, social closure and employment. *Social Forces, 86*(1), 313–334. doi:10.1353/sof.2007.0109

Rose, S. J., & Hartmann, H. (2008). Still a man's labor market: The long-term earnings gap. Institute for Women's Policy Research, Washington, DC.

Ross, C. E., & Wu, C. L. (1996). Education, age, and the cumulative advantage in health. *Journal of Health and Social Behavior, 37*(1), 104–120. doi:10.2307/2137234

Sauter, S., Brightwell, S., Colligan, M., Hurrell, J., Katz, T., LeGrande, D., . . . Tetrick, L. (2002). The changing organization of work and the safety and health of working people: Knowledge gaps and research directions. Cincinnati, OH: National Institute for Occupational Safety and Health, Washington, DC.

Sauter, S., Streit, J., & Hanseman, D. (2009). Work organization and health in an aging workforce. In S. J. Czaja & J. Sharit (Eds.), *Aging and work: Issues and implications in a changing landscape*. Baltimore, MD: Johns Hopkins University Press.

Schooler, C., Mulatu, M. S., & Oates, G. (1999). The continuing effects of substantively complex work on the intellectual functioning of older workers. *Psychology and Aging, 14*(3), 483–506. doi:10.1037/0882-7974.14.3.483

Seghal, E. (1985). Foreign born in the U.S. labor market: The results of a special survey. *Monthly Labor Review, 108*(7):18–24.

Shacklock, K., Brunetto, Y., & Nelson, S. (2009). The different variables that affect older males' and females' intentions to continue working. *Asia Pacific Journal of Human Resources, 47*(1), 79–101. doi:10.1177/1038411108099291

Shaefer, L. (2009). Part-time workers: Some key differences between primary and secondary earners. *Monthly Labor Review, 132*(10). http://www.bls.gov/opub/mlr/2009/10/art1full.pdf.

Sharit, J., & Czaja, S. J. (2012). Job design and redesign for older workers. In J. W. Hedge & W. C. Borman (Eds.), *The Oxford handbook of work and aging.* Oxford: Oxford University Press.

Sharit, J., Hernandez, M. A., Czaja, S. J., & Pirolli, P. (2008). Investigating the roles of knowledge and cognitive abilities in older adult information seeking

on the Web. *ACM Transactions on Computer-Human Interaction, 15*(1). doi:10.1145/1352782.1352785

Silverstein, M. (2008). Meeting the challenges of an aging workforce. *American Journal of Industrial Medicine, 51*(4), 269–280. doi:10.1002/ajim.20569

Smith, D. B., & Moen, P. (2004). Retirement satisfaction for retirees and their spouses—Do gender and the retirement decision-making process matter? *Journal of Family Issues, 25*(2), 262–285. doi:10.1177/0192513x03257366

Smith, P., Bielecky, A., & Mustard, C. (2012). The relationship between chronic conditions and work-related injuries and repetitive strain injuries in Canada. *Journal of Occupational and Environmental Medicine, 54*(7), 841–846. doi:10.1097/JOM.0b013e31824e11f7

Soumerai, S. B., & Avorn, J. (1983). Perceived health, life satisfaction, and activity in urban elderly: A controlled study of the impact of part-time work. *Journal of Gerontology, 38*(3), 356–362. doi:10.1093/geronj/38.3.356

Steege, A. L., Baron, S. L., Marsh, S. M., Menéndez, C. C., & Myers, J. R. (2014). Examining occupational health and safety disparities using national data: A cause for continuing concern. *American Journal of Industrial Medicine, 57*(5), 527–38. doi:10.1002/ajim.22297

Strangleman, T. (2012). Work identity in crisis? Rethinking the problem of attachment and loss at work. *Sociology, 46*(3), 411–425. doi:10.1177/0038038511422585

Szinovacz, M. E., & Davey, A., (2005). Retirement and marital decision making: Effects on retirement satisfaction. *Journal of Marriage and Family, 67*(2), 387–398. doi:10.1111/j.0022-2445.2005.00123.x

Svinovacz, M. E., & DeViney, S. (2000). Marital characteristics and retirement decisions. *Research on Aging, 22*, 479–489.

Szinovacz, M. E., Davey, A., & Martin, L. (2014). Did the Great Recession influence retirement plans? *Research on Aging*. doi:10.1177/0164027514530171

Szinovacz, M. E., Martin, L., & Davey, A. (2014). Recession and expected retirement age: Another look at the evidence. *The Gerontologist, 54*(2), 245–257. doi:10.1093/geront/gnt010

Taylor, P., Brooke, L., McLoughlin, C., & Di Biase, T. (2010). Older workers and organizational change: Corporate memory versus potentiality. *International Journal of Manpower, 31*(3), 374–386. doi:10.1108/01437721011050639

Toossi, M. (2013). Labor force projections to 2022: The labor force participation rate continues to fall. *Monthly Labor Review 28.*

Toossi, M. (2015a). Labor force projections to 2014: Retiring boomers. *Monthly Labor Review, 128*(11), 25–44.

Toossi, M. (2015b). United States Census. Labor force statistics from the current population survey. 2015, http://data.bls.gov/timeseries/LNS14000000

Unson, C., & Richardson, M. (2013). Insights into the experiences of older workers and change: Through the lens of selection, optimization, and compensation. *The Gerontologist, 53*(3), 484–494. doi:10.1093/geront/gns095

Vickerstaff, S., Phillipson, C., & Wilkie, R. (Eds.) (2013). *Work, health and well-being: The challenges of managing health at work*. Bristol: Policy Press.

Voelpel, S. C., & Dous, M. (2006). Lost knowledge: Confronting the threat of an aging workforce. *Academy of Management Perspectives, 20*(4), 125–126.

Wang, M, & Shultz, K. (2010). Employee retirement: A review and recommendations for future investigation. *Journal of Management, 36*(1): 172–206.

Wegman, D. H. (1999). Older workers. *Occupational Medicine, 14*(3), 537–557.

Wegman, D. H., & McGee, J. P. (2004). In D. H. Wegman & J. P. McGee (Eds.), *Health and safety needs of older workers*. National Research, Council Institute of Medicine Committee on the Health & Safety Needs of Older Workers, Washington, DC.

Wickrama, K. A. S., Lorenz, F. O., Conger, R. D., Matthews, L., & Elder, G. H. (1997). Linking occupational conditions to physical health through marital, social, and intrapersonal processes. *Journal of Health and Social Behavior, 38*(4), 363–375. doi:10.2307/2955431

Wickrama, K. K., O'Neal, C. W., Kwag, K. H., & Lee, T. K. (2013). Is working later in life good or bad for health? An investigation of multiple health outcomes. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 68*(5), 807–815. doi:10.1093/geronb/gbt069

Zajacova, A., Montez, J. K., & Herd, P. (2014). Socioeconomic disparities in health among older adults and the implications for the retirement age debate: A brief report. *Journals of Gerontology, Series B: Psychological and Social Sciences, 69*(6), 973–978. doi:10.1093/geronb/gbu041

Zwerling, C., Sprince, N. L., Wallace, R. B., Davis, C. S., Whitten, P. S., & Heeringa, S. G. (1996). Risk factors of occupational injuries among older workers: An analysis of the health and retirement study. *American Journal of Public Health, 86*(9), 1306–1309.

CHAPTER EIGHT

Veterans and the Life Course

Andrew S. London

In the last decade, a range of scholars of aging and the life course have produced a set of critical evaluations of the extant research literature on the consequences of military service (Carlson & Andress, 2009; London & Wilmoth, 2008, 2016; MacLean & Elder, 2007; Settersten, 2006; Wilmoth & London 2013, 2016). These synthetic overviews build on prior reviews (Modell & Haggerty, 1991) and draw from a body of literature that dates back several decades to the seminal work of Glen H. Elder, Jr. (1986, 1987), and even earlier (Browning, Lopreato, & Poston, 1973; Card, 1983; Hogan, 1981). The vast majority of the research reviewed in these overviews focuses on entry into the military, the transition to civilian life, the transition to adulthood, and/or follows veterans through midlife. Mostly, researchers have focused on educational and socioeconomic attainment, and marriage and family. Less research focuses on the more-distal, later-life consequences of military service (Settersten, 2006; Spiro, Schnurr, & Aldwin, 1997; Wilmoth & London, 2016). While several decades of scholarship have yielded important conceptual models, empirical results, and policy-relevant insights, Teachman (2013: 275) recently began his evaluation of the existing literature by stating: "Research on military service has a long and rich history. . . . Yet despite this research heritage, fifty years after the publication of *The American Soldier*, we know surprisingly little about the ways military service is linked to the lives of the men and women who have served their country." It is unfortunate that the existing body of research does not yield a more-comprehensive understanding of the life-course consequences of military service. It is also imperative that we learn from the past and take steps

now to put in place firm foundations for future research on military service, aging, and the life course.

In this chapter, I use the life-course perspective to focus attention on the lives of veterans who served prior to the advent of the All-Volunteer Force (AVF) at the end of the Vietnam-era draft in 1973, and, more specifically, on veterans who served during the Vietnam era. Those who entered the military in the period prior to 1973 were born in 1955 or earlier. Thus, surviving veterans of the pre-AVF era will for the next several decades constitute the majority of the population of older adult veterans who live in our families and communities, participate in research studies, seek care in healthcare facilities, and need family, community-based, and institutional care. In the first section of the chapter, I provide a brief overview of how and why we expect military service to affect aging and the life course, and introduce the cumulative exposure model of the life course as a framework for thinking about the life-course consequences of military service. I then provide a brief description of the size and composition of the pre-AVF veteran population in 2013, and how it will change over the next several decades. Next, I turn to a critical evaluation of what we know about selection into military service during the Vietnam era, and how Vietnam-era service affected the transition to adulthood and the midlife socioeconomic attainment, marriage/family, and health outcomes of veterans relative to nonveterans. At present, we know relatively little about how military service will shape the later-life trajectories and outcomes of Vietnam-era veterans because they are just entering older adulthood. Thus, in addition to reviewing emergent research that is beginning to examine later-life outcomes, I present findings from an original analysis of data from the 2009 American Community Survey (ACS). Specifically, I describe differences between late-midlife nonveterans, Vietnam-era veterans with no service-connected disability, and Vietnam-era veterans with service-connected disability, separately for men and women. I chose 2009 for these analyses because it is the most-recent year that service-connected disability is measured in the ACS (prior to the recent release of the 2013 ACS data), and because analysis of these data provides a relatively contemporary, albeit selective, profile of the Vietnam-era cohort as they enter older adulthood. Finally, I conclude with a discussion of the opportunities that an intensified effort to comparatively study the later lives of Vietnam-era veterans and nonveterans provides, some changes we need to make so that we don't miss the chance, and the challenges that must be overcome if we are going to be successful.

Life-Course Perspectives on Military Service

The life-course perspective generally encompasses five principles—lifelong development, location in time and place, timing and sequencing, human

agency, and linked lives (Elder, Johnson, & Crosnoe, 2003; Settersten, 2003; Mortimer & Shanahan, 2003). Each of these is important for understanding the consequences of military service. Human development and aging are processes that unfold over time and in particular historical, geographical, social, and economic contexts. What happens earlier conditions, but does not determine absolutely, what happens in subsequent life stages because individuals make choices and institutions—such as the military—exert influences that change the trajectory of development. The life-course perspective highlights the critical importance of having comprehensive data on military service experiences, as well as longitudinal, comparative data that enable researchers to address selection, disentangle aging from period and cohort effects, and understand the variable or disproportionate effects of early-life military service on different outcomes in different stages of the life course (Teachman, 2013).

The military is a complex, hierarchical, and potentially transformative social institution (Kelty & Segal, 2013). For those who serve, the military can have long-term effects on identity, life satisfaction, and well-being (Aldwin, Levenson, & Spiro, 1994; Card, 1983; Smith & True, 2014), as well as subsequent choices, trajectories, and outcomes (Wilmoth & London, 2013). Historically, less than 1 percent of the U.S. population has served in the armed forces at any given time, with the exception of brief periods when the country has been at war (Segal & Segal, 2004, Figure 1). There are five branches of the U.S. armed forces—Air Force, Army, Coast Guard, Marine Corps, and Navy—as well as Reserve and National Guard components that are variably associated with them. Within each branch, enlisted personnel and officers are distinguished, with more-fine-grained, hierarchal distinctions drawn within each category. Most active-duty personnel serve during young adulthood for periods of four to eight years, although reenlistment, particularly during periods of war, can lead to longer durations of service. The relatively small percentage of service members who seek careers in the military generally retire after 20 years of active-duty service and are eligible for benefits that may enhance their later-life financial and health security (Street & Hoffman, 2013). Veteran status indicates prior active-duty service with a better-than-dishonorable discharge. Exposure to combat is not required for active-duty or veteran status, or benefits eligibility. The availability of specific veterans' benefits varies by historical period, duration of service, rank, and disability status, and the take-up of benefits varies across the life course (Bennett & McDonald, 2013; Street & Hoffman, 2013; Wilmoth & London, 2011; Wilmoth, London, & Heflin, 2015). In specific circumstances, family members may also receive benefits as a result of a spouse or parent's active-duty service or service-related death.

Understanding the consequences of military service over the life course is complicated because the effects of military service may be mixed and

countervailing. Military service unevenly exposes young adults to an array of risks and benefits; for any particular life-course outcome, the extent to which military service is beneficial, has negative consequences, or has no consequences depends on the particularities of historical circumstance, the prevailing organization and policies of the armed forces, individual characteristics, service experiences, and access to benefits.

Wilmoth and London (2013, Figure 1.1) advocate using a cumulative exposure model of the life course as a conceptual framework for studying the consequences of military service. This conceptual model focuses attention on various mechanisms by which military service influences aging and variation in later-life trajectories and outcomes, as well as the historical embeddedness of aging and development. The cumulative exposure model proposes three key domains of mechanisms that might drive variation in life-course trajectories and outcomes in relation to military service. These include: the range of early-life individual and contextual factors that affect selection into military service—the preservice period of the military life course; military service experiences, including but not limited to exposure to combat—the active-duty period of the military life course; and the effects of variable military service experiences on postservice outcomes—the veteran period of the military life course. They propose that early-life factors influence selection into military service, and that military service experiences, in turn, can mediate, moderate, or have no effect on the associations between such factors and later-life outcomes. The possibility that military service might produce positive or negative turning points—discontinuities—in the life course is a central tenet of this conceptual model (Browning et al., 1973; Elder 1986, 1987; Laub & Sampson, 2003; Sampson & Laub, 1996). This conceptual model also posits that military service has the potential to directly shape or reshape mid- and later-life educational, employment, marriage/family, and health trajectories and outcomes. Ultimately, this conceptual model suggests that the consequences of military are neither automatic nor uniform. Rather, they are individually, socially, and historically contingent, and can best be evaluated with longitudinal studies that compare those with and without military service histories, controlling for selection and taking variation in military service experiences into account.

The Pre-AVF and Vietnam-Era Veteran Population

Older adult veterans are a large and policy-relevant population (Wilmoth & London, 2011). From 2013 to 2043, the population of male veterans aged 50 and over is projected to decline by 43 percent from 15,113,268 to 8,564,570, while the population of female veterans aged 50 and over is

projected to increase by 64 percent from 972,048 to 1,594,593 (National Center for Veterans Analysis and Statistics, 2014a).[1] Several decades ago, 100 percent of the older-adult veterans who researchers observed in their data sets, clinicians treated in health-care facilities, and individuals encountered in institutions and community-based settings had served in the military prior to the advent of the AVF at the end of the poorly implemented and controversial Vietnam-era draft (Kelty & Segal, 2013). Among men transitioning to adulthood in the mid-twentieth century, military service was a normative part of the life course. From 1915 to 1935, rates of participation in the military were over 50 percent for each single-year birth cohort, with rates over 70 percent for those born between 1919 and 1927 (Hogan, 1981). Some served voluntarily during this period, but many others were drafted—and may even have felt coerced—into service during World War II, the Korean War, and the Vietnam War. A substantial number of Vietnam-era men, especially those with higher academic aptitude in high school, enlisted in order to avoid being drafted (Card, 1983). They enlisted unwillingly in order to try to improve the terms of their service.

As of 2013, pre-AVF-era veterans constituted approximately 56 percent of the estimated 22,299,350 living veterans—59 percent of the 20,298,098 male veterans and 23 percent of the 2,001,252 female veterans. By 2023, the percentage of living veterans who served prior to the advent of the AVF is projected to decline sharply to 40 percent as the estimated 3.2 million old-old veterans who served during or between World War II and the Korean War and were alive in 2013 pass away, and as veterans of Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn enter the population. By 2043, it is projected that about 7 percent of living veterans will have entered military service during the pre-AVF era.

Although the percentage of pre-AVF-era veterans will decline over the next several decades, the percentage of surviving pre-AVF-era veterans who served during a war is projected to increase from 82 percent in 2013 to 96 percent in 2043. As seen in Figure 8.1, this shift is driven by the fact that Vietnam-era veterans are projected to constitute an increasingly large proportion of surviving pre-AVF-era veterans over the course of the next three decades. Overall, nearly 9 million Americans served during the Vietnam War. In 2013, it is estimated that there were 7,387,059 living Vietnam-era veterans, which constituted 33 percent of all living veterans and 44 percent of all living wartime veterans. In 2043, it is projected that there will be 965,845 surviving pre-AFV-era veterans, of whom 95 percent will be Vietnam-era veterans. Thus, in 2043, it is projected that there will still be nearly 1 million surviving old-old wartime veterans almost all whom served during the Vietnam War.

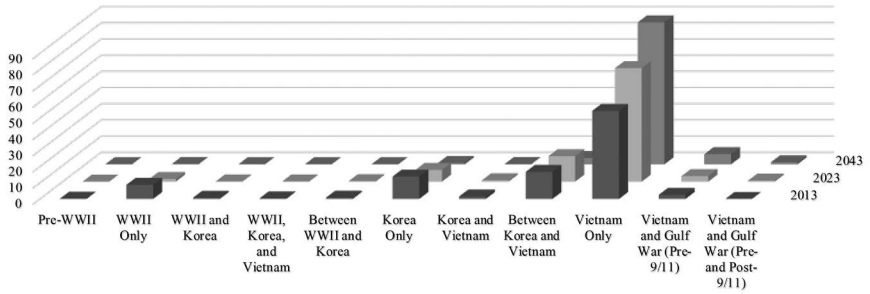


Figure 8.1 Projected trends in the percent distribution of pre-AVF-era veterans by period of service from 2013 to 2043. (Data for this Figure were obtained from VetPop2014, Table 2L [National Center for Veterans Analysis and Statistics.] [2014])

Given these trends that will unfold over the next three decades, it is critically important that we assess the extant research related to Vietnam-era veterans. Just as the last few decades of research on and care for older adult and old-old veterans has focused primarily on veterans of World War II and the Korean War, the next few decades will primarily focus on the lives of Vietnam-era veterans. How these veterans fare as older adults will depend on their early-life experiences, military service experiences, and experiences over the life course, as well as the policies and programs that are in place to meet their needs (Wilmoth & London, 2011). Such policies and programs, which contribute to later-life health and financial security, and family well-being, include: veterans administration health care; service-connected disability, specific war-service, and career-service pensions; life insurance; and support services for family caregivers (National Center for Veterans Analysis and Statistics, 2014b; Nichols et al., 2011; Street & Hoffman, 2013). Vietnam-era veterans are part of the large, post–World War II baby boom cohort, born between 1946 and 1964, which will put substantial demands on family, social service, and health-care systems as they age. Older adult Vietnam-era veterans will benefit from existing and emergent policies and programs available to all older adults, such as Medicare and Social Security, but they may also have specific needs that will require more-focused policies and programs both within and outside of the Veterans Administration.

Vietnam-Era Military Service and the Life Course

The cumulative exposure model of the life course, discussed above, sensitizes us to the need to consider selection and military service experiences

when assessing the life-course consequences of military service. Thus, before turning to a review of what is known about the consequences of Vietnam-era military service for socioeconomic attainment, marriage/family, and health outcomes, it is important to consider the factors that affected selection into military service in this era and, briefly, some of the military-institutional factors that may have shaped later-life outcomes.

Selection

The military is a selective institution. From 1941 to 1973, American men were subject to a draft, and during World War II, the Korean War, and the Vietnam War, many men were in fact conscripted into service (Fligstein, 1980; Flynn, 1993). However, even during the draft era, some men, and all women, voluntarily enlisted or sought to join the military academies in order to be commissioned as officers. While some factors, such as having a family history of military service and socioeconomic disadvantage, increased the likelihood of volunteering for military service, demographic characteristics, such as age, race/ethnicity, nativity status, gender, and sexual orientation, have variably constrained entry into the military in various historical periods (Brown, 2013; Kelty & Segal, 2013; Lutz, 2013).

In the context of a draft or voluntary enlistment, entry into the military is not guaranteed. Recruiters may dissuade some would-be service men, and increasingly women, from applying. Individuals who apply must take the Armed Forces Qualifying Test (AFQT) and score high enough to ensure that they have the aptitudes necessary to successfully complete basic training programs and the duties required by particular military occupational specialties (Sackett & Mavor, 2006). Individuals must also pass preinduction exams that are designed to identify a range of disqualifying physical and mental health conditions, impairments, abnormalities, and behaviors. Rejection rates vary by year depending on the personnel needs of the armed forces and the characteristics of applicants, but, from 1950 to 1971, they were above 30 percent in every year and over 40 percent for much of the period (Wolf, Wing, & Lopoo, 2013, Figure 13.1).

Although differential rejection due to differential failure of preinduction exams and screenings will remain an aspect of selection that must be considered in life-course studies, a well-implemented draft has the potential to reduce the influence of voluntary factors on selection into the military because selection is random. A draft has the potential to level the playing field in the sense that the selective force of economic need, family culture, and individual choice do not drive entry. However, it is important to note that the Vietnam-era draft was notorious for not being well-implemented, which contributed to social and racial strife, as well as to efforts to reform

military personnel policy and the shift to the AVF (Kelty & Segal, 2013). The deferment system in place during the Vietnam War allowed college students to avoid service, which provided a means for primarily white, middle- and upper-class men to avoid the draft. Middle-class and white men may also have been more able to obtain exemptions for other reasons or enroll in the Reserves to avoid the risk of deployment to the war zone. Presidential decisions to keep the Reserve/Guard at home made them a relatively safe haven (Kelty & Segal, 2013). Given that lower-class men and blacks made up a large portion of the troops who served in Vietnam during the Vietnam War, allegations were made that "blacks and the poor were serving as cannon fodder" (Armor, 1996: 9).

Despite the poor implementation of the draft, there is some evidence that differences between those who did and did not serve may be limited. In her extensive analysis of preservice, baseline Project Talent data, which were collected when the men she studied were 14 or 15 years old, Card (1983) found that men from upper-class backgrounds were significantly less likely to have served than men from other socioeconomic class backgrounds, and lower-class and black men were more likely to serve in the Army and Marine Corps, where combat exposure was more common. However, she did not find an overall race difference in participation. Moreover, she found very few other differences between those who did not serve, those who served but not in the Vietnam theater of operations, and those who served in Vietnam across a very broad range of demographic characteristics, cognitive tests, and measured aptitudes and aspirations. Compared to those who did not serve, those who served were less calm, received less guidance outside of high school, participated less in extracurricular activities, and were less interested in selected vocations. But, differences were small. She concluded that the combination of the draft and the differential rejection of both draftees and enlistees may have helped level the playing field to some extent. For example, with respect to race, countervailing forces may have worked to equalize participation. Blacks were more likely than whites to be drafted because they were less able to obtain deferments, but they were four times more likely to be rejected because they failed preinduction physical and mental health exams. Card (1983: 24) summarized her findings related to selection into service by stating: "The groups of veterans and nonveterans are not as different from one another as popular belief might suggest."

Accounting for such selective forces, by one means or another, is important in life-course studies of the consequences of military service. To the extent possible, analysts want to be sure that they are identifying a causal relationship between military service and some outcome, which can only be done if selection is adequately addressed. This may be done

by controlling for observed preservice characteristics, using sibling fixed effects models (London et al., *in review*), or using the draft-era lottery or something else as an instrumental variable to control for unobserved heterogeneity (Angrist, 1990, 1991; Angrist, Imbens, & Rubin, 1996). The extent to which this can be done, of course, depends on the availability of adequate data.

Active-Duty

Analysts interested in the life-course consequences of military service are often limited to investigating simple veteran status differences because of data constraints. As valuable as such analyses are, they represent a limited starting point. In such analyses, the specific aspect of service that matters is masked. Moreover, because the undocumented influences of different aspects of military service may be countervailing and cancel each other out, we may sometimes incorrectly conclude that the effect is small or nonexistent. Entering the military exposes young adults to a range of opportunities and risks, which are historically, geographically, and institutionally contingent. If military service, per se, has consequences for understanding variation in the life course, then something about active-duty military service must matter for some aging-related process or outcome. However, our capacity to empirically delineate dimensions of military service in relation to the range of outcomes that are of interest to scholars of aging and the life course is severely limited. Most longitudinal data sets that include important life-course outcomes do not include measures of draft status, branch of service, rank, military occupational specialty, duration of service, location of service, exposure to combat, or service-connected disability.

Theoretically, there are good reasons to expect different aspects of military service to matter for different life-course outcomes. With respect to employment outcomes, each branch and rank initially selects individuals with particular characteristics with the goal of staffing specific military occupational specialties. Military occupational specialties provide different kinds of educational and training opportunities, risks, and rewards, which variably translate into the civilian labor market (Kleykamp, 2013). The training and education service members receive in their military occupational specialty may be one of the factors that produces variation in employment outcomes during the veteran period of the life course. It may do so because it is the only education and training the individual receives beyond high school and before entering the labor force, or because it sets the individual on a postservice trajectory toward additional education in a particular field via access to GI Bill benefits. It may also be one of the factors that contributes to

positive turning points in the lives of men and women from disadvantaged backgrounds. While these processes operate across time periods of service, their effects likely vary in response to changing institutional and historical conditions. Thus, the effects of training and educational opportunities during the Vietnam-era active-duty period may be very different than those that prevailed in other periods. Moreover, some evidence from the Vietnam era suggests that veteran status served as a negative screening device in the labor market (Berger & Hirsch, 1985; Hogan, 1981).

With respect to marriage and family formation, Lundquist and Smith (2005) found that organizational and economic incentives in the family-friendly AVF promoted early marriage and family formation among military women. However, this mechanism is unlikely to have operated in the less family-friendly Vietnam-era military. In part because of the draft and the implementation of deferments for those with dependents, men who served in the Vietnam era tended to be very young and childless. Some married rapidly in advance of induction, while others waited until after they completed their service (Hogan, 1981). Thus, for the Vietnam-era cohort of service members, marriage and/or family formation tended to happen during the veteran period rather than before it (Burland & Lundquist, 2013). Combat exposure and service-connected physical and mental health problems that are rooted in the active-duty period may exert a negative influence on marital and family outcomes in this era. Such negative influences may have been exacerbated by the unpopularity of the war and the stigma many Vietnam-era service members experienced upon their return home (Frey-Wouters & Laufer, 1986; Kulka et al., 1990).

Another set of service-connected factors might shape health outcomes, for better or worse. Those who serve in the military are initially selected on the basis of healthiness. Some aspects of military service might enhance service members' health and well-being, such as rank (MacLean & Edwards, 2010). During the active-duty period, service members engage in a substantial amount of regular exercise and achieve relatively high levels of physical fitness. In some circumstances, socialization into the military role and unit cohesion may foster a sense of mastery, social support, and self-esteem that provide psychosocial resources that can be beneficial for well-being.

However, there are a broad range of factors related to the mission and culture of the institution that potentially threaten health and well-being. Wartime service is not randomly assigned or equally distributed. In the context of the Vietnam War, characteristics that indicated the ability to perform noncombat functions reduced combat assignments and service in the Vietnam theater of operations, although indicators of aggression and stress management also played a role in predicting combat exposure

(Gimbel & Booth, 1996). Wartime service often involves combat exposure, which increases the risk of short-term injury and long-term disability (Elder, Shanahan, & Clipp, 1994, 1997; MacLean, 2010), physical and mental health problems (MacLean, 2013; Wilmoth, London, & Parker, 2010), sleep problems (London, Burgard, & Wilmoth, 2014), and later-life mortality (Elder et al., 2009). More-mundane overtraining injuries and accidents also contribute to long-term health problems and disabilities. In the context of service in the Vietnam theater of operations, exposure to Agent Orange is a critical issue, although in other contexts, such as World War II and the Gulf War, environmental exposures may also have mattered for long-term health. Health outcomes are also negatively affected by the culture of the institution regarding tobacco, alcohol, and drugs. For example, the military has been described as "pro-tobacco" (Jahnke et al., 2011: 1382), and "highly hospitable to smoking" (Smith & Malone, 2012: 1202). It is an institution that has a long history of having a culture that supports and encourages tobacco use by its members (Nelson & Pederson, 2008), "institutional norms that promote smoking" (Conway, 1998: 291), and, from a policy perspective, "a culture of tobacco 'exceptionalism'" (Smith & Malone, 2012: 1202). Policy changes in the mid-1980s appear to have reduced some types of drug use (Miech et al., 2013), but less progress has been made with respect to reducing alcohol consumption and smoking. For women, and to a lesser extent men, the experience of military sexual trauma during the active-duty period may be a factor that affects long-term health and well-being (Kimmerling et al., 2007; Suris & Lind, 2008).

With some exceptions, such as combat exposure, theoretical conceptualizations of what it is about military service that explains variation in life-course outcomes among older adults have outstripped empirical examinations of them (Wilmoth & London, 2013). For the Vietnam-era cohort, we are just at the beginning of the window of opportunity to examine whether and how their military service experiences influence their later-life trajectories and outcomes relative to their nonveteran older-adult peers. Although there are challenges, moving forward, it is critically important that we continue to expand our capacity to conduct theoretically informed, comparative, empirical analyses that aim to elucidate the mechanisms by which participation in the Vietnam-era military affected later-life trajectories and outcomes.

Veteran Period

We know less than we should about the impact of Vietnam-era military service on the lives of the men and women who served, as well as those

whose lives are linked to them. However, the extant research literature does provide a set of empirical studies about the effects of Vietnam-era service on the transition to adulthood and socioeconomic attainment, marriage/family, and health outcomes through midlife. This body of research can serve as a foundation for the further study of the long-term, later-life consequences of Vietnam-era service.

Socioeconomic Attainment. In contrast to World War II and Korean War veterans, who achieved higher educational attainment than their nonveteran peers, Vietnam-era veterans achieved lower levels of educational attainment than their peers at the time of discharge (Cohen, Segal, & Temme, 1986; Cohen & Temme, 1986; Stanley, 2003). This may have been due to selection, as well as the fact that during the Vietnam era some nonveterans achieved that status by receiving deferments because they were in college, and because of changes in federal policies that made financial aid that was not tied to military service more available and changes in the GI Bill benefits that were available to veterans (Bennett & McDonald, 2013, Table 6.1). For example, in 1975, Vietnam-era GI Bill benefits represented 34 percent of monthly wages in manufacturing, in contrast to 54 percent at the peak of World War II-era GI Bill use (Mattila, 1978). The lower value of Vietnam-era GI Bill educational benefits relative to manufacturing wages may have increased the opportunity costs of pursuing additional schooling for some veterans.

Yet, there is evidence that use of GI Bill benefits did influence the educational attainment of Vietnam-era veterans. Focusing on the transition to adulthood and early midlife—ages 36–37 years—Card (1983) found that male Vietnam-era veterans finished school at significantly older ages than their nonveteran classmates. Angrist (1993) used data from the 1987 Survey of Veterans and found that veterans' benefits increased years of schooling by one and a half years for men aged 35–44 years, 95 percent of whom served during the Vietnam era. The majority of the veterans in the sample had volunteered for service and had served for three to five years, and they had twelve and a half years of education at the time they were discharged from service. Overall, 63 percent received some sort of financial aid, 78 percent acquired some additional education or training after discharge, and 52 percent attended college or graduate school. Taken together, the available evidence suggests that Vietnam-era veterans were able to catch up to their nonveteran peers to some extent and close the educational attainment gap over time (Teachman, 2005; Teachman & Call, 1996). This conclusion is bolstered by recent research that has followed the Vietnam-era cohort over a longer period of time. Angrist and Chen (2011) used 2000 Census data to obtain draft-lottery estimates of the causal effect of Vietnam-era military service on educational attainment.

They found large gains for veterans, which they attribute to use of the GI Bill rather than draft avoidance behavior. Elman and O'Rand (2004) find that military service significantly increased school reentry in midlife among men, which might partly account for the narrowing of the gap.

The employment and earnings prospects of veterans and nonveterans are tied to some extent to macroeconomic and labor-market circumstances, as well as their educational attainment. Vietnam-era veterans are part of the large baby boom cohort, whose members have had to compete for jobs and weather the economic recessions of the 1970s and 1980s relatively early in their careers (Wilmoth and London, 2016, Figure 1). The unpopularity of the Vietnam War may also have affected their initial reception in the labor market. Compared to World War II–era veterans, the unemployment rates for Vietnam War veterans were much higher. Browning et al. (1973) report that the unemployment rate for Vietnam-era veterans was 11 percent overall—11 percent for whites and 15 percent for nonwhites—compared to 5 percent for World War II–era veterans. This circumstance certainly influenced their labor-market opportunities and may have contributed to their overrepresentation in public-sector employment in midlife (Angrist & Chen, 2011).

The available literature indicates that Vietnam-era veterans, overall, have not done as well as their nonveteran peers with respect to income and earnings (Berger & Hirsch, 1983; Bryant, Samaranayake, & Wilhite, 1993; Hirsch & Mehay, 2003; Martindale & Poston, 1979; Savoca & Rosenheck, 2000; Teachman, 2004). Hogan (1981) attributes this to intercohort change in the occupational and income returns of being a veteran, and disadvantages associated with a service-connected disorderliness in the transition to adulthood in this era. Using Social Security administrative records through the early 1980s, Angrist (1990) employed the draft lottery to estimate the causal effect of veteran status on civilian earnings. He found a 15 percent earnings penalty for white male veterans relative to white male nonveterans. However, there is some indication that veterans earnings have caught up to those of nonveterans over time. Angrist and Chen (2011) found no Vietnam-era veteran status difference in draft-lottery estimates of earnings in 2000, which they in part attributed to a modest economic return to GI Bill-subsidized educational attainment.

Although the overall profile of earnings and income relative to Vietnam-era service is negative, there is some indication that military service produced positive and negative turning points for economically disadvantaged and advantaged men, respectively. Kleykamp (2013: 148) notes: "One of the most consistent findings across generations of veterans is the fact that the effect of military service appears to be more positive—or at least less negative—among racial and ethnic minorities." Consistent with this view,

a range of studies indicate an earnings advantage among African American Vietnam-era veterans, and an earnings penalty among whites (Berger & Hirsch, 1983; Browning et al., 1973; Lopreato & Poston, 1977; Martindale & Poston, 1979; Rosen & Taubman, 1982; Teachman, 2004). The earnings advantage among blacks is consistent with the positive turning point hypothesis, which posits that military service may knife off individuals from early-life disadvantage and place them in a bridging environment, where education and training in young adulthood, prior to the adoption of adult roles, can redirect the life course in positive ways. The earnings penalty among white men may be indicative of a negative turning point, or an undermining of early-life advantage. This is consistent with findings from a study based on a convenience sample of elite, Ivy League college-educated men who served in Vietnam (Bookwala, Frieze, & Grote, 1994). These men were less satisfied in midlife with their careers, finances, and life in general, and more likely to have changed careers, moved, used alcohol, experienced depression, and questioned their values than nonveterans. Some of these consequences were specific to those who served in the Vietnam theater of operations and thus may be associated with combat exposure.

Marriage/Family. The literature on the consequences of Vietnam-era service on marriage and family outcomes is somewhat smaller than that on socioeconomic outcomes, and the evidence is more mixed. Card (1983) found that male Vietnam-era veterans got married and became fathers at significantly older ages than their nonveteran classmates. Others have also reported that the effect of military service on marriage, especially early age at marriage, was negative during the Vietnam era (Cooney & Hogan, 1991; Goldscheider & Waite, 1986), which is different than the effect in other historical eras (Hogan, 1981). However, Call and Teachman (1996) examined marital stability in relation to the timing of first marriage and Vietnam-era military service. They found that Vietnam combat and noncombat veterans married at the same rate as nonveterans, and marriages contracted before or during service were not negatively impacted with respect to marital stability. Laufer and Gallops (1985) studied a probability sample of nonveterans, Vietnam-era veterans who did not serve in the theater of operations, and Vietnam veterans who did serve in the theater of operations. Vietnam veterans were more likely to enter marriage than nonveterans, but combat exposure contributed to higher rates of divorce. Other research finds that Vietnam-era military service had little effect on the risk of divorce in well-controlled models (Cohen & Segal, 2009; Ruger, Wilson, & Waddoups, 2002), although there is some evidence that combat exposure increased the odds of marital dissolution among all cohorts (Ruger et al., 2002). Heerwig and Conley (2013) used an instrumental

variable approach to studying family dynamics and found that Vietnam-era service actually reduced the likelihood of divorce among white men. In general, the extent to which variation in Vietnam-era military service experiences, combat exposure, and service-connected disability affect marriage and family outcomes is underexplored in the available literature.

Health. Later-life measurements of the health and well-being of those who served in the Vietnam era will be based on those who survive to the point of observation, and selective mortality is an issue with which life-course scholars interested in older adults and later-life outcomes must grapple (Wolf et al., 2013). MacLean (2013, Table 10.1) estimates that 58,000 U.S. service members were killed during the Vietnam War. Many others survived, but were wounded in combat. The odds of being wounded relative to being killed were much better in the Vietnam War than they were for either World War II or the Korean War, which perhaps reflects improvements in technology and in-theater medical and surgical care (MacLean, 2013). Suicide rates were also higher among military personnel than civilians during the Vietnam War (Ritchey, 2009), and there is some evidence that Vietnam-era veterans were more likely to die from accidents, suicide, and homicide in the period immediately following separation from service (Boehmer et al., 2004; Boscarino, 2006). Other evidence suggests that Vietnam veterans are more likely to attempt suicide if they have a psychiatric disorder (Fontana & Rosenheck, 1995).

Among wartime veterans of all eras, combat exposure is one of the key drivers of veteran status differences in physical and mental health over the life course (MacLean, 2010, 2013; Vogt et al., 2004). Card (1983) documents that veterans who served in the Vietnam theater of operations had significantly more symptoms of post-traumatic stress disorder—nightmares, loss of control over behavior, emotional numbing, withdrawal, hyperalertness, anxiety, depression—than veterans who did not serve in the Vietnam theater of operations and nonveterans, respectively. Research that directly compares veterans to nonveterans consistently indicates that Vietnam veterans are in worse health than nonveterans. Some evidence suggests that physical health disparities increase with age (Dobkin & Shabani, 2009). Vietnam veterans also have worse psychological outcomes (Dohrenwend et al., 2006; Laufer et al., 1981), including late-onset stress symptomology among older-adult combat veterans (Davison et al., 2006).

Several longitudinal, life-course studies have begun to investigate the later-life health and health behaviors of Vietnam-era veterans to the extent possible given that this cohort is currently entering early older adulthood. In later life, veterans who served during the Vietnam War have more chronic health conditions and poorer self-rated health around retirement age than veterans who served during World War II (Wilmoth et al., 2010).

Using cohorts defined on the basis of the year individuals turned 18 and became eligible for military service during particular historical periods, which facilitates comparisons of veterans and nonveterans, Wilmoth, London, and Himes (2015) examined inter- and intra-cohort variation in body mass index (BMI). They observed the Vietnam-era cohort over the 36–64 age range and found that members of this cohort were significantly heavier than members of earlier cohorts at the same ages. Across cohorts, they found that BMI followed the same trajectory over age, and that within each cohort, veterans were significantly heavier than nonveterans. For the older cohorts, BMI declined substantially and faster at older ages. Whether the same will be true for the Vietnam-era cohort remains to be seen. London et al. (*in review*) conducted an age-period-cohort analysis of smoking that included the cohorts in which men would have been eligible to serve in Vietnam. They found that veterans were significantly more likely to smoke than nonveterans in the 30–64 age range. Moreover, for both relevant cohorts, the intercohort change for veterans was positive, while it was negative for nonveterans. These results suggest that service in the military may have been a driver of population-level changes in smoking behavior in this era.

Another factor that appears to be affecting the later-life health of Vietnam-era veterans is Agent Orange exposure. Vietnam veterans have attributed some of their later-life illnesses to exposure to Agent Orange during their active-duty wartime service (Scott, 1992). In 2001, veterans with Type 2 diabetes associated with exposure to Agent Orange in Vietnam became eligible for Disability Compensation. Duggan, Rosenheck, and Singleton (2010) estimate that this policy change increased enrollment in the Disability Compensation program by 6 percentage points, and increased the amount of benefits received by enrollees by almost 2 percent. These estimated impacts related to this one disease suggest that a substantial number of individuals were exposed to and harmed by Agent Orange.

In addition to the available life-course literature, there is an extensive body of research on Vietnam-era veterans' health that is based on users of Veterans Administration health-care services, which is a highly selected and disadvantaged segment of the veteran population. The National Center for Veterans Analysis and Statistics (2014b) estimates that 40 percent of living veterans used at least one Veterans Administration service in 2012 and that users tend to have lower household incomes than nonusers. As important as this research is for policy and program management, it does not allow for assessment of the impact of military service on health because it is not directly comparative. It also does not allow for examinations of change over age and across the life course because it is

generally based on cross-sectional samples. Like the life-course literature on health, it tends to focus on health problems. Often left unexplored in both of these literatures is the question of whether and how military service in this era might have engendered resilience, stress-related growth, and positive outcomes, which it sometimes does (Aldwin et al., 1994; Card, 1983).

The Vietnam-Era Cohort in Late-Midlife

The Vietnam-era cohort is entering the retirement and older adult years, yet we know relatively little about how their contemporary circumstances vary by veteran status or how service-connected disability has shaped how they have fared to this point. With the foregoing review as context, I turn now to a description of selected demographic, socioeconomic, marriage/family, and health outcomes using data from the 2009 ACS. The sample includes all men and women, regardless of veteran or service-connected disability status, who were aged 52–63 years in 2009. This age range is consistent with the start, August 5, 1964, and stop, May 7, 1975, dates for Vietnam War service recorded in the U.S. Code of Federal Regulations (2014) and was selected because it is the age range of the Vietnam-era veterans identified in the 2009 ACS. The total sample includes 507,219 individuals, of whom about 48 percent are male. As seen in Table 8.1, weighted descriptive statistics are presented separately for men and women, and focus on comparisons of nonveterans, veterans with no service-connected disability, and veterans with service-connected disability, all severities combined. Overall, among men, 74 percent are nonveterans, 21 percent are veterans with no service-connected disability—nondisabled veterans, and 5 percent are veterans with a service-connected disability—disabled veterans, while among women, 99 percent are nonveterans, 1 percent are nondisabled veterans, and less than 1 percent are disabled veterans. Self-reported service-connected disability is likely to be underreported (Griffin & Stein, 2015). To the extent that veteran status is accurately reported, such underreporting likely results in some disabled veterans reporting themselves to be nondisabled veterans. There is also likely to be considerable heterogeneity in the consequences of more- and less-severe service-connected disabilities, which is masked by combining all severities together. Although it would be desirable to differentiate veterans along a broad range of service-related dimensions, such as by branch, rank, duration of service, such distinctions are not possible with the ACS.

In late-midlife, veteran status differences in demographic characteristics are broadly similar for men and women. For both men and women,

Table 8.1 Percentage of 52–63-Year-Old Vietnam-Era Nonveterans, Veterans with No Service-Connected Disability, and Veterans with Service-Connected Disability, by Gender, 2009 American Community Survey

	Men			Women		
	Non-veteran %	Veteran, no service-connected disability %	Veteran, service-connected disability %	Non-veteran %	Veteran, no service-connected disability %	Veteran, service-connected disability %
Demographic						
Race:						
White	80.4	86.0	77.8	79.7	79.1	68.2
African American	9.7	9.7	15.5	11.3	15.7	24.1
Other	10.0	4.2	6.7	9.0	5.2	7.7
Hispanic	10.6	4.7	6.4	9.0	4.4	5.4
U.S.-born	83.2	97.4	97.1	86.5	97.0	96.5
Living in South	34.5	38.0	44.7	36.4	43.3	54.6
Non-metro	16.5	19.3	20.3	16.9	17.6	18.6
Socioeconomic						
>High school	53.2	55.2	58.3	50.9	70.2	80.1
Employed	71.2	66.0	47.3	61.0	64.9	48.7
>Median Personal Income	59.6	62.2	64.8	38.0	47.5	62.7
In poverty	9.1	7.1	6.9	9.9	8.1	6.9
Owns home	79.1	81.6	80.0	79.9	77.5	75.7
Marriage/Family						
Marital status:						
Never-married	11.4	6.7	6.1	8.5	11.1	14.5
Married	69.5	71.0	68.4	62.4	54.0	43.3
Previously married	19.1	22.3	25.5	29.0	34.9	42.2
Married 2+ times	27.5	38.8	42.7	30.4	43.2	46.1
Percentage 1+ coresident children	32.9	23.8	24.4	29.2	25.6	21.8

	Men			Women		
	Non-veteran %	Veteran, no service-connected disability %	Veteran, service-connected disability %	Non-veteran %	Veteran, no service-connected disability %	Veteran, service-connected disability %
Health						
Any limitation/ disability	16.6	17.9	43.1	17.4	19.3	38.7
Any health insurance	84.8	91.5	97.5	87.3	92.3	99.5

Source: Author's calculations.

nondisabled veterans are as or more likely than nonveterans to be white and less likely to be coded other race or of Hispanic ethnicity. Disabled veterans are more likely than nonveterans and nondisabled veterans to be African American (16% vs. 10% for men and 24% vs. 11–16% among women). Disabled veterans are also somewhat more likely than nondisabled veterans to be coded other race or of Hispanic ethnicity. Since service-connected disability ratings are generally assigned early in the life course, close to service members' transitions to civilian life, these racial differences likely reflect the often-noted racial stratification in military and combat roles during the war. Both veteran groups are overwhelmingly U.S.-born. Veterans, especially disabled veterans, are more likely than nonveterans to reside in the South and in nonmetro areas, which has implications for health-care and service delivery.

The late-midlife socioeconomic profiles of Vietnam-era men and women differ somewhat in relation to veteran status. Among men, both nondisabled and disabled veterans are more likely than nonveterans to have more than high school education, but the rate is highest among disabled veterans. The same pattern is observed among women, but there is a much larger difference between disabled veterans and the other two groups. Approximately 80 percent of disabled female veterans have more than high school education, compared to 51 percent of female nonveterans; the difference for men is about 5 percentage points and only 58 percent of disabled male veterans have more than high school educational attainment. Among both men and women, less than half of disabled veterans are employed; employment rates among the other groups range from 61 to 71 percent, with nondisabled male veterans working less than male nonveterans and nondisabled female veterans working more than female

nonveterans. Perhaps reflecting the importance of Veterans Administration Disability Compensation and/or Social Security Disability Insurance (Wilmoth, London, & Heflin, 2015), the percentage with personal income above the median for both men and women is highest among disabled veterans. As was the case with education, veteran status differences are much smaller among men than among women. Among both men and women, the rate of poverty is highest among nonveterans and lowest among disabled veterans. Home ownership varies slightly more among women than men. It is also lower among both groups of female veterans than among nonveterans, but, for all groups of men and women, home ownership exceeds 75 percent.

Outcomes in the marriage and family domain also vary by veteran status and gender. Among men, nonveterans have the highest rate of never marrying and disabled veterans the lowest. Among women, the pattern is the mirror image. Among all three groups of men, the rates of being currently married are about the same. Disabled male veterans have the highest rate of being previously married, but differences are relatively small. Among women, the rate of being currently married is highest among nonveterans and lowest among disabled veterans; female veterans in general, and disabled female veterans in particular, have low rates of current marriage. Disabled female veterans are the most likely to be previously married—42 percent. Both male and female disabled veterans have high rates of two or more marriages—43 and 46 percent, respectively. The rate of multiple marriages is more similar among the two veteran groups than between the veteran and nonveteran groups for both men and women. Nonveteran men are more likely than either of the veteran groups to have one or more children in the household. Among women, nonveterans are the most likely to have one or more children in the household.

The ACS does not include many health variables. However, six measures of functional limitation/disability are included. These indicate difficulty with cognition, ambulation, independent living, self care, vision, and hearing (see also, Wilmoth, London, & Parker, 2011). The any disability measure used for the analysis presented in Table 8.1 equals 1 if the respondent has any one of these six functional limitations/disabilities, and 0 otherwise. For both men and women, there is relatively little difference in the rate of any limitation/disability between nonveterans and nondisabled veterans. However, high rates are observed for both male and female disabled veterans—43 and 39 percent, respectively. It is likely they would be even higher if other forms of disability were measured, such as that associated with psychiatric and substance abuse disorders. Among both men and women, veterans, particularly disabled veterans, have higher rates of any health insurance coverage than nonveterans.

Discussion

Almost a decade ago, in the lead article to a special issue of *Research on Aging* on Military Service, the Life Course, and Aging, which he guest-edited, Richard A. Settersten, Jr. (2006: 12) wrote: "Most scholarship on aging is based on cohorts born early in the 20th century, and these cohorts have had significant experience with war. Wartime experiences may therefore be critical but largely hidden variables underlying current scientific knowledge about aging." Wilmoth and London (2013: 2) expanded this claim by noting that the "institutional influence of military service on lives has more generally been under-acknowledged among life-course scholars, and more broadly within Sociology and other disciplines that study human lives." Their recent content analysis of papers published between January 1980 and December 2013 in the five Gerontology Society of America-sponsored journals, *Research on Aging*, and *Journal of Aging and Health* lends credence to these notions (Wilmoth & London, 2016). In total, over the 34-year period, these seven mainstream aging journals published a total of 101 military-related articles, or three per year, on average. The vast majority were cross-sectional, nonrepresentative, and focused exclusively on veterans or Veterans Administration health-care facilities and programs that serve older veterans. Although these studies address important, policy-relevant questions, they do not contribute substantially to our understanding of how military service affects variation in long-term life-course outcomes because almost none of these studies directly compares veterans to nonveterans over time in carefully controlled models.

The Vietnam-era cohort of veterans is now entering the retirement and older adult years. While the extant literature provides some indications of how their lives have unfolded to this point, the knowledge base is thin on most topics. The descriptive results from analysis of the 2009 ACS that are presented in this chapter raise more questions than they answer. Perhaps, they will stimulate further research. Further research is needed because, even where our knowledge base is deepest, such as with respect to the effects of combat and consequences of military service for socioeconomic attainment, there are important gaps or uncertainties. It is critically important that researchers use available data sources to fill in the gaps in our knowledge to the extent possible. It is also important that we develop new opportunities to study the later lives of Vietnam-era veterans and nonveterans. Questions about military service experiences can be added to ongoing longitudinal data collection efforts. There is much to be learned about how different aspects of military service experiences affect a range of outcomes among older adult baby boomers in general and the Vietnam-era veterans among them in particular. As we follow surviving cohort members

forward, we will need to make efforts to better understand the sources of, and adjust for, differential attrition and mortality by veteran status. There are challenges, but they can be overcome.

At the same time that efforts are being made to follow Vietnam-era veterans and nonveterans through older adulthood, we must also expand our capacity to prospectively follow younger cohorts as they age. Teachman (2013) has provided a set of recommendations to help address the data limitations that currently exist with regard to studying military service and the life course. For starters, he recommends that data: be longitudinal; contain information about nonveterans, active-duty personnel, Reserve/Guard members, and veterans so that comparative analyses can be undertaken; begin prior to the age of eligibility for military service; and comprehensively measure heterogeneity in military service experiences. He further recommends that we consider selection dynamically since the confounding factors that distinguish veterans and nonveterans may not be stable over time; continue to follow individuals when they enter service; measure contextual information to capture the effects of time and place; consider to whom veterans lives are linked and collect data about them as well; and undertake qualitative investigations as well as quantitative studies. These are sound recommendations, but finding the funds to implement them is a challenge.

Failure to act now to enhance the capacity of the social science research community to study military service, aging, and the life course will represent a missed opportunity. Not only will we perpetuate the notion that military service is a hidden variable in research on aging and the life course, we will also miss the opportunity to study how the transition to the AVF and military experiences during the late twentieth and early twenty-first centuries shaped aging and life-course processes and outcomes among those entering older adulthood in the mid-twenty-first century. As more women serve in the military, and as lesbian-, gay-, and bisexual-identified individuals serve openly for the first time in U.S. history, there are new opportunities to expand the reach of research on military service and the life course. Additionally, important questions related to spouses, children, and the lives of those who are linked to service members are emerging as key issues for future data collection and research. Of the 2 million individuals who have served in the active-duty military since September 11, 2001, nearly 45 percent had children (Cozza & Lerner, 2013). In 2011, the ratio of spouses and children to active-duty service members was 1.4 to 1 (Clever & Segal, 2013). Further investigation of military service in the United States, as well as carefully constructed international and cross-national comparative research, can elucidate the mechanisms by which military service affects lives, and how that varies by individual

characteristics and historical circumstances. There is important work to be done that has the potential to significantly impact policies and programs that aim to support those who volunteered and, potentially, sacrificed for us all, as well as those whose lives are linked to them.

Arguably, military service is now an emergent variable in life-course research (London & Wilmoth, 2016). However, the continued emergence of military service in life-course studies is not guaranteed. If the availability of data and knowledge related to military service and the life course does continue to expand and deepen, this research initiative has the potential to provide important insights about how early-life institutions shape later-life outcomes. Hopefully, several decades from now, researchers will not look back and lament that we know very little about how military service affects the lives of those who served and the lives of those who are linked to them as Teachman (2013) recently did.

Note

1. VetPop2014, Tables 1L and 2L (National Center for Veterans Analysis and Statistics 2014a) are the sources for all of the population size estimates presented in this section. VetPop2014 is the latest official projection model of the veteran population provided by the Office of the Actuary. Original calculations based on data from VetPop2014 were completed by the author.

References

Aldwin, C. M., Levenson, M. R., & Spiro, A. (1994). Vulnerability and resilience to combat exposure: Can stress have lifelong effects? *Psychology and Aging, 9*(1), 34–44.

Angrist, J. D. (1990). Lifetime earnings and the Vietnam era draft lottery—Evidence from social security administrative records. *American Economic Review, 80*(3), 313–336.

Angrist, J. D. (1991). The draft lottery and voluntary enlistment in the Vietnam era. *Journal of the American Statistical Association, 86*(415), 584–595.

Angrist, J. D. (1993). The effect of veterans benefits on education and earnings. *Industrial & Labor Relations Review, 46*(4), 637–652.

Angrist, J. D., & Chen, S. H. (2011). Schooling and the Vietnam-era GI Bill: Evidence from the draft lottery. *American Economic Journal: Applied Economics, 3*, 96–118.

Angrist, J. D., Imbens, G. W., & Rubin, D. B. (1996). Identification of causal effects using instrumental variables. *Journal of the American Statistical Association, 91*(434), 444–455.

Armor, D. J. (1996). Race and gender in the US military. *Armed Forces & Society, 23*(1), 7–27.

Bennett, P.R., & McDonald, K.B. (2013). Military service as a pathway to early socioeconomic achievement for disadvantaged groups. In J.M. Wilmoth & A.S. London (Eds.), *Life-course perspectives on military service* (pp. 119–143). New York: Routledge.

Berger, M.C., & Hirsch, B.T. (1983). The civilian earnings experience of Vietnam-era veterans. *Journal of Human Resources, 18*(4), 455–479.

Berger, M.C., & Hirsch, B.T. (1985). Veteran status as a screening device during the Vietnam era. *Social Science Quarterly, 66*(1), 79–89.

Boehmer, T.K.C., Flanders, D., McGeehin, M.A., Boyle, C., & Barrett, D.H. (2004). Postservice mortality in Vietnam Veterans—30 year follow-up. *Archives of Internal Medicine, 164*(17), 1908–1916.

Bookwala, J., Frieze, I., & Grote, N. (1994). The long-term effects of military service on quality of life—the veteran experience. *Journal of Applied Social Psychology, 24*(6), 529–545.

Boscarino, J.A. (2006). Posttraumatic stress disorder and mortality among US Army veterans 30 years after military service. *Annals of Epidemiology, 16*(4), 248–256.

Brown, M.T. (2013). Military service and lesbian, gay, bisexual, and transgender lives. In J.M. Wilmoth & A.S. London (Eds.), *Life-course perspectives on military service* (pp. 97–118). New York: Routledge.

Browning, H.L., Lopreato, S.C., & Poston, D.L. (1973). Income and veteran status—Variations among Mexican Americans, blacks and Anglos. *American Sociological Review, 38*(1), 74–85.

Bryant, R.R., Samaranayake, V.A., & Wilhite, A.L. (1993). The effect of military service on the subsequent civilian wage of the post-Vietnam veteran. *Quarterly Review of Economics and Finance, 33*(1), 15–31.

Burland, D., & Lundquist, J.H. (2013). The best years of our lives: Military service and family relationships—A life-course perspective. In J.M. Wilmoth & A.S. London (Eds.), *Life course perspectives on military service* (pp. 165–184). New York: Routledge.

Call, V.R.A., & Teachman, J.D. (1996). Life-course timing and sequencing of marriage and military service and their effects on marital stability. *Journal of Marriage and the Family, 58*(1), 219–226.

Card, J.J. (1983). *Lives after Vietnam: The personal impact of military service.* Lexington, MA: Lexington Books.

Carlson, E., & Andress, J. (2009). Military service by twentieth-century generations of American men. *Armed Forces & Society, 35*(2), 385–400.

Clever, M., & Segal, D.R. (2013). The demographics of military children and families. *The Future of Children, 23*(2), 13–39.

Cohen, J., & Temme, L.V. (1986). Military service was an educational disadvantage to Vietnam-era personnel. *Sociology and Social Research, 70*(3), 206–208.

Cohen, J., & Segal, M.W. (2009). Veterans, the Vietnam era, and marital dissolution: An event history analysis. *Armed Forces & Society, 36*(1), 19–37.

Cohen, J., Segal, D.R., & Temme, L.V. (1986). The educational cost of military service in the 1960s. *Journal of Political & Military Sociology, 14*(2), 303–319.

Conway, T.L. (1998). Tobacco use and the United States military: A longstanding problem. *Tobacco Control*, *7*(3), 219–221.

Cooney, T. M., & Hogan, D. P. (1991). Marriage in an institutionalized life course: First marriage among American men in the twentieth century. *Journal of Marriage and the Family, 53*(1), 178–190.

Cozza, S. J., & Lerner, R. M. (2013). Military children and families: Introducing the issue. *The Future of Children, 23*(2), 3–11.

Davison, E. H., Pless, A. P., Gugliucci, M. R., King, L. A., King, D. W., Salgado, D. M., Spiro, A., & Bachrach, P. (2006). Late-life emergence of early-life trauma—The phenomenon of late-onset stress symptomology among aging combat veterans. *Research on Aging, 28*(1), 84–114.

Dobkin, C., & Shabani, R. (2009). The health effects of military service: Evidence from the Vietnam draft. *Economic Inquiry, 47*(1), 69–80.

Dohrenwend, B. P., Turner, B., Turse, N. A., Adams, B. G., Koenen, K. C., & Marshall, R. (2006). The psychological risks of Vietnam for US veterans: A revisit with new data and methods. *Science, 313*(5789), 979–982.

Duggan, M., Rosenheck, R., & Singleton, P. (2010). Federal policy and the rise in disability enrollment: Evidence for the Veterans' Affairs Disability Compensation Program. *Journal of Law and Economics, 53*(2), 379–398.

Elder Jr., G. H. (1986). Military times and turning points in men's lives. *Developmental Psychology, 22*(2), 233–245.

Elder Jr., G. H. (1987). War mobilization and the life course: A cohort of World War II veterans. *Sociological Forum, 2*(3), 449–472.

Elder Jr., G. H, Clipp, E. C., Brown, J. S., Martin, L. R., & Friedman, H. W. (2009). The life-long mortality risks of World War II experiences. *Research on Aging, 31*(4), 391–412.

Elder Jr., G. H., Johnson, M. K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the life course*, (pp. 3–19). New York: Kluwer Academic/Plenum.

Elder Jr., G. H., Shanahan, M. J., & Clipp, E. C. (1994). When war comes to men's lives: Life-course patterns in family, work, and health. *Psychology and Aging, 9*(1), 5–16.

Elder Jr., G. H., Shanahan, M. J., Clipp, E. C. (1997). Linking combat and physical health: The legacy of World War II in men's lives. *American Journal of Psychiatry, 154*(3), 330–336.

Elman, C., & O'Rand, A. (2004). The race is to the swift: Socioeconomic origins, adult education, and wage attainment. *American Journal of Sociology, 10*(1), 123–160.

Fligstein, N. D. (1980). Who served in the military, 1940–73. *Armed Forces & Society, 6*(2), 297–312.

Flynn, G. Q. (1993). *The draft 1940–1973*. Lawrence: University Press of Kansas.

Fontana, A., & Rosenheck, R. (1995). Attempted suicide among Vietnam veterans—A model of etiology in a community sample. *American Journal of Psychiatry, 152*(1), 102–109.

Frey-Wouters, E., & Laufer, R. S. (1986). *Legacy of a war: The American soldier in Vietnam*. New York: Routledge.

Gimbel, C., & Booth, A. (1996). Who fought in Vietnam? *Social Forces, 74*(4), 1137–1157.

Goldscheider, F. K., & Waite, L. J. (1986). Sex differences in the entry into marriage. *American Journal of Sociology*, *92*(1), 91–109.

Griffin Jr., C.L., & Stein, M.A. (2015). Self-perception of disability and prospects for employment among U.S. veterans. *Work, 50*, 49–58.

Heerwig, J.A., & Conley, D. (2013). The causal effects of Vietnam-era military service on post-war family dynamics. *Social Science Research, 42*, 299–310.

Hirsch, B.T., & Mehay, S.L. (2003). Evaluating the labor market performance of veterans using a matched comparison group design. *Journal of Human Resources, 38*(3), 673–700.

Hogan, D.P. (1981). *Transitions and social change: The early lives of American man.* New York: Academic.

Jahnke, S.A., Hoffman, K.M., Haddock, K., Long, M.A.D., Williams, L.N., Landon, H.A., & Poston, W.S.C. (2011). Military tobacco policies: The good, the bad, and the ugly. *Military Medicine, 176*(12), 1382–1387.

Kelty, R., & Segal, D.R. (2013). The military as a transforming influence: Integration into or isolation from normal adult roles? In J.M. Wilmoth and A.S. London (Eds.), *Life-course perspectives on military service* (pp. 19–47). New York: Routledge.

Kimmerling, R., Gima, K., Smith, M.W., Street, A, & Frayne, S. (2007). The veterans health administration and military sexual trauma. *American Journal of Public Health, 97*(12), 2160–2166.

Kleykamp, M. (2013). Labor market outcomes among veterans and military spouses. In J.M. Wilmoth & A.S. London (Eds.), *Life-course perspectives on military service* (pp. 144–164). New York: Routledge.

Kulka, R.A., Schlenger, W.E., Fairbank, J.A., Hough, B.K.J., Marmar, C.R., Weiss, D.S., Grady, D.A., & Cranston, A. (1990). *Trauma and the Vietnam War generation: Report of findings from the National Vietnam Veterans Readjustment Study*. New York: Brunner/Mazel.

Laub, J.H., & Sampson, R.J. (2003). *Shared beginnings, divergent lives: Delinquent boys to age 70.* Cambridge, MA: Harvard University Press.

Laufer, R.S., & Gallops, M.S. (1985). Life-course effects of Vietnam combat and abusive violence—marital patterns. *Journal of Marriage and the Family, 47*(4), 839–853.

Laufer, R.S., Yager, T. Frey-Wouters, E., & Donnellan, J. (1981). Postwar trauma: Social and psychological problems of Vietnam veterans in the aftermath of the war. In A. Egendorf, C. Kadushin, R.S. Laufer, G. Rothbart, & L. Sloan (Eds.), *Legacies of Vietnam: Comparative adjustment of veterans and their peers* (pp. 19–44). New York: Center for Policy Research.

London, A.S., Burgard, S.A., & Wilmoth, J.M. (2014). The influence of veteran status, psychiatric diagnosis, and traumatic brain injury on inadequate sleep. *Journal of Sociology & Social Welfare,* XLI(4), 49–67.

London, A. S., Herd, P., Miech, R. A., & Wilmoth, J.M. (*in review*). The influence of men's military service on smoking across the life course.

London, A.S., & Wilmoth, J.M. (2008). Military service. In D. Carr, R. Crosnoe, M.E. Hughes, & A. Pienta (Eds.), *Encyclopedia of the life course and human development* (pp. 292–299). Farmington Hills, MI: Gale.

London, A. S., & Wilmoth, J. M. (2016). Military service in lives: Where do we go from here? In M. J. Shanahan, J. T. Mortimer, & M. Kirkpatrick Johnson

(Eds.), *Handbook of the life course (Volume II)* (pp. 277–300). Switzerland: Springer International Publishing.

Lopreato, S. C., & Poston, D. L. (1977). Differences in earnings and earnings ability between black veterans and non-veterans in the United States. *Social Science Quarterly, 57*(4), 750–766.

Lundquist, J. H., & Smith, H. L. (2005). Family formation among women in the US Military: Evidence from the NLSY. *Journal of Marriage and Family, 67*(1), 1–13.

Lutz, A. C. (2013). Race–ethnicity and immigration in the U.S. military. In J. M. Wilmoth & A. S. London (Eds.), *Life-course perspectives on military service* (pp. 68–96). New York: Routledge.

MacLean, A. (2010). The things they carry: Combat, disability, and unemployment among U.S. men. *American Sociological Review, 75*(4), 563–585.

MacLean, A. (2013). A matter of life and death: Military service and health. In J. M. Wilmoth & A. S. London (Eds.) *Life course perspectives on military service* (pp. 200–220). New York: Routledge.

MacLean, A., & Edwards, R. D. (2010). The pervasive role of rank in the health of U.S. veterans. *Armed Forces & Society, 36*(5), 765–785.

MacLean, A., & Elder Jr., G. H. (2007). Military service in the life course. *Annual Review of Sociology, 33,* 175–196.

Martindale, M., & Poston, D. L. (1979). Variations in veteran-non-veteran earnings patterns among World War II, Korea, and Vietnam War cohorts. *Armed Forces & Society, 5*(2), 219–243.

Mattila, J. P. (1978). GI Bill benefits and enrollments—How did veterans fare? *Social Science Quarterly, 59*(3), 535–545.

Miech, R. A., London, A. S., Wilmoth, J. M., & Koester, S. (2013). The effects of the military's antidrug policies over the life course: The case of past-year hallucinogen use. *Substance Use & Misuse, 48,* 837–853.

Modell, J., & Haggerty, T. (1991). The social impact of war. *Annual Review of Sociology, 17,* 205–224.

Mortimer, J. T., & Shanahan, M. J. (2003). *Handbook of the life course*. New York: Kluwer Academic/Plenum Publishers.

National Center for Veterans Analysis and Statistics. (2014a). Office of the Actuary, Veteran Population Projections Model (VetPop2014), Tables 1L and 2L. Last retrieved July 1, 2015, http://www.va.gov/vetdata/Veteran_Population.asp

National Center for Veterans Analysis and Statistics (2014b). Unique veteran users report FY 2012. Last retrieved July 1, 2015, https://catalog.data.gov/dataset/fy-2012-profile-of-unique-veteran-users

Nelson, J. P., & Pederson, L. L. (2008). Military tobacco use: A synthesis of the literature on prevalence, factors related to use, and cessation interventions. *Nicotine & Tobacco Research, 10*(5), 775–790.

Nichols, L. O., Martindale-Adams, J., Burns, R., Graney, M. J., & Zuber, J. (2011). Translation of a dementia caregiver support program in a health care system—REACH VA. *Archives of Internal Medicine, 171*(4), 353–359.

Ritchey, J. (2009). US Army, mental health experts team up to fight rising suicide rate. Last retrieved July 1, 2015, http://www.voanews.com/content/a-13-2009-01-30-voa59-68626972/407478.html

Rosen, S., & Taubman, P. (1982). Changes in life-cycle earnings—What do social security data show? *Journal of Human Resources, 17*(3), 321–338.

Ruger, W., Wilson, S. E., & Waddoups, S. L. (2002). Warfare and welfare: Military service, combat, and marital dissolution. *Armed Forces & Society, 29*(1), 85–107.

Sackett, P. R., & Mavor, A. S. (2006). *Assessing fitness for military enlistment: Physical, medical, and mental health standards*. Washington, DC: National Academies Press.

Sampson, R. J., & Laub, J. H. (1996). Socioeconomic achievement in the life course of disadvantaged men: Military service as a turning point, circa 1940–1965. *American Sociological Review, 61*(3), 347–367.

Savoca, E., & Rosenheck, R. (2000). The civilian labor market experiences of Vietnam-era veterans. *Journal of Mental Health Policy and Economics, 3*(4), 199–207.

Scott, W. J. (1992). PTSD and Agent Orange—Implications for a sociology of veterans issues. *Armed Forces & Society, 18*(4), 592–612.

Segal, D. R., & Segal, M. W. (2004). America's military population. *Population Bulletin, 59*(4), 1–40.

Settersten Jr., R. A. (2003). *Invitation to the life course: Toward new understandings of later life*. Amityville, NY: Baywood.

Settersten Jr., R. A. (2006). When nations call: How wartime military service matters for the life course and aging. *Research on Aging, 28*(1), 12–36.

Smith, E. A., & Malone, R. A. (2012). Why strong tobacco control measures "can't" be implemented in the U.S. military: A qualitative analysis. *Military Medicine, 177*(10), 1202–1207.

Smith, R. T., & True, G. (2014). Warring identities: Identity conflict and the mental distress of American veterans of the wars in Iraq and Afghanistan. *Society and Mental Health, 4*(2), 147–161.

Spiro, A., Schnurr, P. P., & Aldwin, C. M. (1997). A life-span perspective on the effects of military service. *Journal of Geriatric Psychiatry, 30*(1), 91–128.

Stanley, M. (2003). College education and the midcentury GI Bills. *Quarterly Journal of Economics,* 118(2), 671–708.

Street, D, &, Hoffman, J. (2013). Military service, social policy, and later-life financial and health security. In J. M. Wilmoth & A. S. London (Eds.), *Life-course perspectives on military service* (pp. 221–242). New York: Routledge.

Suris, A., & Lind, L. (2008). Military sexual trauma—A review of prevalence and associated health consequences in veterans. *Trauma, Violence, and Abuse, 9*(4), 250–269.

Teachman, J. D. (2004). Military service during the Vietnam era: Were there consequences for subsequent civilian earnings? *Social Forces, 83*(2), 709–730.

Teachman, J. D. (2005). Military service in the Vietnam era and educational attainment. *Sociology of Education, 78*(1), 50–68.

Teachman, J. D. (2013). Setting an agenda for future research on military service and the life course. In J. M. Wilmoth & A. S. London (Eds.), *Life course perspectives on military service* (pp. 254–274). New York: Routledge.

Teachman, J. D., & Call, V. R. A. (1996). The effect of military service on educational, occupational, and income attainment. *Social Science Research, 25*(1), 1–31.

U.S. Code of Federal Regulations. (2014). 38 §3.2, periods of war. Last retrieved July 1, 2015, http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=38:1.0.1.1.4#se38.1.3_12

Vogt, D. S., King, D. W., King, L. A., Savarese, V. W., & Suvak, M. K. (2004). War-zone exposure and long-term general life adjustment among Vietnam veterans: Findings from two perspectives. *Journal of Applied Social Psychology, 34*(9), 1797–1824.

Wilmoth, J. M., & London, A. S. (2011). Aging veterans: Needs and provisions. In J. L. Angel & R. Settersten (Eds.), *Handbook of the sociology of aging* (pp. 445–461). New York: Springer.

Wilmoth, J. M., & London, A. S. (2013). *Life-course perspectives on military service*. New York: Routledge.

Wilmoth, J. M., & London, A. S. (2016). The influence of military service on aging. In K. F. Ferraro, L. K. George, & D. Carr (Eds.), *Handbook of aging and the social sciences* (8th ed., pp. 227–250). New York: Springer.

Wilmoth, J. M., London, A. S., & Heflin, C. M. (2015). The use of VA disability benefits and social security disability insurance among veterans. *Disability and Health Journal, 8*, 388–396.

Wilmoth, J. M., London, A. S., & Himes, C. L. (2015). Inter-cohort variation in the consequences of U.S. military service on men's body mass index trajectories in mid- to late-life. In C. Burton-Jeangros, S. Cullati, A. Sacker, & D. Blane (Eds.), *A life course perspective on health trajectories and transitions* (pp. 133–154). London: Springer.

Wilmoth, J. M., London, A. S., & Parker, W. M. (2010). Military service and men's health trajectories in later life. *Journal of Gerontology: Social Science, 56*(6), 744–755.

Wolf, D. A., Wing, C., & Lopoo, L. M. (2013). Methodological problems in determining the consequences of military service. In J. M. Wilmoth & A. S. London (Eds.), *Life-course perspectives on military service* (pp. 254–274). New York: Routledge.

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CHAPTER NINE

Immigration, Life Course, and Aging

Ynesse Abdul-Malak and Rebecca Wang

The number of immigrants arriving in the United States and the number of older immigrants are both expected to grow in the coming two decades. How are immigrants faring particularly as they approach older ages? Life-course-based theoretical frameworks such as segmented assimilation and cumulative inequality aid in contextualizing the various economic and physical well-being of immigrants. In this chapter, we review the literature on the economic and health impacts of immigration in the United States. We begin with a broad demographic look at who immigrates to the United States and highlight several different contexts in which migration occurs. Then, we review various ways in which immigrants fare economically and in health, placing special emphasis on where immigrants are advantageous and where they are most vulnerable.

Demographic Trends

According to the 2013 American Community Survey, there are roughly 41 million foreign-born immigrants in the United States (Zong & Batalova, 2015). Together, immigrants comprise approximately 13 percent of the total U.S. population. While the proportion of immigrants has been steadily increasing since the 1970s, the peak share of immigrants occurred in 1890, with immigrants accounting for almost 15 percent of the total U.S. population (Zong and Batalova, 2015). Within this immigrant population, foreign-born older immigrants in the United States aged 60 and older represent approximately 7 percent of all admitted immigrants each year with numbers ranging from 50,398 in 1998 to 100,554 in 2006 (Wilmoth,

2012). Overall, the foreign-born older population increased from 2.7 to 4.6 million people between 1990 and 2010, an increase of nearly 70 percent (Population Reference Bureau, 2013). The greatest increase has been among Asian and Latino foreign-born older immigrants who accounted for roughly 38 percent and 29 percent, respectively, aged 65 years and older in 2010 (Wilmoth, 2012). This section will highlight key demographic trends of the immigrant population in the United States, including country of origin, age, gender, intergenerational households, and geography of immigrant settlement.

Early to late twentieth century brought immigrants from a variety of countries of origin to the United States and was largely shaped by sociohistorical time and policy. Immigrants arriving at the turn of the twentieth century largely came from southern, central, and eastern Europe and in particular, Italians, Polish, and eastern European Jewish (Perlmann, 2005). However, this time was also characterized by great feelings of xenophobia, prompting restrictionist policies such as quotas on all immigrant groups as well as bans on specific immigrant groups such as the Chinese. The passage of the 1965 Immigration Act lifted quotas and bans on immigration and saw a surge in immigrants from Asia and Latin America. The top sending countries in 2013 were Mexico, China, India, Philippines, and Vietnam and account for about 45 percent of the total U.S. immigrant population (Zong & Batalova, 2015). Figure 9.1 illustrates the shift in birth countries of immigrants. In 1960, approximately three-quarters of the immigrants were from Europe (Zong & Batalova, 2015). Countries such as Germany, Italy, Poland, and the former Soviet Union accounted for a large share of immigrants. In contrast, European originating immigrants in 2013 comprised 12 percent of the immigrant population (Zong & Batalova, 2015). Asian and Latin American-born immigrants experienced the opposite trend. In 2013, Asian and Latin American countries accounted for 68 percent of the immigrant population in the United States, compared to just 14 percent in 1960 (Zong & Batalova, 2015).

Although the average age of the immigrant population is higher than that of the U.S.-born population, the difference fluctuates across time. In 2013, the average age of the U.S.-born population was approximately 36 years compared to approximately 43 years for the foreign-born population (Zong & Batalova, 2015). The large majority of the foreign-born population is of working age, with about 80 percent of the foreign-born population between the ages of 18 and 64 years (Zong & Batalova, 2015). While the 65 years and older group is similar across foreign-born and U.S.-born, at about 14 percent, there has been an increase in immigrants arriving in later life (Zong & Batalova, 2015). Researchers distinguish between two distinct groups of older immigrants in the United States: Those who migrated earlier

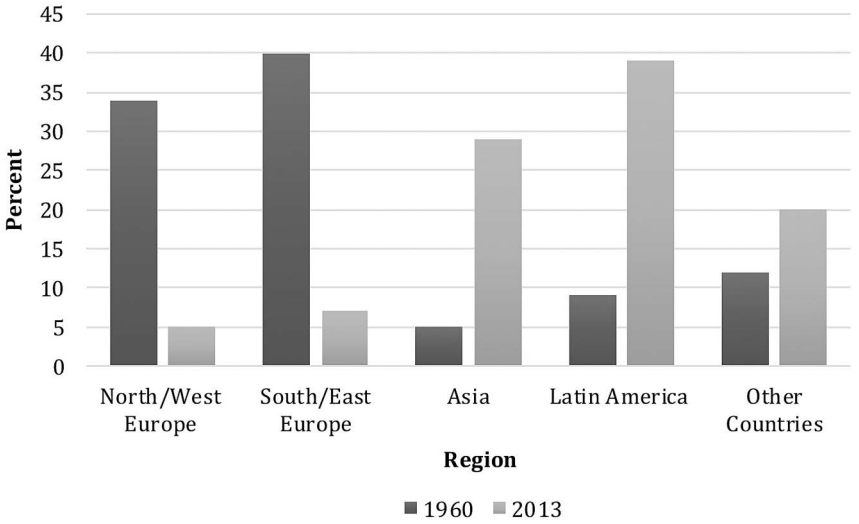


Figure 9.1 Immigrant population by geographic region, 1960 and 2013. (Migration Policy Institute tabulation of data from the 2013 American Community Surveys. Data for 1960 are from Campbell J. Gibson and Emily Lennon, "Historical Census Statistics on the Foreign-Born Population of the United States: 1850 to 1990" [Working Paper No. 29, U.S. Census Bureau, Washington, DC, 1999].)

in life and those who migrated later in life. The 2010 American Community Survey estimates that 10 percent of immigrants over the age of 65 had been living in the United States for fewer than 10 years (Population Reference Bureau, 2013). Demographers have found that the aging experiences of early-arriving immigrants who migrated at a younger age and have aged in the United States generally reflect their U.S.-born counterparts in terms of health and health-care utilization in later life (Choi, 2011). In comparison, immigrants who arrive later in life, particularly after 65 years, face unique challenges.

Compared to the early twentieth century, the gender composition of the U.S. immigrant population has shifted due to increased numbers of female immigrants. From 1870 to 1950, there were more men than women immigrants in the United States, with the highest sex ratio in 1910 of 131 immigrant men to every 100 immigrant women (Zong & Batalova, 2015). In 2013, the sex ratio was 95 immigrant men to every 100 immigrant women, meaning that there are fewer immigrant men than women in the United States (Zong & Batalova, 2015). Because women live longer than men, on average, consequently, many of the problems of aging are disproportionately experienced by women whose life course experiences

shape their later-life outcomes, including health conditions, economic status, and social relationships. The variability in intergenerational family experiences of older immigrants is directly and indirectly influenced by sociohistorical and sociopolitical contexts. Sociohistorical time not only provides the context to society's warm or hostile welcome, it also provides the context in which immigrants develop key cultural values and norms that are transferred across generations. For example, Chinese family formations were directly shaped by historical policies such as the Chinese Exclusion Act of 1882. Xenophobic attitudes towards Chinese immigrants forced families into close living quarters, known as Chinatowns. Most Chinatowns consisted of tight knit ethnic enclaves featuring strong social and economic support systems. As a result, it was not uncommon to have large, extended families, many not biological (Rumbaut, 2005). This greatly shaped the experiences of Chinese older immigrants as they were not only much more likely to be independent, but these immigrant grandparents had the "respect of an entire community" (Zhou, 2009, p. 25). These grandpas often times kept watch over the children in Chinatowns. In stark contrast, the family and intergenerational experiences of contemporary immigrant generations are typically characterized as dissonant and filled with struggles (Foner & Dreby, 2011; Treas, 2008b). Values of familism and filial piety are not always found consistently across generations. This is perhaps best seen in multigenerational households. Some scholars have found that in multigenerational homes, some intergenerational relationships are privileged over other relationships (Silverstein & Attias-Donfut, 2010; Treas, 2008b; Usita & Shakya, 2012). For example, a strong degree of familism may be present in the parent-child relationship, but not in the grandparent-grandchild relationship. This relationship is further moderated by the degree of acculturation experienced by the younger generation (Foner & Dreby, 2011). Silverstein and Attias-Donfut (2010) suggest that acculturation among the later-generation children is negatively associated with feelings of emotional solidarity with their grandparents. That is, as the immigrant children become more acculturated into American mainstream culture, they feel less close to their grandparents.

A distinctive hallmark of the post-1965 wave of migration has been the decreasing geographic concentration of immigrant settlement. One of the significant demographic changes has been geographic disbursement of immigrants away from the Big Five states: California, New York, Texas, Florida, and Illinois. This trend has been particularly well documented by researchers for the Mexican immigrant population, as the Mexican migration patterns have experienced the most diversity (Donato et al., 2008; Leach & Bean, 2008; Lichter et al., 2010). Before 1990, 86 percent of Mexican immigrants settled in the Big Five states. This number

decreased to 61 percent in 2000 according to the PUMS data. For example, the increase of Mexican immigrants in the same time period settling in new destinations states rose from 10 percent to 30 percent (Massey & Capoferro, 2008). While this is largely driven by Latino immigration, in a comparison of Asian immigrant groups, the trend is similar, but was more modest than Latino immigrant trends (Bump, Lowell, & Pettersen, 2005; Massey & Capoferro, 2008). The passage of Immigration Reform and Control Act of 1986 (IRCA) coupled with growing economies, particularly in service and construction, played a large role in the new geography of immigrant settlements. As a provision of IRCA, undocumented migrants who have been living in the United States since January of 1982 were granted amnesty. Essentially, this allowed for immigrants to relocate without the fear of deportation. Moreover, traditional immigrant destinations such as California were experiencing saturation of local markets, pushing immigrants to look elsewhere for work. The top three states experiencing the largest percent growth of immigrants in the past decade are Tennessee, North Carolina, and Kentucky (Zong & Batalova, 2015). Many of these nontraditional places share a similar story, such as Dalton, Georgia, where growing industrial economies generated labor shortages that immigrants quickly filled.

As immigration to the United States steadily increases, the demographic trends of immigrants reveal several noteworthy shifts. While the bulk of immigrants are still migrating during working-age years, there has been a substantial growth of immigrants arriving in later life. Immigrant sex ratio trends indicate a shift to more immigrant women to men, placing them in a more vulnerable position to later-life hardships. Contemporary intergenerational household dynamics challenge the traditional immigrant assumptions of filial piety and familism. Finally, the geographic settlement of immigrants has expanded far beyond the traditional destinations of immigrants.

Contextualizing Migration Patterns

Why do immigrants migrate to the United States? Immigrants arrive in the United States under very different contexts. Understanding the reasons for international migration helps to contextualize the experiences across the life course of immigrants. For immigrants, the different details of why people migrate are critical to contextualizing the experiences across the life course. This section highlights push-pull influences of migration, chained migration, and rolling migration.

Factors that push people to immigrate vary depending on the economic climate of a particular period of time. In the 1980s and 1990s,

scholars focused on the pressures to migrate as a result of global capitalism (Portes & Walton, 2013; Sassen, 1990). World systems theory emphasizes the effect of globalization. Globalization is marked by the growth of multinational capitalists with branches and factories in the global south and has a direct effect of immigration because it dislocates groups of people, many of whom are forced to move elsewhere. This nonvoluntary immigration is an inevitable consequence of the growth of profit-driven capitalists in search of land, raw materials, and labor (Massey et al., 1993). For example, despite high unemployment rates in the United States during the 1970s, Asian and Caribbean immigration remained steady because of the increased expansion of global corporations and industries into Southeast Asian and Caribbean countries and displacing physical homes, jobs, and means for survival (Sassen, 1990). As a result, immigrants who are pushed into a new country often face more difficulties because of the absence of migration incentives such as better wages. Today, the appendages of global capitalism still create constrained opportunities to thrive in less-developed countries, pressuring families and individuals to immigrate to an unfamiliar place.

On the other end of the spectrum, international migration occurs as a result of many sources of incentive, or pull factors. At the most elementary level, incentives can be seen as a basic cost-benefit calculation and maximizing income with minimal risk for individuals and families. Federal programs, such as the Bracero Program during the 1940s, created large-scale incentives for international migration. At its peak, the U.S. government brought in almost half a million contracted Mexican laborers to meet the labor demand (Portes & Rumbaut, 2014). The Bracero Program stipulations included set wages, housing, and some medical care (Massey, Durand, & Malone, 2002). To cut costs, rural farmers began to hire undocumented immigrants who were willing to work and farmers did not have to provide the same standards of pay and living as contracted braceros. Moreover, when the Bracero Program ended in the 1965, farmers were reluctant to hire back native workers, which would ultimately increase wages and decrease profit. So, while the official incentives of labor migrants may have disappeared, the incentive for labor migrants, particularly undocumented immigrants remained strong. Contemporary pull factors for immigrants include postsecondary education, family reunification, and opportunities for both skilled and unskilled labor.

As immigration increases, so does the possibility for chained migration. That is, changing norms in the sending and receiving country create an embedded incentive for migration. For example, a consequence of the Bracero Program was that the social definition of a farm laborer became strongly associated with foreign or immigrant work, essentially creating

an institutionalized demand for immigrant laborers. In the sending countries, increased migration and remittances made households with family members working abroad become more common (Massey, 1999). The greater visibility of international migration then becomes ingrained into their values changing norms and cultural values (Massey, 1999). These factors produce an increasing incentive for others to follow in the footsteps of their fellow, former community members and migrate. Moreover, with each wave of migration, a foundation of knowledge and social capital is developed; thus, the risks of future waves decrease (Massey, 1999).

The flow of migration is not always permanent, as in the case of rolling migrants. Rolling migration refers to immigrants who strategically divide their time between the United States and their country of origin. Policy changes, along with more restrictionist laws, have resulted in the use of more innovative strategies. Contemporary immigrants are becoming increasingly transnational, through strategies of using tourist visas or dual citizenship. Transnational, or global, families refers to families that are split with part of the family in the United States and part of the family in their respective home country (Silverstein & Attias-Donfut, 2010). These groups of migrants differ from the traditional younger, working-age labor migrants and are often the older parents of adult immigrant children. Transnational older adults mainly come to help their adult children and grandchildren. For many older immigrants, this is achieved through "strategic use of immigration policies that presume a desire for permanent U.S. settlement and constrain international travel patterns" (Treas, 2008a, p. 471). Some strategies include using tourist visas to stay in the United States for six months, then returning to their home country in order to apply for a new travel visa (Treas, 2008a). Though technically considered temporary, some older immigrants continue this cycle for many years. For some immigrants, the transnational life may be ideal as some immigrants value the preservation of ties to their home country. However, as some qualitative research suggest, for older immigrants who have the resources to live a transnational life, commuting between two countries and the back-and-forth nature of the visits disrupts the lives of older immigrants' adult children and grandchildren who have come to depend on the different types of support provided by their elder parents (Gilberson, 2009). Nevertheless, this circulatory transnational migration pattern is increasingly becoming the reality for contemporary immigrants.

Theories for Assessing Impacts of Immigration on Economic Well-Being and Health

The body of research studying the impacts of immigration on economic well-being and health often draws from the rich theoretical developments

in both the sociology of immigration as well as social gerontology. Encouraging the use of diverse theories from multiple disciplines provides the best framework for better capturing the diversity in immigrant lives. This section pays special attention to how these conceptual frameworks inform our understanding of immigrants' socioeconomic circumstances and health. We explore how segmented assimilation theory contributes to our understanding of immigrants' socioeconomic status and health; then, we discuss how cumulative inequality theory adds to our understanding of the social location of new wave immigrants and its association with their economic well-being and health.

Segmented Assimilation Theory

Segmented assimilation theory emerged as an alternative to classical assimilation theory to explain the process of assimilation of various immigrant groups. Classical assimilation theory was more relevant to describe the experiences of European immigrants, while segmented assimilation theory is used to elucidate the adaptation and experiences of the new wave of immigrants, specifically the second generation (Portes & Zhou, 1993; Zhou, 1997). It recognizes that contextual differences are what accounted for the new immigrants' assimilation. Successful assimilation is shaped by a wide range of factors such as skin color, geographic location, and access to economic opportunities (Portes & Zhou, 1993). The new immigrants are so diverse, ranging from laborers to professionals, who are received in various sectors of American society, from impoverished urban settings to affluent suburbs (Zhou, 1997). Consequently, these contextual differences shape their paths of social mobility. Those who start from the bottom echelon might be trapped there and the ones who are on top have more opportunities to move upward. For example, professional migrants are more likely to assimilate to mainstream U.S. culture (Finch et al., 2007). In the United States, structural forces that are inherent due to the prevalence of spatial segregation can explain some of the differences in the social mobility of different immigrant groups. Rumbaut (1997) conjectures that these structural forces could hinder healthy behaviors of the new wave second-generation immigrants. That is, some immigrants, specifically those who are blacks, are more likely to live in urban settings and are more likely to adapt to the American way of life, poor dietary habits and lack of exercise.

Cumulative Inequality Theory

Cumulative inequality theory provides insights into economic and health disparities that exist in different immigrant groups across the life

course. It is a middle-range theory that integrates elements from the life course perspective with cumulative advantage/disadvantage theory to study health and aging and the accumulation of inequality (Ferraro & Shippee, 2009). Cumulative inequality theory posits that life course trajectories are shaped by disparities in resources, accumulation of risk, and human agency (Ferraro, Shippee, & Schafer, 2009). It looks at the interaction of the individuals with their environments. Specifically, it highlights how with demographic changes, social systems might generate inequality over the life course and that "personal trajectories are shaped by the accumulation of risk, available resources, perceived trajectories, and human agency" (Ferraro, Shippee, & Schafer, 2009: 334). Looking at the accumulation of inequality highlights more than later-life outcomes; it also places emphasis on the aging process as a whole. Moreover, cumulative inequality theory recognizes that social forces generate inequality and that individual choices are structurally constructed. Social antecedents are correlated with current- and future-life conditions. In other words, immigrants' early-life conditions and events can impact their later-life outcomes. Indeed, immigrants who achieve early socioeconomic accomplishments such as higher education might have better later-life outcomes, such as economic success and better health in the United States. Furthermore, cumulative inequality theory underscores how disadvantages generate more exposure to risk while advantages facilitate opportunities. This is not merely a linear relationship. Multiple domains could interact to generate inequality. This can be illustrated with the case of highly educated immigrants who are more likely to capitalize in their human capital when they migrated to the United States. Finally, cumulative inequality theory focuses on how life course trajectories are not deterministic and that risk accumulation, available resources, and human agency are constantly interacting to shape later-life outcomes. The concept of human agency is very salient when it comes to how different individuals respond to a risk or an opportunity. Immigrants can overcome adversities and prosper.

In sum, cumulative inequality theory highlights how minority immigrant health is linked to early-life trajectories, such as lack of resources in their native countries and current economic inequalities in the United States. It provides insights on how country of origin and time of migration are important factors in determining health status. Cumulative life course exposure to low socioeconomic conditions can lead to chronic diseases (Pollitt, Rose, & Kaufman, 2005; Wakabayashi, 2010). For example, immigrants with fewer resources early in life in their home countries often continue to have fewer resources in the United States, and as a result they struggle with more adverse health effects through their life trajectories.

We find this theory to be the most plausible at explaining minorities' economic disparities and health.

Economic Impacts of Immigration

What are the economic impacts of immigration on the receiving country? What are the economic impacts of immigration on immigrants across the life course? How do older immigrants fare economically? Economic impacts of immigration are usually measured in terms of labor market and utilization of social programs. This section assesses the economic impacts of immigration on the U.S. economy and on various immigrant groups by looking at its effects on labor market, poverty and employment rates, wage differentials, wealth as in savings and home ownership, and immigrant usage of social assurance programs.

Scholarly works on the impacts of immigration on the U.S. labor market are mixed and inconclusive. Immigrant inflows can provide mixed economic effects to the United States because of the heterogeneity of immigrant groups and structural/institutional factors. For example, high-skilled immigration might be conducive to economic growth by increasing productivity and innovation (Orrenius & Zavodny, 2012; Peri, 2012), while low-skilled workers might have a negative impact on natives' wages (Borjas, 2003; Hanson, 2008). Using national data, Borjas (2003) found that between the years 1960 and 2000, immigration negatively impacted labor wages and low-skilled labor supply, specifically for young high school dropouts, who experienced slower wage growth. Conversely, looking at data from 1960 to 2008, Peri (2010) found that the effect of immigration had not been deleterious to the U.S. economy. In fact, immigration increased the wages of U.S-born Americans.

Economic impacts of immigration on immigrants can be assessed by looking at poverty rates across immigrants from different region/country of origin, age, and generational cohorts. In general, immigrants are more likely to live in poverty than native-born Americans, at 19 percent and 15 percent, respectively (Grieco et al., 2012). Specifically, immigrants from Latin America are more likely to live below the poverty line compared to those from African, European, and Asian countries. Based on the American Community Survey, for immigrant families that poverty is determined, Figure 9.2 illustrates that about 23 percent of Latin American immigrants live below 100 percent of the poverty level compared to 10 percent of European immigrants (U.S. Census Bureau, 2015). When region of origin is disaggregated into countries, the disparity in poverty level is even more apparent with Mexican immigrants having the highest rates at 29 percent, followed by Guatemalans at 27 percent, and

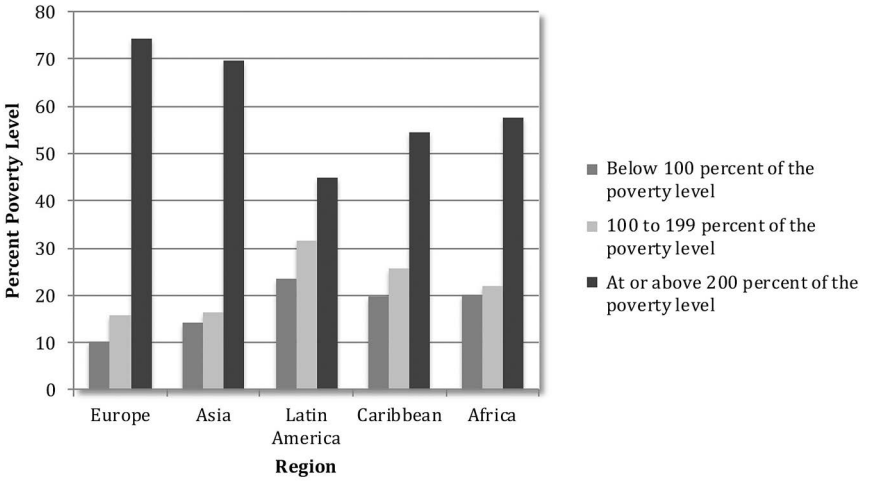


Figure 9.2 Immigrant poverty level for past 12 months by region of origin. (U.S. Census Bureau, 2009–2013, 5-Year American Community Survey)

Dominicans at 26 percent (Portes & Rumbaut, 2014, p. 34). Poverty varies across different age groups, about 31 percent of foreign-born children of 18 years or younger live below the poverty line compared to 21 percent of U.S.-born children (Grieco et al., 2012). In 2009, while 40 percent of children from Mexico and the Dominican Republic lived below the poverty line, only 6 or 7 percent of those from India and the Philippines did (Borjas, 2011). For older adults, despite working in the labor market for more years, on average, older immigrants are more susceptible to poverty than U.S.-born older adults. The poverty rate for immigrants, 65 years and older, is 16 percent compared to 8 percent of the native-born (Grieco et al., 2012). About 20 percent of Hispanic older immigrants and 14 percent of Asian older immigrants live under the federal poverty line, compared to 9 percent of the U.S.-born older adult population (Gerst & Burr, 2012). In 1970, the relative wage of immigrants 65 years and older compared to native-born was 5 percent and has widened to 30 percent in 2007 (Borjas, 2009). This widening gap is partially explained by country of origin, limited acculturation, and lack of opportunities for paid employment. Late-life-arriving immigrants and those who reside in the United States for less than 10 years have lower income, and they are less likely to receive retirement benefits and pensions (Borjas, 2009).

How do rates and types of employment differ among immigrants according to region/country of origin, generational cohorts, and gender? Employment is one major reason why people migrate. While the current employment profile of U.S. immigrants has diversified in comparison

to that of the early twentieth-century immigrants, immigrants are still disproportionately represented in labor-intensive, low-skilled, often dangerous work. Immigrants in the early twentieth century were generally poor and took jobs in low-skill industries. Southern and central European immigrants were concentrated in construction, mining, and factory jobs. In comparison, in 2013, approximately 30 percent of the employed immigrant population worked in "management, professional, and related occupations," or white-collar occupations (Zong & Batalova, 2015). However, many contemporary labor immigrants occupy jobs at the lower end of the occupation spectrum. The difference is that these jobs are no longer held by European immigrants, but rather by Hispanic immigrants, especially Mexicans (Perlmann, 2005). Immigrants comprise 16 percent of the U.S. labor force that is overwhelmingly represented by Hispanic and Asian immigrants, 48 percent and 24 percent, respectively (Bureau of Labor Statistics, 2014). The unemployment rate in 2013 for immigrants was slightly lower than U.S.-born Americans, 6.9 percent and 7.5 percent, respectively (Bureau of Labor Statistics, 2014). However, the rates for black immigrants' unemployment is 11 percent compared to 5 percent of Asian immigrants (Bureau of Labor Statistics, 2014). By gender, in 2013, immigrant men comprised about 58 percent of the labor force compared to 52 percent of their U.S.-born counterparts and among various immigrant groups, 66 percent are men (Bureau of Labor Statistics, 2014).

The geographic proximity of Latin America to the United States renders the migration of low-skilled migrants more feasible, while it creates education selectivity among other groups such as Asians and Africans. Immigrants with less education tend to hold manual jobs that many natives would not hold, such as in factories, farmlands, construction, and service industries. Latin American immigrants are more likely to work in service occupations, 31 percent, while only about 11 percent of European and Asian immigrants are likely to (Grieco et al., 2012). This explains the large numbers of immigrants who are overrepresented in these industries. Immigrants from Latin America including Mexico are more likely to come to the United States and occupy these positions because the journey is not as expensive. On the other hand, immigrants from Asia, Africa, and Europe tend to be more educated, thus they can afford to make the long journey to the United States and they occupy more managerial and professional positions. By gender, in 2013, immigrant women were more likely to be in service occupations compared to U.S.-born women, 33 percent and 20 percent, respectively (Bureau of Labor Statistics, 2014).

To measure immigrant wealth, we can look at wage differentials, home ownership, and savings by region/country of origin, gender, and education

level. In general, immigrant earnings are less than native-born Americans, with its relative wages declining. In 2010, the median income for families of U.S.-born householders was $62,358 compared to $49,785 for families of immigrant householders (Grieco et al., 2012). However, there was great income disparity in immigrants' income depending on region of origin, with Asians' 2013 weekly earning to be at $951, followed by blacks at $649 and Hispanics at $509 (Bureau of Labor Statistics, 2014).

Wealth among immigrants is different according to gender. In 2013, immigrant women earned 15 percent less than their U.S.-born counterparts (Bureau of Labor Statistics, 2014) and 13 percent less than immigrant men (Immigration Policy Center, 2010). Mexican immigrant women earned less than any other immigrant group with a median annual income of $21,489, while Indian women had the highest median annual income at $61,767 (Immigration Policy Center, 2010). About 75 percent of married immigrants of 51 or older are homeowners compared to 88 percent U.S.-born Americans (Sevak & Schmidt, 2014). Looking at immigrant wealth by educational level reveals a positive association. The most educated immigrants are those from Asian countries, while those from Latin America have the lowest level of educational attainment. About 49 percent of Asian immigrants have a Bachelor's degree or higher while only 11 percent of those from Latin America do (Grieco et al., 2012). At the country of origin level, about 75 percent of Indians and only 5 percent of Mexicans are college graduates (Portes & Rumbaut, 2014). Therefore, immigrants with higher level of education tend to be better off economically. Even when accounting for variables such as country of origin, education, and gender, in general, immigrants fare worse when it comes to wealth accumulation. Using the Survey of Income and Program Participation (SIPP) from 2001 to 2003, Seto and Bogan (2013) showed that immigrants are 4.41 percent and 3.38 percent less likely to own stocks and mutual funds, respectively. Immigrants have a family net worth of $100,000 less than U.S-born (Sevak & Schmidt, 2014).

Immigrant use of social programs such as Temporary Assistance to Needy Families (TANF), Supplemental Security Income (SSI), Supplemental Nutrition Assistance Program (SNAP), Women, Infants, and Children nutrition program (WIC), and housing assistance is mostly determined by immigration status, country of origin, and age. Before the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), immigrants with legal status were allowed to participate in means-tested federal benefit programs, albeit their usage of such programs was considered low. With the implementation of PRWORA, participation of immigrants in social programs dropped significantly because citizenship status is one of the qualifications for eligibility for some of these programs.

Under the provisions of PRWORA, immigrants must reside in the United States for longer than five years to be eligible for certain assistance programs. Using data from the Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC), controlling for legal status and low incomes, Capps, Fix, and Henderson (2009) found that usage of TANF, SSI, and food stamps remained low among legal permanent residents compared to native families. From 1994 to 2002, TANF and food stamps usage among legal permanent residents decreased by 18 percent and 14 percent, respectively. Together, this represented a 50 percent greater decrease compared to U.S.-born families (Capps, Fix, & Henderson, 2009). Based on 2011 CPS data, the use of any type of social programs was higher among immigrants from Latin American countries such as Mexico (57%) and Guatemala (55%) and lower in European countries such as Germany (10%) and UK (6%) (Camarota, 2012). Moreover, legal barriers to accessing social assurance programs often make the later-life immigrant population not only vulnerable, but also place strain on their adult children and extended family who typically absorb the consequences of these structural barriers (Choi, 2011; Gerst & Burr, 2012).

How do older immigrants fare economically? Late-life immigrants are vulnerable to economic hardship, despite their sponsors' affidavit to provide economic support until older immigrants "are naturalized citizens or they work for 40 quarters" (Gerst & Burr, 2012, p. 15). Older immigrants may become naturalized and share the same access to social benefits as United States citizens. However, many late-life immigrants are much less likely to become naturalized because they are more likely to arrive to the United States with limited human capital, making it difficult to successfully pass the English proficiency and literacy tests associated with the naturalization process (Gerst & Burr, 2012). For these late-life immigrants, they are much less likely to work for the 40 quarters needed to gain eligibility for Social Security because of their age and their limited English proficiency. Additionally, policy changes from the PRWORA changed eligibility requirements for federal programs such as Temporary Aid to Needy Families, making some older immigrant populations even more vulnerable. For the late-arriving older immigrants who do not have access to these state resources, many are much more reliant on their adult children. This shift of "responsibility for support of the most vulnerable from government to family members" places a heavy burden on the families of the newly arrived older immigrants (Gerst & Burr, 2012, p. 15). Ineligibility not only negatively affects older immigrants, it also disproportionately affects the lower-income adult children and grandchildren who may have existing financial strains.

Health Impacts of Immigration

What are the health impacts of immigration? With the rising number of older immigrants to the United States, specifically the new wave of immigrants from Latin America and Asia, there has been a lot of focus on the health status of these immigrants and how they impact the U.S. health-care system. In general, immigrants experience a health advantage and have lower adult mortality than their U.S.-born counterparts (Abraído-Lanza et al., 2006; Derose, Escarce, & Lurie, 2007; Heron, Schoeni, & Morales, 2003; Kim et al., 2006; Read, Emerson, & Tarlov, 2005; Singh & Miller, 2004; Singh & Siahpush, 2001; Singh & Yu, 1996). Explanations for this immigrant health advantage have focused on many factors such as selective migration and culturally relevant healthy behaviors (Abraido-Lanza, Chao, & Florez, 2005; Akresh & Frank, 2008; Antecol & Bedard, 2006; Cho et al., 2004; Jasso et al., 2004). However, many scholarly works have shown that with age and time, this health advantage dissipates and immigrant health converges with the native-born levels (Abraido-Lanza, Chao, & Florez, 2005; Antecol & Bedard, 2006; Wakabayashi, 2010). This section focuses on major health impacts of immigration in terms of infant mortality, health behaviors, and chronic conditions on various immigrant groups and its impact on the U.S. health-care system.

Generally, immigrants' infant mortality rate (IMR) is lower than of U.S.-born women. However, most scholarly works on this topic have focused on Hispanics, mostly Mexicans, and non-Hispanic white immigrants (Frisbie et al., 2010; Henry-Sanchez & Geronimus, 2013; Mathews & MacDorman, 2010). Using data from the National Center for Health Statistics (NCHS) of three time periods, 1989–1991, 1995–1998, and 1999–2001 and tracing trends over time in IMR due to specific leading causes, Frisbie et al. (2010) showed that there are great disparities in IMR among various American mothers. Comparing immigrants' IMR to U.S.-born non-Hispanic white women, the odds ratios of infant mortality from all-causes are 1.56 for non-Hispanic black immigrants, 0.85 for Mexican immigrant, and 0.73 for non-Hispanic white immigrants. The IMR for black immigrants is much higher than any other immigrant group. That is, black immigrant infants are less likely to see their first birthdays compared to other immigrant groups. To our knowledge, there are no studies that disaggregate the pan-ethnic grouping of black immigrant women to country of origin, in order to fully capture and understand the disparity of IMR among that group.

There are stark differences in patterns and distribution of chronic health conditions among various immigrant groups in the United States by

generational cohorts, country of origin, and gender. First-generation, or foreign-born, immigrants are generally healthier and have fewer chronic health conditions than the second generation, born in the United States. Data from the nationally representative, Second Longitudinal Survey of Aging (LSOAII) show that second-generation immigrants are over six times more likely to have cancer than their late-arriving, first-generation counterparts (Choi, 2011). Second-generation older immigrants have, on average, 1.2 percent more reported chronic conditions compared to the late-arriving, first-generation immigrants (Choi, 2011). Using data from 1997 to 2005 of the National Health Interview Survey (NHIS), Oza-Frank and Narayan (2008) showed that immigrants from Mexico, Central America, and the Caribbean have higher prevalence of diabetes compared to European immigrants, 7 percent and 3 percent, respectively. With the National Survey of American Life (NSAL) data, Erving (2011) found that after controlling for SES and social roles, Caribbean black immigrant women are 43 percent more likely to report greater chronic illness (including cancer, hypertension, diabetes, stroke, blood circulation problems, and heart trouble) relative to men. Incidence of chronic health conditions seem to increase with increased length of stay in the United States. Difference in chronic health conditions between different immigrant women is understudied and not well understood. Very few studies disaggregate immigrant groups into country of origin and different demographic factors.

How do health behaviors explain health differentials among U.S. immigrants? Health behaviors such as smoking, exercise, and dietary habits are important determinants of overall health. Understanding how health behaviors operate or change with migration might provide insights on immigrants' health disparity. Over time, immigrants adopt traditional American health behaviors and their health status begins to converge with that of the general U.S. population. Singh and Siahpush (2001) analyzed a longitudinal data set from the National Longitudinal Mortality Study (NLMS) and Behavioral and health status data, originating from the 1993 and 1994 NHIS to examine several factors associated with all-cause and cause-specific mortality in the United States, specifically whether health status and behaviors vary among immigrant groups and by length of stay in the United States. After adjusting for the effects of several socioeconomic and demographic factors, immigrants who reside in the United States for less than a year are 52 percent less likely to smoke cigarettes than the U.S.-born; those who are in the United States for 10–15 years and those who are residing in the country longer than 15 years are less likely to smoke than their U.S.-born counterparts, 32 percent and 18 percent, respectively (Singh & Siahpush, 2001). Additionally, immigrants residing in the United States for more than 15 years are

13 percent less likely to be overweight compared to newly arrived immigrants, who are 61 percent less likely to be overweight. Pérez-Escamilla (2011) conducted a systematic review of nationally representative surveys related to Hispanics' health behaviors and concluded that higher acculturation among Hispanics is associated with poor dietary habits such as lower consumption of fruits and vegetables and higher consumption of sugar and added fats. Among immigrant women, Roshania, Narayan, and Oza-Frank (2008) found that longer stay in the United States for early-arriving immigrants, those who arrived at 20 years old or younger, was related to a change in dietary habits and they were more likely to be overweight/obese compared to those who came at 50 years old or older, odds ratios of 0.46 and 0.38, respectively. Using similar data, Choi (2012) found that immigrants from all regions, except the Middle East/north Africa, are more likely to be obese/overweight with longer stay in the United States. The longer immigrants stay in the United States, the more likely their health behaviors including smoking status and dietary habits, and risk factors for cardiovascular diseases, converge to the lifestyles of Americans.

Immigrants have lower rates of health insurance coverage than U.S.-born populations, and there is disparity of coverage along country of origin, SES, gender, and age. Immigrants from Latin America, the Caribbean, Vietnam, and Korea are least likely to have health-care coverage, while immigrants from Europe and Canada have the highest insurance coverage rates (Carrasquillo, Carrasquillo, & Shea, 2000). Indeed, immigrants from Central America or the Caribbean are least likely to be covered by some form of health insurance and only 63 percent of those from the Caribbean with health insurance are covered by a private insurer (Grieco et al., 2012). One explanation for lower coverage is that immigrants are more likely to work for employers who do not offer health benefits or are self-employed (Buchmueller et al., 2007). Moreover, access to jobs with access to health benefits is positively associated with education.

Immigrant groups such as Indians, who enjoy an 89 percent high school graduation rate, also enjoy a high percentage of health-care coverage (Derose, Escarce, & Lurie, 2007). Disparities in health insurance coverage among immigrants are even greater across gender and age. Using the National Health Interview Surveys from 1992–2002, Kaushal and Kaestner (2007) found that single immigrant women are less likely to have coverage, about 19 percent lack insurance. Among immigrant families, children of immigrants are much more susceptible to not having health insurance than children of nonimmigrants, controlling for income. That is, among lower-income families, children of immigrants are three times as likely to lack health insurance than children of nonimmigrants (Huang, Stella, & Ledsky, 2006). Among older immigrants, country of origin, marital status,

gender, and work quarters are strong predictors of health-care coverage. Overall, older immigrants are less likely to have health insurance. Further, Latino immigrants are 22 times as likely than European immigrants to be without health insurance (Choi, 2006). The 1996 PRWORA significantly restricted immigrants' eligibility for federally funded services such as Medicaid for noncitizens, especially unmarried women (Derose et al., 2009; Kaushal & Kaestner, 2007). Additionally, many older immigrants might not be qualified for Medicare because they have not worked in the United States long enough or were self-employed. Approximately one-quarter of older immigrants qualify for Medicare, because most older immigrants have less than 40 quarters of work experience (Carr & Tienda, 2013).

The U.S. safety net, such as Medicaid and Medicare, does not negate the health disparities by providing equal health-care access. Country of origin, SES, gender, and age are variables that are associated with healthcare access. Overall, noncitizen immigrants made up less than 5 percent of the population receiving Medicare or Medicaid (Carrasquillo, Carrasquillo, & Shea, 2000). U.S. policies advantage certain immigrant groups over others. For example, those who are considered refugees or asylum seekers for political reasons are automatically eligible for government-funded health-care coverage. This creates a disparity regarding health-care access based on country of origin. Cuban and Russian immigrants are considered refugees and thus enjoy government-funded health-care coverage. Whereas, 60 percent of migrant farm workers, mostly from Mexico, Guatemala, El Salvador, and Haiti, do not meet the basic eligibility criteria for government assistance (Carrasquillo, Carrasquillo, & Shea, 2000). The situation is even more precarious for undocumented immigrants. Immigrant children, who entered the United States after the implementation of PRWORA, are ineligible for insurance coverage under SCHIP programs. Kaushal & Kaestner (2007) found that welfare reform was associated with a 28 to 40 percent increase in the proportion of lack health-care coverage among low-educated, immigrant single mothers. Older immigrants, especially those who have not paid into the system, are not qualified to receive Medicare. According to New York City Department of Health and Mental Hygiene, immigrant adults living in NYC with low incomes are less likely to have Medicaid than the U.S.-born, 29 percent and 42 percent, respectively (Kim et al., 2006). The newly implemented Affordable Care Act (ACA) aims to address the unequal health-care access; however, its coverage is not as comprehensive as Medicaid and Medicare (Pandey, Cantor, & Lloyd, 2014). Scholarly works need to evaluate the effectiveness of the ACA at providing health-care coverage for many uninsured and whether it has an effect at decreasing health disparities among various immigrant groups.

Discussion

Contemporary waves of immigration vary greatly in demographics, economic well-being, and physical health. Political and social histories not only shape the demographic compositions of immigrants, but also the contextual climate for migration and reception. The motivations, strategies, and paths on which immigrants arrive to the United States can range from simple cost-benefit calculations of voluntary migrants to the dislocating structural forces of global capitalist expansion.

Drawing directly and indirectly from life course perspectives, theoretical frameworks such as cumulative inequality and segmented assimilation aid in contextualizing the various economic and physical well-being of immigrants. The economic and health impacts of immigration vary not only by cultural origins, but also by a diverse set of factors such as generational cohort, age, and gender. Disparities such as greater rates of poverty and lower median incomes have long-lasting effects across the life course for immigrants, such as having much more limited financial savings in retirement. Moreover, much of low-skilled labor positions in the United States are occupied by immigrants. The physical demands associated with these occupations will no doubt carry long-lasting effects into later life. Finally, policy influences such as the restrictions from the 1996 Welfare Reform Act have only produced negative effects on immigrants and their families, who must absorb the additional weight.

Regarding physical health, immigrants in the United States enjoy some advantages but are much more vulnerable in other health-related areas. With the exception of late-life immigrants, first-generation immigrants experience better health. Infant mortality rates are lower for immigrant women than non-Hispanic and U.S.-born white women, but higher for black immigrants. In addition, immigrants enjoy fewer chronic conditions than their U.S.-born counterparts. However, immigrants are much more vulnerable when it comes to health-care access. Lack of health-care coverage is detrimental to long-term health. Moreover, health-care access and coverage are subject to federal program regulations and restrictions that often disproportionately affect immigrants.

The intricate nexus of immigration, life course, and aging allows much room for additional research. For example, with increasing numbers of immigrants moving and settling in nontraditional destinations, so does the need to better understand processes of incorporation. While scholarship on the demography of these populations has been well documented, additional quantitative research on the experiences of incorporation in these new destinations is much more limited. Researchers in the future are tasked with creating innovative methodology to access this population, especially

the need to disaggregate the pan-ethnic grouping into country of origin. Furthermore, research on aging has not yet been included in this area. For now, the numbers of older immigrant are still small. However, it is quite likely that these numbers will be increasing in the coming years, especially for the late-life immigrants because of the more relaxed restrictions of family reunification policy. Older immigrants already face higher risk of isolation and loneliness. A lack of established immigrant coethnic communities, especially in nonmetropolitan new destinations, may be the most detrimental to the well-being and health of older immigrants. Though perhaps small in absolute number, the growth rates of immigrants in new destinations represent an overlooked, yet emergent population.

References

Abraído-Lanza, A. F., Armbrister, A. N., Flórez, K. R., & Aguirre, A. N. (2006). Toward a theory-driven model of acculturation in public health research. *American Journal of Public Health, 96*(8), 1342–1346.

Abraido-Lanza, A. F., Chao, M. T., & Florez, K. R. (2005). Do healthy behaviors decline with greater acculturation? Implications for the Latino mortality paradox. *Social Science & Medicine (1982), 61*(6), 1243.

Akresh, I. R., & Frank, R. (2008). Health selection among new immigrants. *American Journal of Public Health, 98*(11), 2058–2064. doi:10.2105/AJPH.2006.100974

Antecol, H., & Bedard, K. (2006). Unhealthy assimilation: Why do immigrants converge to American health status levels? *Demography, 43*(2), 337–360.

Borjas, G. (2003). The labor demand curve is downward sloping: Reexamining the impact of immigration on the labor market. *Quarterly Journal of Economics, 118*(4), 1335–1374. doi:10.3386/w9755

Borjas, G. (2009). *Economic well-being of the elderly immigrant population.* (No. orrc09–02). National Bureau of Economic Research.

Borjas, G. (2011). Poverty and program participation among immigrant children. *The Future of Children, 21*(1), 247–266.

Buchmueller, T. C., Lo Sasso, A. T., Lurie, I., & Dolfin, S. (2007). Immigrants and employers-sponsored health insurance. *Health Services Research, 42*(1p1), 286–310.

Bump, M. N., Lowell, B. L., & Pettersen, S. (2005). The growth and population characteristics of immigrants and minorities in America's new settlement areas. In E. Gozdziak, & S. Martin (Eds.), *Beyond the gateway: Immigrants in a changing America* (pp. 19–37). Lanham, MD: Lexington Books.

Bureau of Labor Statistics. (2014). *Foreign-born workers: Labor force characteristics—2013*. U.S. Department of Labor. Retrieved March 1, 2015, from http://www.bls.gov/news.release/forbrn.nr0.htm

Camarota, S. A. (2012). *Immigrants in the United States, 2010: A profile of America's foreign-born population.* Center for Immigration Studies Washington, DC.

Retrieved March 1, 2015 from http://cis.org/2012-profile-of-americas-foreign-born-population

Capps, R., Fix, M., & Henderson, E. (2009). Trends in immigrants' use of public assistance after welfare reform. In M. Fix (Ed.), *Immigrants and welfare* (pp. 93–122). New York: Russell Sage Foundation.

Carr, S., & Tienda, M. (2013). Family sponsorship and late-age immigration in aging America: Revised and expanded estimates of chained migration. *Population Research and Policy Review, 32*(6), 825–849.

Carrasquillo, O., Carrasquillo, A. I., & Shea, S. (2000). Health insurance coverage of immigrants living in the United States: Differences by citizenship status and country of origin. *American Journal of Public Health, 90*(6), 917–923.

Cho, Y., Frisbie, W. P., Hummer, R. A., & Rogers, R. G. (2004). Nativity, duration of residence, and the health of Hispanic adults in the United States. *International Migration Review, 38*(1), 184–211. doi:10.1111/j.1747–7379.2004.tb00193.x

Choi, J. Y. (2012). Prevalence of overweight and obesity among US immigrants: Results of the 2003 new immigrant survey. *Journal of Immigrant and Minority Health, 14*(6), 1112–1118.

Choi, S. (2006). Insurance status and health service utilization among newly-arrived older immigrants. *Journal of Immigrant and Minority Health, 8*(2), 149–161.

Choi, S. (2011). Longitudinal changes in access to health care by immigrant status among older adults: The importance of health insurance as a mediator. *The Gerontologist, 51*(2), 156–169. doi:10.1093/geront/gnq064

Derose, K. P., Bahney, B. W., Lurie, N., & Escarce, J. J. (2009). Review: Immigrants and health care access, quality, and cost. *Medical Care Research and Review, 66*(4), 355–408.

Derose, K. P., Escarce, J. J., & Lurie, N. (2007). Immigrants and health care: Sources of vulnerability. *Health Affairs, 26*(5), 1258–1268.

Donato, K. M., Tolbert, C., Nucci, A., & Kawano, Y. (2008). Changing faces, changing places: The emergence of new nonmetropolitan immigrant gateways. In D. S. Massey (Ed.), *New faces in new places: The changing demography of American immigration* (pp. 75–98). New York: Russell Sage Foundation.

Erving, C. L. (2011). Gender and physical health: A study of African American and Caribbean black adults. *Journal of Health and Social Behavior, 52*(3), 383–399. doi:10.1177/0022146511415857

Ferraro, K. F., & Shippee, T. P. (2009). Aging and cumulative inequality: How does inequality get under the skin? *The Gerontologist, 49*(3), 333–343. doi:10.1093/geront/gnp034

Ferraro, K. F., Shippee, T. P., & Schafer, M. H. (2009). Cumulative inequality theory for research on aging and the life course. In V. L. Bengtson, D. Gans, N. M. Putney & M. Silverstein (Eds.), *Handbook of theories of aging* (2nd ed., pp. 413–433). New York: Springer New York.

Finch, B. K., Lim, N., Perez, W., & Phuong, D., Do. (2007). Toward a population health model of segmented assimilation: The case of low birth weight in Los Angeles. *Sociological Perspectives, 50*(3), 445–468.

Foner, N., & Dreby, J. (2011). Relations between the generations in immigrant families. *Annual Review of Sociology, 37*, 545–564.

Frisbie, W.P., Hummer, R.A., Powers, D.A., Song, S., & Pullum, S.G. (2010). Race/ethnicity/nativity differentials and changes in cause-specific infant deaths in the context of declining infant mortality in the US: 1989–2001. *Population Research and Policy Review, 29*(3), 395–422.

Gerst, K., & Burr, J.A. (2012). Welfare program participation among older immigrants. *Public Policy and Aging Report, 22*(2), 12–16.

Gilberson, G. (2009). Caregiving across generations: Aging, state assistance, and multigenerational ties among immigrants from the Dominican Republic. In N. Foner (Ed.), *Across generations: Immigrant families in America* (pp. 135–159). New York: New York University Press.

Grieco, E.M., Acosta, Y.D., de la Cruz, G Patricia, Gambino, C., Gryn, T., Larsen, L.J., Walters, N.P. (2012). The foreign-born population in the United States: 2010. *American Community Survey Reports,* Retrieved September 1, 2014, from https://www.census.gov/prod/2012pubs/acs-19.pdf

Hanson, G.H. (2008). The economic consequences of the international migration of labor. *National Bureau of Economic Research Working Paper Series, No. 14490*. doi:10.3386/w14490

Henry-Sanchez, B.L., & Geronimus, A.T. (2013). Racial/ethnic disparities in infant mortality among U.S. Latinos. *Du Bois Review: Social Science Research on Race, 10*(01), 205–231. doi:10.1017/S1742058X13000064

Heron, M.P., Schoeni, R.F., & Morales, L. (2003). *Health status among older immigrants in the United States.* Population Studies Center, University of Michigan.

Huang, Z.J., Stella, M.Y., & Ledsky, R. (2006). Health status and health service access and use among children in US immigrant families. *American Journal of Public Health, 96*(4), 634–640.

Immigration Policy Center. (2010). *Immigrant women in the United States: A portrait of demographic diversity*. Retrieved from http://www.immigrationpolicy.org/just-facts/immigrant-women-united-states-portrait-demographic-diversity

Jasso, G., Massey, D.S., Rosenzweig, M.R., & Smith, J.P. (2004). The US new immigrant survey: Overview and preliminary results based on the new-immigrant cohorts of 1996 and 2003. *Immigration Research and Statistics Service Workshop on Longitudinal Surveys and Cross-Cultural Survey Design: Workshop Proceedings*. London, UK: Crown Publishing.

Kaushal, N., & Kaestner, R. (2007). Welfare reform and health of immigrant women and their children. *Journal of Immigrant and Minority Health, 9*(2), 61–74.

Kim, M., Van Wye, G., Kerker, B., Thorpe, L., & Frieden, T. (2006). The health of immigrants in New York City. *New York City Department of Health and Mental Hygiene*, Retrieved March 1, 2015 from http://www.nyc.gov/html/doh/downloads/pdf/episrv/episrv-immigrant-report.pdf

Leach, M.A., & Bean, F.D. (2008). The structure and dynamics of Mexican migration to new destinations in the United States. In D.S. Massey (Ed.), *New faces in new places: The changing demography of American immigration* (pp. 51–74). New York: Russell Sage Foundation.

Lichter, D. T., Parisi, D., Taquino, M. C., & Grice, S. M. (2010). Residential segregation in new Hispanic destinations: Cities, suburbs, and rural communities compared. *Social Science Research, 39*(2), 215–230.

Massey, D. S. (1999). Why does immigration occur? A theoretical synthesis. In C. Hirschman, P. Kasinitz, & J. DeWind (Eds.), *The handbook of international migration: The American experience* (pp. 34–52). New York: Russell Sage Foundation.

Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1993). Theories of international migration: A review and appraisal. *Population and Development Review, 19*(3), 431–466.

Massey, D. S., & Capoferro, C. (2008). The geographic diversification of American immigration. In D. S. Massey (Ed.), *New faces in new places: The changing demography of American immigration* (pp. 25–50). New York: Russell Sage Foundation.

Massey, D. S., Durand, J., & Malone, N. J. (2002). *Beyond smoke and mirrors*. New York: Russell Sage Foundation.

Mathews, T., & MacDorman, M. F. (2010). Infant mortality statistics from the 2006 period linked birth/infant death data set. *National Vital Statistics Reports: From the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, 58*(17), 1–31.

Orrenius, P. M., & Zavodny, M. (2012). Economic effects of migration: Receiving states. In M. R. Rosenblum, & D. J. Tichenor (Eds.), *Oxford handbook of the politics of international migration* (pp. 105–152). Oxford: Oxford University Press.

Oza-Frank, R., & Narayan, K. M. V. (2008). Overweight and diabetes prevalence among US immigrants. *American Journal of Public Health, 100*(4), 661–668. doi:10.2105/AJPH.2008.149492

Pandey, S. K., Cantor, J. C., & Lloyd, K. (2014). Immigrant health care access and the affordable care act. *Public Administration Review, 74*(6), 749–759.

Pérez-Escamilla, R. (2011). Acculturation, nutrition, and health disparities in Latinos. *The American Journal of Clinical Nutrition, 93*(5), 1163S–1167S.

Peri, G. (2010). The effect of immigrants on US employment and productivity. *FRBSF Economic Letter, 26*, 1–5.

Peri, G. (2012). Immigration, labor markets, and productivity. *Cato Journal, 32*, 35.

Perlmann, J. (2005). *Italians then, Mexicans now: Immigrant origins and the second-generation progress, 1890–2000*. New York: Russell Sage Foundation.

Pollitt, R., Rose, K., & Kaufman, J. (2005). Evaluating the evidence for models of life course socioeconomic factors and cardiovascular outcomes: A systematic review. *BMC Public Health, 5*(1), 7.

Population Reference Bureau. (2013). Elderly immigrants in the United States. *Today's Research on Aging, 29,* 1–9.

Portes, A., & Rumbaut, R. G. (2014). *Immigrant America: A Portrait.* Oakland: University of California Press.

Portes, A., & Walton, J. (2013). *Labor, Class, and the International System*. Philadelphia: Elsevier.

Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants. *The Annals of the American Academy of Political and Social Science, 530*(1), 74–96. doi:10.1177/0002716293530001006

Read, J. G., Emerson, M. O., & Tarlov, A. (2005). Implications of black immigrant health for US racial disparities in health. *Journal of Immigrant Health, 7*(3), 205–212.

Roshania, R., Narayan, K. M. V., & Oza-Frank, R. (2008). Age at arrival and risk of obesity among US immigrants. *Obesity, 16*(12), 2669–2675. doi:10.1038/oby.2008.425

Rumbaut, R. G. (1997). Assimilation and its discontents: Between rhetoric and reality. *International Migration Review, 31*(4), 923–960.

Rumbaut, Ruben. (2005). Immigration, incorporation and generational cohorts in historical contexts. In K. W. Schaie & G. Elder (Eds.), *Historical influences on lives and aging* (pp. 43–88). New York: Springer Publishing.

Sassen, S. (1990). *The mobility of labor and capital: A study in international investment and labor flow*. Cambridge: Cambridge University Press.

Seto, S., & Bogan, V. L. (2013). Immigrant household investment behavior and country of origin: A study of immigrants to the United States. *International Journal of Finance & Economics, 18*(2), 128–158. doi:10.1002/ijfe.464

Sevak, P., & Schmidt, L. (2014). Immigrants and retirement resources. *Social Security Bulletin, 74*, 27.

Silverstein, M., & Attias-Donfut, C. (2010). Intergenerational relationships of international migrants in developed nations: The United States and France. In C. Phillipson & D. Dannefer (Eds.), *The SAGE handbook of social gerontology* (pp. 177–189). London: Sage Publications Ltd.

Singh, G. K., & Miller, B. A. (2004). Health, life expectancy, and mortality patterns among immigrant populations in the United States. *Canadian Journal of Public Health. Revue Canadienne De Sante Publique, 95*(3), I14.

Singh, G. K., & Siahpush, M. (2001). All-cause and cause-specific mortality of immigrants and native born in the United States. *American Journal of Public Health, 91*(3), 392.

Singh, G. K., & Yu, S. M. (1996). Adverse pregnancy outcomes: Differences between US- and foreign-born women in major US racial and ethnic groups. *American Journal of Public Health, 86*(6), 837–843.

Treas, J. (2008a). Four myths about older adults in America's immigrant families. *Generations, 32*(4), 40–45.

Treas, J. (2008b). Transnational older adults and their families. *Family Relations, 57*(4), 468–478.

United States Census Bureau. (2014). Annual estimates of the resident population for selected age groups by sex for the United States, states, counties, and Puerto Rico commonwealth and municipios: April 1, 2010 to July 1, 2013. Retrieved March 1, 2015, from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk

United States Census Bureau. (2015). American fact finder—selected characteristics of the foreign-born population by region of birth, 2009–2013 American Community Survey 5-Year Estimates. Retrieved April 24, 2015, from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_5YR_S0503&prodType=table

Usita, P., & Shakya, H. (2012). Aging families and immigration. In R. Blieszner, & V.H. Bedford (Eds.), *Handbook of families and aging* (2nd ed., pp. 337–362). Santa Barbara, CA: Praeger.

Wakabayashi, C. (2010). Effects of immigration and age on the health of older people in the United States. *Journal of Applied Gerontology, 29*(6), 697–719.

Wilmoth, J. (2012). A demographic profile of older immigrants in the United States. *Public Policy and Aging Report,* 22(2), 8–11.

Zhou, M. (1997). Growing up American: The challenge confronting immigrant children and children of immigrants. *Annual Review of Sociology,* 23(1), 63–95.

Zhou, M. (2009). Conflict, coping, and reconciliation: Intergenerational relations in Chinese immigrant families. In N. Foner (Ed.), *Across Generations: Immigrant Families in America* (pp. 21–46). New York: New York University Press.

Zong, J., & Batalova, J. (2015). Frequently requested statistics on immigrants and immigration in the United States. Retrieved on April 24, 2015, from http://www.migrationpolicy.org/article/frequently-requested-statistics-immigrants-and-immigration-united-sstates#TOP

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CHAPTER TEN

Marital Status and Living Arrangements over the Life Course

Judith Treas and Tanya Sanabria

Over our lives, we look to our close personal ties for companionship, social support, practical assistance, financial help, and many other rewards. At least for some part of adulthood, most of us will find these things in our intimate romantic partnerships, especially in the comparatively permanent relationship of marriage. The pathways into and out of these partnerships define the course of our lives and differentiate our life circumstances in predictable ways. We also look to others with whom we live, whether a partner or not, to meet emotional and pragmatic needs. As we grow up and grow older, our living arrangements change, offering insights into the changes in needs and resources over our lives.

In this chapter, we describe recent historical changes, point to life-course patterns, and describe how well-being is associated with marital status and living arrangements. We begin by examining marital status as a window on the trends and differentials in Americans' lives. Most Americans intend to marry and most will achieve this goal. Heterosexual marriage, however, is no longer the only acceptable arrangement for couples, as seen by the rise in unmarried cohabitation and same-sex marriage. With age at marriage rising, people are spending more of their lives being never-married. By middle age, the ranks of the married are thinned by divorce and in old age by widowhood. Turning to living arrangements, two developments stand out. On the one hand, the share of married-couple households with children has plummeted over the last 40 years. On the other

hand, living alone has become remarkably more common for two groups, older women and younger men. In both cases, the trend is to smaller households with fewer people living together. These trends were consequential for the well-being of Americans. Persons not living in households, including younger incarcerated adults and older adults in nursing homes, raise other important issues for the U.S. population.

Marital Status

At one time, the progression of Americans through a series of marital statuses was so predictable that family researchers called it the family life cycle (Duvall, 1962; Glick, 1955). The movement was from singlehood to marriage, where children were born, raised and then sent forth, and eventually to widowhood. While the family life cycle was a useful schema, researchers began to notice how many people deviated from this pattern. Over their lives, some never married. Increasingly, unmarried persons cohabited, living together in intimate domestic arrangements that were once largely restricted to married people. More and more people had children outside of marriage. Of those who did marry, many divorced and some went on to marry again. In recognition of all the variations on the family life cycle, as well as the potentially stigmatizing effects of celebrating one developmental path over the others, family sociologists abandoned discussions of the family life cycle for the multiple pathways of the life course (Elder, Johnson, & Crosnoe, 2003).

Despite the growing emphasis on life-course diversity, marital status never lost its importance as a concept (see Hollingshead, 1975; Umberson et al., 2005). Marriage remained an ideal to which most people aspired, even if not everyone achieved a lasting union. Even as cohabitation became more common, people told pollsters of their intentions to marry someday (Wang & Parker, 2014). Gays and lesbians won over most Americans with their compelling case for marital equality (Pew Research Center, 2013). Marriage, particularly the situation of married couples with their own children, remained the baseline against which other arrangements were gauged. Single parents raising children, for instance, were hard put to match the economic advantages that two married parents were able to provide (Bianchi, 1994). Furthermore, marriage was never just a personal matter. It was a social institution—a nexus of social expectations, practices, and social structures—that brought with it legal and social rights and obligations. Until 2013 when the U.S. Supreme Court ruled a provision of the Defense of Marriage Act (DOMA) unconstitutional, Social Security did not recognize same-sex partners for the survivor pensions to which heterosexuals were entitled (*US v. Windsor*, 2013). Last, marriage

was the lightning rod for moral debates ranging from gender equality to sexual freedom to assisted reproductive technology. For instance, in most U.S. states and in contrast to the case with married parents, children born to unmarried parents via alternative insemination are not assured that their mother's partner will be their legal parent (Joslin, 2010).

Noting changes such as the rise in cohabitation and two-earner couples, Cherlin (2004) famously concluded that marriage was becoming deinstitutionalized, shorn of a supporting scaffolding of normative expectations and cultural understandings that had long guided behavior. Lauer and Yodanis (2010) insist that deinstitutionalization would require changes in marriage itself, not just changes in behavior outside marriage. Following this argument, Treas, Lui, and Gubernskaya (2014) analyze changes in attitudes between the late 1980s and the early 2000s in the United States and 20 other industrialized countries. They do find growing acceptance of cohabitation, premarital sex, and single parents—that is, behavior outside marriage. Except for the decline in disapproval of working wives, there was no retreat from traditional beliefs about what marriage is or what married people should do. In fact, there was increased support for sexual fidelity in marriage. After decades of tumultuous debate about changes in family life, surprisingly little had changed in terms of beliefs about the institution of marriage.

The bottom line is that marriage continues to be surprisingly important even as people marry later or perhaps not at all. Marital status—being married, never-married, or previously married—still matters. If different sorts of people take different marital pathways, marital status also continues to be a force that shapes the life styles and life chances of individuals (Fincham & Beach, 2010). People are hardly passive with regard to these most intimate of choices. In their personal lives, Americans have challenged conventions, bringing greater acceptance to new arrangements including unmarried cohabitation and same-sex marriages.

After 30, married is the most common marital status, as Figure 10.1 shows. The ranks of the never-married drop sharply into the 30s when married becomes the dominant marital status. The percentage divorced rises gradually for advancing age groups although divorce is not as high for the oldest Americans as for the baby boomers who came after them. Widowhood is largely found among older adults, particularly women who are more likely to outlive spouses and less likely to remarry.

Marriage. Marriage is no longer the definitive milestone in the passage to adulthood. Americans marry later after they have realized a number of adult aspirations. They usually have finished their schooling, found a full-time job, moved out of their parents' home, cohabited, and sometimes had children. They have time to pack in all these accomplishments

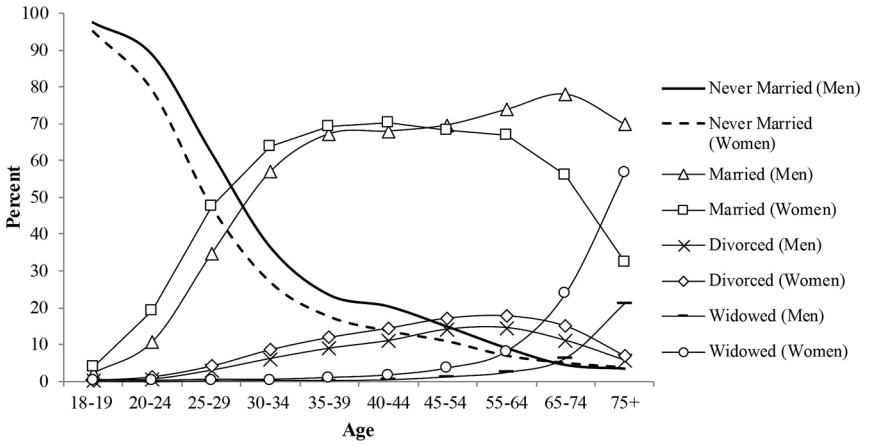


Figure 10.1 Marital status by age and sex. (U.S. Census Bureau, Statistical Abstract of the United States, 2012)

because of the rise in the age at first marriage. Between 1980 and 2010, the median age for women rose from 23.9 to 26.6 years (Cohn, Passel, Wang, & Livingston, 2011). For men, who marry later than women, it rose from 26.1 to 28.7 years, surpassing even the late marriage age of the nineteenth century.

Today, young people experience more adult experiences, such as living apart from parents, before marrying, because they put off marriage longer. They put off marriage longer, because they need the time to make those transitions, such as finishing their schooling, that give them the personal and economic security needed to marry. Blacks and Hispanics are even more likely than whites to insist that a steady job is a very important criterion for a partner (Wang & Parker, 2014). Particularly during the recent recession, some young adults delayed marriage in response to economic uncertainty. Until they meet the economic requirements of marriage, say, by paying off their student loans, cohabitation offers many of marriage's advantages—from companionship to shared household expenses to a regular sexual partner (Smock, Manning, & Porter, 2005).

The significance of finances is seen in the socioeconomic status of those who do marry. In the past, the relatively few highly educated women were passed over for marriage in favor of less-educated women who had a greater need for a husband's support (Qian & Preston, 1993). Today, when dual-earner couples are the norm, highly educated women with strong earning potential are in high demand (Blossfeld, 2009). And, women's remarkable increase in higher education enrollments makes it easier for college-educated singles to meet one another in college and the workplace. Thus,

well-educated people marry one another, leaving less privileged individuals to build married life around their mutual disadvantages or, alternately, to not marry at all. Economic inequality between couples has grown as likes marry likes (Schwartz, 2013).

Married persons are drawn from a particularly advantaged population. This points to the difficulty of inferring the benefits that come from marrying. Married people and their children enjoy longer lives, better mental and physical health, higher incomes, and greater life satisfaction than unmarried people and their children (Nock, 2005). While marriage itself may be the cause of these advantages, people who are able to marry have a more favorable situation to begin with. Take married people's superior health. A loving spouse might encourage a lifestyle that promotes the partner's health, but people in poor health may never be able to attract a spouse. Research tends to show benefits to marriage, but this sort of selection into marriage also plays a role in the advantages the married have over others.

Delaying marriage does not mean that marriage is not valued. In 2014, a majority of never-married Americans said that they want to marry; only 13 percent stated definitively that they did not want to marry (Cohn et al., 2011). The reasons given for not being married differ by age (Wang & Parker, 2014). The top reason for 18–24-year-olds is that they are too young or not ready to settle down. In 1960, when the median age at first marriage was 20.3 years for women and 22.8 for men (Cohn et al., 2011), few young adults would have thought they were too young! Focused on establishing a strong economic foundation for marriage, 25-to-34-year-olds today point to not being financially prepared (Wang & Parker, 2014). Among never-married adults, 35 and older, 41 percent say they have not found what they were looking for in a mate yet.

Since the 1960s, the percent that is married has declined among all racial and ethnic groups although the numbers, then and now, are lower for blacks than for whites or Hispanics (Cohn et al., 2011). Only 55 percent of whites were married in 2010, a decline from 74 percent in 1960. Among Hispanics, 48 percent were married, compared with 72 percent in 1960. Among blacks, only 31 percent were married, compared with 61 percent in 1960. These differences may be attributed, in part, to the fact that the Hispanic and black population is younger than whites.

Cohabitation. Cohabitation is not usually tabulated as a marital status. Cohabiters who live together in an intimate relationship are counted as never-married, divorced, separated, widowed—or even married—to someone else. Although some cohabiting unions gain legal recognition as registered partnerships, this arrangement has not really caught on in the United States, at least in comparison with informal cohabitation.

Nonetheless, it is hard to talk about trends in marriage without considering the remarkable rise of cohabitation. At one time, cohabitation was a relatively uncommon experience limited largely to those too poor to marry and to bohemians who rejected societal conventions. Today, cohabitation is so common that it helps explain why people marry at older ages. In 2009–2010, nearly three-fifths of 19-to-24-year-old women in a union were in a cohabiting one instead of a legal marriage (Manning, 2013). Twenty industrialized countries saw a significant decline in disapproval of unmarried cohabitation, with or without intentions to marry, between 1994 and 2002 (Treas, Lui, & Gubernskaya, 2014).

Some explanations for the rise in cohabitation are economic. Women's labor-force participation makes them less dependent on marriage for their livelihood. The changing demand for labor makes it harder for young men to establish a career that can support a family (Oppenheimer, Kalmijn, & Lim, 1997). Other explanations pointed to cultural roots. Sociologists have emphasized the influence of long-term social changes, such as the sexual revolution that diminished the stigma of premarital sex (Bumpass & Lu, 2000; Cherlin, 2004). According to the Theory of the Second Demographic transition, cohabitation is only one of a number of changes in family life, ranging from greater nonmarital childbearing to divorce, that reflect the growing importance of individual freedom over responsibilities to family and community (Lesthaeghe & Meekers, 1986).

As recently as 1987, only one-third of women, aged 19–44, had cohabited at one time or another (Manning, 2013). By 2010, three-fifths had lived in an unmarried cohabitation. Although some still marry directly without cohabiting, each successive generation has been more likely to live together first before marrying. All demographic categories were touched by the rise in cohabitation. Between 1989 and 2010, white women cohabiting went from 32 percent to 62 percent, while Hispanics increased from 30 percent to 59 percent (Manning, 2013). Although black women have traditionally been more likely to cohabit, white women have surpassed them in the share that has ever lived in an unmarried relationship. Cohabitation has increased across educational groups as well, and the educational gap is increasing. In 2009–2010, nearly three-quarters of women without a high school degree had cohabited at some point, in contrast to only half of women with a college degree. Compared to married persons, cohabiters are drawn from those who are at a socioeconomic disadvantage.

Cohabitation is now the typical pathway into marriage. Two-thirds of women who were first married between 2000 and 2009 had cohabited before marriage (Manning, 2013). Although some couples live together with no intention of making their relationship permanent, others treat cohabitation as a courtship stage on the way to the altar. About two-fifths

of cohabiters report they were engaged or had definite plans to marry their partner before they began living together (Guzzo, 2009). For those looking to marry, cohabitation is a serious proving ground for marital compatibility or a practical arrangement for building up the resources for marriage. Young adults view cohabitation as a way to test the waters by living with the partner. Others are less deliberate in their planning. They simply drift from cohabitation to marriage after they become locked into a routine, have children, or sign a long-term lease together.

Despite cohabiters who go on to marry, cohabiting unions have features that make them more prone than marriages to breakups. Cohabiters are less committed to their relationship than their married counterparts are. They are less likely to pool all their money together in a shared bank account and less willing to trust that unequal contributions will balance out over the long haul (Brines & Joyner, 1999). Cohabiting partners also have less in common with one another in terms of age, education, and race-ethnicity. Cohabiters do not have the stabilizing education and income advantages of married couples. Their attitudes toward sex and marriage are less traditional (Clarkberg, Stolzenberg, & Waite, 1995). All these factors predispose unmarried couples who live together to go their separate ways.

Today, over one-in-five children are born to cohabiting parents (Lichter, 2012). Besides the children born to them, 63 percent of cohabiting parents report having at least one child born before they started living with their present partner. In the Fragile Families study that followed couples after a birth, 26 percent of cohabiting parents were still cohabiting five years later and another 26 percent had married; 45 percent, however, were no longer romantically involved (Center for Research on Child Well-Being, 2007). Not surprisingly, the quality of the couple's relationship deteriorated with the breakup, leading to weaker father-child relationships. Only 43 percent of fathers who were not romantically involved with the mother had seen their child in the last month compared to 100 percent of the still cohabiting fathers. In short, children growing up with cohabiting, rather than married, biological parents are at a disadvantage because of the parents' initial disadvantages and the danger that the parents' breakup will deprive the child of father's support.

Because cohabitation is still associated with young people who have never-married, it may be surprising to learn that unmarried cohabitation is a popular arrangement for middle-aged and older adults who have been widowed or divorced (Yi Zeng et al., 2012). In later life, unmarried unions are more stable and long lasting, and cohabitation appears to operate as a long-term alternative to marriage instead of as a trial marriage (Brown, Bulanda, & Lee, 2006). While many younger adults may

cohabit with the intention to marry their partner, older adults choose cohabitation for reasons relevant to their stage in life. The legal niceties of marriage are less compelling when couples will not be having babies. For older people who want to leave their money to their children when they die, cohabiting offers economies and companionship without legal entanglements. Others may want to keep their Social Security survivor's benefits or the alimony they would lose if they remarried. Family members' objections may influence decisions. Besides cohabitating, however, older adults are also observed to form intimate lasting relationships while maintaining their own homes—a phenomenon referred to as LAT, or living apart together. This has advantages for those who enjoy their privacy or do not want to risk becoming a round-the-clock caregiver to a sick partner.

Same-Sex Unions. Although same-sex cohabitation is a long-standing arrangement, the recognition of same-sex marriages added an important dimension to conversations about the future of marriage. Since the early 1980s, Americans have grown more accepting of same-sex relations (Treas, 2002). Legal recognition has tracked changing attitudes. In 2004, Massachusetts became the first U.S. state to legalize same-sex marriage. Fully 37 states and the District of Columbia had legalized it by February, 2013. By 2013, a majority of all Americans supported same-sex marriage, and fully 72 percent considered it inevitable (Pew Research Center, 2013). Because individual states write their own marriage laws, a uniform policy legalizing same-sex marriage would await the Supreme Court 2015 ruling on constitutional protections.

Marriage equality is not just a sentimental or political issue for same-sex couples. Among the federal rights, protections, and benefits that have been at stake in the definition of marriage have been Social Security for a surviving partner, taxation on the money from a home sale, and the ability to sponsor a partner's immigration to the U.S. (U.S. General Accountability Office, 2004). Marriage could bring other pragmatic benefits to same-sex couples, too. Even controlling for socioeconomic resources, same-sex cohabiters report having health that is not as good as the health of married persons in heterosexual relationships (Liu, Reczek, & Brown, 2013). This raises the possibility that the access to marriage might improve the health of gays and lesbians.

The Census Bureau has worked to count the number of same-sex couples. The estimates have not been very precise, if only because people in the many heterosexual couples sometimes inadvertently report their partner as being of the same sex (DiBennardo & Gates, 2014). Other same-sex couples may be missed because they are reluctant to report their relationship. Revised 2010 figures from the Census Bureau put the number

of same-sex couple households at 646,464. Of those, 131,223 involved married same-sex couples, split fairly evenly between 67,506 women and 64,223 men.

More research is needed to place the experience of same-sex couples in life-course context. In previous generations, sodomy laws and social stigma discouraged relationships, such as cohabitations, that might call attention to sexual orientation (Rosenfeld, 1999). Researchers ignored the family relationships of gays and lesbians, who were assumed not to share the everyday family concerns of heterosexuals. As the rise in same-sex marriage testifies, gays, lesbians, and transgendered people increasingly have life-course experiences much like other Americans. For example, more same-sex parents are raising children in same-sex couple households. This is especially true for lesbian mothers, who are apt to bring children from an earlier, heterosexual union to their same-sex relationship. For children raised by same-sex couples, same-sex marriage could translate into greater social acceptance for their families, more stable households, and greater financial well-being.

Divorce. Divorce has important implications for the well-being of individuals and families. After divorce, families can experience substantial declines in economic welfare, particularly for women and their children (Smock, Manning, & Gupta, 1999). The strains and deprivations of divorce lead to poorer health, especially in terms of chronic conditions and disability (Hughes & Waite, 2009). The loss of health insurance, combined with other stresses of the divorce process, increases health risks for women (Lavelle & Smock, 2012). Being uninsured can worsen health conditions and illnesses for women, because the uninsured are less likely to seek routine or emergency medical care (McWilliams, 2009). Men and children are also affected. Although joint custody has become more popular in recent years, children's relationship with the noncustodial parent—usually the father—tends to deteriorate. This pattern leads eventually to less support from grown children to aging fathers (Shapiro & Cooney, 2007). The effects of parental divorce can be felt on children's mental well-being even into adulthood (Cherlin, Chase-Lansdale, & McRae, 1998).

From 1970 to 1975, when new no fault divorce laws ended the legal requirement of wrongdoing, the annual divorce rate for women jumped from 15 to 20 divorces per 1,000 (Kennedy & Ruggles, 2014). Today, tabloid accounts of celebrity divorces fuel the widespread impression that divorce is still on the rise. The picture is complex, but current evidence suggests that divorce rates since 1990 have diverged: They have increased for middle-aged Americans but declined for younger adults, possibly because married people in recent cohorts are selected for positive characteristics that stabilize marriage. Fewer people are marrying, and they

are marrying at older ages when they are better prepared for the emotional and financial responsibilities. In the baby boom cohort, nearly one in two marriages ended in divorce, but baby boomers were unusual. They married at young ages when the risk of divorce is highest, and rebellious boomers had little patience for the tradition that couples should stick it out in unhappy relationships.

The early years of marriage are the most divorce-prone, perhaps because spouses acquire the most unsettling information about each other early on (Becker, 1981). The chance of divorce is higher for those with less schooling, particularly for adults who did not complete high school (Stevenson & Wolfers, 2007). Black and native-born Hispanic adults experience more divorce than whites do. In 2012, black and native-born Hispanic women had the highest rates of divorce—25.4 and 26.8 divorces per 1,000 first marriages, respectively, compared to 16.1 per 1,000 among whites (Stykes, Gibbs, & Payne, 2014). Black and Hispanic couples are more likely to have experienced pronounced socioeconomic disadvantages and a premarital birth, thus contributing to higher divorce rates (Bulanda & Brown, 2007).

Older adults are no longer immune to divorce. Even in later life, baby boomers' high rates of divorce continue (Kennedy & Ruggles, 2014). In contrast to the general trend to lower divorce rates, the divorce rate for Americans, 50 and older, doubled between 1990 and 2010 (Brown & Lin, 2012). Today, about a quarter of divorces occur to these middle-aged and older adults. Once divorced, older adults are less likely than others to remarry (Shapiro & Cooney, 2007), so the proportion of older men and women who are divorced will likely rise in the coming years. The late-life divorce boom is not fully understood, but several explanations have been suggested.

Having lived through an era of higher divorce rates, older adults have remarried, and second and higher order marriages are less stable than first marriages are. Having a longer employment history than earlier cohorts, older women are no longer as financially dependent on a husband. Declining mortality means an increase in the number of years of life and, hence, the years at risk of getting a divorce. Other explanations point to the unique strains on marriages in later life. Retirement, health declines, and the empty nest can all lead couples to reevaluate their relationship (Davey & Szinovacz, 2004).

There are social and economic differences in the likelihood of divorce. As we noted above, marrying later gives couples a chance to become financially secure, and the better off have been marrying at higher rates than other Americans. These trends should work against the risk of divorce. For those born since 1980, the leveling off of divorce may reflect this sort of increase in the selectivity of who marries (Ruggles, 1997). The

college-educated are much less likely to divorce than those with less education (Stevenson & Wolfers, 2007). In addition, higher earnings and employment protect against divorce (Amato, 2010). Besides individual characteristics, community affluence also matters. Women living in neighborhoods with low levels of poverty, welfare receipt, and unemployment, as well as high levels of education, are less likely to experience separation or divorce (Bramlett & Mosher, 2002).

Remarriage. Remarriage compensates for some of the losses associated with divorce or widowhood, but the remarried do not make up enough lost ground to catch up with the continuously married (Sweeney, 2010). With remarriage, income increases but still falls below that of first marriages. Although marrying again largely closes the gap in depressive symptoms vis-à-vis the continuously married, remarriage cannot completely reverse the deterioration in physical health that occurs with divorce and widowhood (Hughes & Waite, 2009). Remarried adults do report higher psychological well-being than divorced or unmarried adults, particularly for men (Marks & Lambert 1998). However, intense stress associated with the breakup of a marriage or a spouse's death seem to do physiological damage to body systems that remains even after a new partner is found. Whatever the effect of remarriage on partners, children living with a stepparent, instead of two biological parents, do not do as well on academic, behavioral, cognitive, and other measures (McLanahan & Sandefur, 1997).

Four out of every 10 marriages in 2013 involved at least one partner who had been previously married (Livingston, 2014). In two out of ten marriages, both partners had been married before. Women are less likely to remarry than men. Among the previously married, 64 percent of eligible men had remarried but only 52 percent of their female counterparts. In part, this reflects personal preferences. Fully 54 percent of women, but only 30 percent of the men, say that they do not want to get married again. Although the gender difference in remarriage rates narrows at younger ages, it remains especially large for adults, 65 and older, among whom women outnumber men three to two due to sex differences in mortality. Whites are more likely to wed again than are blacks and Hispanics.

Given the relative youth of divorcing persons, many go on to second marriages. A divorced woman is more likely to remarry if she is under the age of 40 and does not have children from a prior marriage (Coleman, Ganong, & Fine, 2000). Some widows and widowers, contemplating better health and longer life expectancies, also marry again. Because widowhood generally occurs in old age, marital prospects are not as good as they are for divorced persons. In fact, the widowed are slower to remarry than their divorced counterparts, half of whom are wed again within four years of divorcing (Kreider & Ellis, 2011).

Trends in remarriage for younger and older adults have moved in different directions. In 2013, only 42 percent of previously married Americans, 25–34, had remarried—down from 75 percent in 1960 (Livingston, 2014). On the other hand, older adults have become more likely to tie the knot again. Among previously married persons, 55 and older, 57 percent had married again compared to 42 percent a half century earlier.

Remarriages are more divorce-prone than first marriages (Livingston, 2014). One explanation is that they have fewer institutional supports, and expectations for second and higher order marriages are weaker. Authority over stepchildren, for instance, may be in doubt, introducing stress into families. Furthermore, the remarried are selected from people with a higher divorce risk. Their prior experience ending a marriage indicates that they are already familiar with the process and perhaps simply more open to the whole idea of divorce. They are also at a socioeconomic disadvantage that predisposes them to divorce.

Widowhood. Of every 1,000 women, aged 15 and older, 7.8 became widowed in 2009 (Elliott & Simmons, 2011). The rate for men was only 3.5 per 1,000. Because of historical declines in mortality, losing a spouse to death almost always occurs later in life. Among widows who lost their husband in the last 12 months, two-thirds were 65 years of age or older. Less than 6 percent were under the age of 45. Because men typically marry women younger than they are and because women live longer, men are less likely to outlive their wives. When they do, they are, on average, older than women when they become widowed.

Given their advanced age, widowed Americans have lower household incomes than their married or divorced counterparts (Elliott & Simmons, 2011). Nearly half of new widows and 35 percent of widowers reported household incomes of less than $25,000 in the last year, and nearly three-quarters were not in the labor force. Having a disability was reported for 39 percent and 36 percent of recently widowed men and women, respectively. If the widowed had an advantage, it was higher rates of homeownership than the adults in other marital circumstances.

Unlikely to remarry, many older adults, especially women, will live out their lives without a partner. The numbers of widows cohabiting are much lower than for divorced persons although the likelihood for the widowed increased fourfold between 1970s and the 1990s (Yi Zeng et al., 2012). For older married people, the death of a spouse is the permanent loss of the major social support in later life. An analysis of the findings from 123 studies on the relationship of widowhood and mortality confirms that widowhood is linked to higher mortality (Shor et al., 2012). All things considered, the risk of dying was 22 percent higher among those who lost a spouse than among their married counterparts. Men experienced more negative effects

of widowhood than women. Although the causes are not fully understood, the effect of widowhood on dying has been increasing over time.

Being old, low-income, and disabled, the widowed have higher needs for support than other Americans. Fortunately, children and friends seem to step in as trusted confidants to compensate at least somewhat for the loss of the spouse (Ha, 2008). Mothers, however, are more central to family life than fathers. When widowed, fathers receive less support from children than do mothers (Kalmijn, 2007).

Never Married. Among adults 25 and older in 2013, one in five had never married—up from one in ten in 1960. This rise in singlehood can be traced to the increase in the age of marriage, as well as the growing popularity of unmarried cohabitation. Changing public opinion, hard economic times, and shifting demographic patterns contribute to the rising share of never-married adults. In a 2010 survey, about 39 percent of Americans agreed that marriage as an institution is becoming obsolete (Cohn et al., 2011). Moreover, younger generations were more likely to express this view than those aged 50 and older. Of course, young people also had to put off marriage for college and faced challenges establishing stable careers. Labor-force participation among young men fell significantly—from 93 percent in 1960 to 82 percent in 2012 (Wang & Parker, 2014). Overall wages declined 20 percent since 1980. Increased higher education enrollments may also be keeping young people single. Across most racial and ethnic groups, men were more likely than women to have never married, except among blacks, for whom the percentages are similar.

Most never-married people go on to marry, but some become lifelong singles. In the population, 65 and older, about 4 percent have never married and will most likely stay single (U.S. Census Bureau, 2012). Compared to currently married counterparts, the never-married have greater mobility limitations, poorer self-reported health, and more depression (Hughes & Waite, 2009). Of course, poor health helps to explain why they are unmarried. Older adults, especially women, who have never married are at an economic disadvantage compared to their married counterparts. Nonetheless, those who have not married do not see themselves as disadvantaged. Across seven European countries, the never-married and women are both less likely than the married and men to endorse the view that married people are happier than anyone else (Treas et al., 2014). In fact, this skepticism about the virtues of marriage has grown since the late 1980s.

Living Arrangements

Nearly two-thirds of American households in 2011 consisted of family members living together, as Table 10.1 shows. The remainder—nonfamily

Table 10.1 Percent Distribution of Household Types by Householder Age: U.S. Households, 2011

Characteristic	All Households	Family Households			Nonfamily Households	
		Married Couple	Male Householder	Female Householder	Male Householder	Female Householder
Age of householder						
15–24 years	4.1	0.7	0.3	0.8	1.1	1.2
25–34 years	15.4	6.6	1.0	2.7	3.0	2.1
35–44 years	18.3	9.9	1.2	3.3	2.4	1.5
45–54 years	21.2	11.3	1.1	2.9	3.2	2.7
55–64 years	18.9	10.1	0.6	1.6	2.9	3.6
65+ years	22.0	9.6	0.5	1.8	3.1	7.1
All households	100.0	48.2	4.7	13.1	15.7	18.2

Source: U.S. Census Bureau, American Community Survey, 2011.

households—were made up of individuals living alone or with unrelated persons. Nearly half of U.S. households involved married couples.

As a closer look would show, for every two married-couple households with minor children, there were about three without them. Not only was mom, dad, and offspring not the most popular household form, they were not even the most common type of married-couple household. With only about one-in-five households fitting the married-with-children model, this living arrangement was only half as popular as it had been in 1970.

There are many reasons for this startling decline in households with married couples raising children. Fertility has declined since the days when baby boom youngsters were growing up. Furthermore, the U.S. population has aged. With the baby boomers middle-aged or older, their own children are mostly grown with homes of their own. Given the rising age of marriage, the younger generation has been slower to form married-couple households with children.

Also contributing to the decline in married-with-children households are the changes in the residential experience of children. Today, children spend more of their childhoods growing up in households with a single parent or with two unmarried parents. Mothers, often never-married ones, make up the large majority of single parents. Fathers, who are more often

divorced, have increased their share of all single parents with children in the home. In recent years, courts have been more willing to award shared custody to divorcing parents (Cancian, Meyer, Brown, & Cook, 2014). The change in children's living arrangements has led to concerns about the social and economic well-being of American youngsters. Married parents have higher incomes than single parents, particularly single mothers. For example, 39 percent of mother-only families with children under 18 are in low-income households receiving food stamps (Vespa, Lewis, & Kreider, 2013). This compares to only 9 percent of youngsters whose parents are still married. Although single mothers confront challenging circumstances, they are also stigmatized. In 2010, when 12 percent of families consisted of single mothers with children under 18 years, 69 percent of Americans surveyed said that a single woman having children was a bad thing (Horowitz, 2010).

Living Alone. Another big change in living arrangements has to do with the increase in nonfamily households. This increase is driven by growing numbers of one-person households. More Americans live alone. In fact, the percent of households with only one person climbed from 17 percent in 1970 to 27 percent in 2012 (Vespa et al., 2013). Initially, this category of one-person households was dominated by older women. Social Security gave elderly widows enough income to live alone after their husband died instead of moving in with grown children (McGarry & Schoeni, 2000). Being less likely to survive a typically younger wife, older men were less likely to live alone, but this gender gap has narrowed in recent years as men's life expectancy has improved. Among single-person households, women 65 and older are outnumbered by men under the age of 65. In part, higher divorce rates contribute to men living alone before old age (Vespa et al., 2013). Nonelderly women, being more likely to get custody of the children, continue to live in family households after divorce well into middle age (Cancian & Meyer, 1998). Thus, they are less affected by the trend toward solitary living.

Among both whites and Asians, family households built around a married couple amounted to about 80 percent. The comparable figure for blacks was only 44 percent and for Hispanics 62 percent (Vespa et al., 2013). Another racial and ethnic difference has to do with multigenerational households, where three or more generations in a family live together. In about two-thirds of these households, an adult child and grandchild lives in the home owned or rented by an older parent. In the other cases, it is the grown child who provides the housing for both the older and the younger generation—a pattern common among Asian families. Although only 3 percent of non-Hispanic white households were multigenerational, 6 percent of Asian and 8 percent of black or Hispanic households had

three or more generations. Because the households of immigrant families are more likely to be multigenerational, it is easy to assume that residential choices simply reflect cultural preferences and family-oriented values. Multigenerational households, however, are overrepresented among the population living in poverty, suggesting that shared housing is a way of coping with greater economic need (Taylor et al., 2010). Of course, multigenerational households also offer noneconomic advantages such as companionship, help with household chores, and assistance with childcare (Treas & Mazumdar, 2004).

The economic tribulations of the recent recession had an effect, forcing many young adults to reclaim the childhood bedrooms that they had abandoned earlier when they left home (Fry, 2013). The 25-to-34-year-old group saw the biggest increase in multigenerational living. Even before the recession, however, young Americans with no more than a high school education were less likely to have left the nest for good than their counterparts who had graduated from college. Young women are less likely to live in the parental home than young men are. This trend used to be attributed to women marrying at younger ages than men. Today, it is attributed, in part, to women's higher rates of college attendance.

Household Size. Consistent with the growth in individuals living alone and the decline in married parents with children, the number of people living in the average household has fallen over time. The mean size of households dropped from 3.1 persons in 1970 to 2.6 in 2012 (Vespa et al., 2013). By 2012, households with five or more members made up only 10 percent of all households; 40 years earlier, their share of households had been twice as large. Over the same period, households consisting of just one or two people climbed from 21 percent to 46 percent.

Of course, household size changes predictably over the life course. With time, children move out and spouses pass away. Households empty out with the aging of the householder, that is, the person in whose name the residence is owned or rented. With increasing time in the United States, immigrant households become less crowded (Myers & Lee, 1996). Not only do children grow up, but income rises so families no longer have to double up or squeeze into small dwellings to make ends meet. An exception to this rule of diminished crowding, however, has occurred for Mexican immigrants. Their incomes do not rise as much, and departing household members have often been replaced by new immigrants.

Larger households signal greater economic needs to be met, but larger size also brings advantages. Having more members raises the odds that someone in an immigrant household, probably a younger person, will be able to speak English well—thus, protecting against what is called linguistic isolation. If adults live together, there are apt to be more people

who can contribute money to support the household. Of course, not all households are share-and-share-alike arrangements with rich exchanges and resource transfers that benefit less well-off members.

Especially in nonfamily households where members do not have feelings of responsibility and emotional ties based kinship, coresidence may be a strictly economic expedient among unrelated persons who are not involved in one another's lives. Roommates may share the rent but little else. Because unrelated persons are not likely to feel very strong obligations to subsidize one another's lifestyle and living standard, their shared living arrangements are more lasting when they contribute equally (Glick & Hook, 2011). Parents and grown children have stronger commitments to one another. Those who live together adopt more permanent relationships when their incomes are unequal and when one generation relies financially on the other for support.

Not in Households. Not everyone lives in households. Some Americans live in institutions where their custody or care is formally supervised. Two types of institutions have received a great deal of attention lately, namely, prisons and facilities for older adults.

Since the 1970s War on Drugs, the U.S. incarceration rate has shot up and ranks as the highest in the world (Wakefield & Uggen, 2010). About 2.3 million adults are incarcerated. The prison population is disproportionately young, male, black, and poorly educated. Because of the stigma of imprisonment and limited job skills, ex-offenders have poor employment prospects when they are released. They are often barred from public assistance. If rejected by landlords and family members, they can wind up living on the streets. About half who leave prison are reincarcerated within three years.

Incarceration not only punishes felons, but also hurts their families. Grandparents, for example, may find themselves raising grandchildren, because the middle generation is in prison. Mass incarceration has been implicated in the rise in low-income, female-headed households, especially in the African American community where the shortage of marriageable men makes it hard for women to find acceptable partners. The separation of incarceration leads couples to break-up. Most prisoners have children. The effects of a parent's imprisonment on youngsters are complex. Removing an abusive parent from the home may be a positive development for children, but prison may also mean the loss of the principal breadwinner. Often, parental incarceration ripples through the family impacting, for example, grandparent-grandchild relations (Turney, 2014a) as well as children's learning and conduct (Turney, 2014b).

Considering a different sort of specialized institution, some older adults live apart from private households and communities. Among the U.S.

population, 65 and older in 2012, 3.6 percent or 1.3 million resided in nursing homes and other institutions (Administration on Aging, n.d.-b). The institutionalized population rises to 11 percent of Americans, 85 and older. These age differences reflect the greater disability and the greater needs among the oldest old for ongoing medical care, daily assistance, and supervision. Although nursing home use is notoriously difficult to project, it is estimated that 35 percent of 65-year-olds living in 2005 will spend at least a year in a nursing home at some point in their lives (Houser, 2007). If only because of the high costs associated with institutionalized care, there is growing interest in keeping older adults in households in the community.

Older adults live in nursing homes, because they need skilled nursing care, require intensive help with ordinary activities such as bathing and eating, or have severe cognitive impairments such as Alzheimer's Disease (Administration on Aging, n.d.-a). In fact, half of nursing home residents have dementia, and half are confined to a bed or wheelchair (Houser, 2007). Because they live to older ages, have higher rates of disability, and are more likely to be widowed, women are more likely than men to live in nursing homes (Houser, 2007). Marital status is a critical factor in the institutionalization of older adults. When admitted, half of the residents of nursing homes are widowed as compared to only 20 percent who are married or partnered. This point underscores the key role of family members in helping older adults to continue to live in their homes even if they become frail or disabled.

Conclusion

The conventional categories used to describe marital status and living arrangements often seem inadequate to capture contemporary experience. Being never-married or in a married-couple family household fails to characterize the rich variety of family and interpersonal relationships over the life course. Exhaustive and mutually exclusive, these categories are well-suited to demographic accounting exercises. They leave much unsaid when it comes to the nature and quality of relationships between, say, husband and wife or unrelated people who share a household together. It is, nonetheless, surprising how much marital status and living arrangements reveal about the changing circumstances of lives. Historical shifts, life-course patterns, and associated advantages and disadvantages are all evident in the trends and differences in marital status and living arrangements.

Categorical frameworks illustrate historical changes. For example, the introduction of Social Security increased the economic security of widows, and this development registered in the long time series of data tracking the

rise in older women who are householders living independently from kin. The historical decline in married-couple households has kept pace with other important developments, including the contemporary tendency of Americans to cohabit and to defer first marriages to later ages.

Similarly, marital status and living arrangements not only make clear the regularities in the life course as we grow up and grow older, but also demonstrate the diverse pathways in intimate lives. Getting married is no longer the definitive marker of adulthood that it once was. Most people do marry, but shifts in the timing of first marriages and the looser coupling of marriage and childbearing both define contemporary patterns in the temporal organization of lives. The recognition of these life-course changes invites a much broader examination of the ways that individual lives are dictated by cultural expectations, economic opportunities, legal constraints, and other factors.

Our marital status and domestic arrangements would matter much less if they were not associated with advantage and disadvantage. Despite the considerable variation within marital categories, just knowing marital status can convey useful information about one's age, socioeconomic circumstances, and risks to physical and emotional well-being. Married persons prove to be advantaged on most counts. The challenge for researchers has been to tease out how much of this advantage is due to the privileged status of those most likely to marry and how much is due to the beneficial dynamics of marriage itself. Partnering and household arrangements continue to permit us to monitor historical developments, the organization of the life course, and the sources of personal well-being.

References

Administration on Aging. (n.d.-a). A profile of older Americans: 2012. Washington, DC: U.S. Department of Health and Human Services.

Administration on Aging. (n.d.-b). A profile of older Americans: 2020. Washington, DC: U.S. Department of Health and Human Services.

Amato, P.R. (2010). Research on divorce: Continuing trends and new developments. *Journal of Marriage and Family, 72*, 650–666.

Becker, G. (1981). *A treatise on the family*. Cambridge, MA: Harvard University Press.

Bianchi, S.M. (1994). The changing demographic and socioeconomic characteristics of single parent families. *Marriage & Family Review, 20*, 71–97.

Blossfeld, H.P. (2009). Educational assortative marriage in comparative perspective. *Annual Review of Sociology, 35*, 513–530.

Bramlett, M.D., & Mosher, W.D. (2002). Cohabitation, marriage, divorce, and remarriage in the United States. *National Center for Health Statistics. Vital and Health Statistics, 23*(22), 1–32.

Brines, J., & Joyner, K. (1999). The ties that bind: Principles of cohesion in cohabitation and marriage. *American Sociological Review, 64*, 333–355.

Brown, S. L., & Lin, I.-F. (2012). The gray divorce revolution: Rising divorce among middle-aged and older adults: 1990–2010. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 67*, 731–741.

Brown, S. L., Bulanda, J. R., & Lee, G. R. (2005). The significance of nonmarital cohabitation: Marital status and mental health benefits among middle-aged and older adults. *The Journals of Gerontology Series, B: Psychological Sciences and Social Sciences,60*, S21–S29.

Bulanda, J. R., & Brown, S. L. (2007). Race–ethnic differences in marital quality and divorce. *Social Science Research, 36*, 945–967.

Bumpass, L., & Lu, H. H. (2000). Trends in cohabitation and implications for children s family contexts in the United States. *Population Studies, 54*, 29–41.

Cancian, M., & Meyer, D. R. (1998). Who gets custody? *Demography, 35*(2), 147–157.

Cancian, M., Meyer, D. R., Brown, P. R., & Cook S. T. (2014). Who gets custody now? Dramatic changes in children's living arrangements after divorce. *Demography, 51*, 1381–1396.

Center for Research on Child Well-Being. (2007). Parents' relationship status five years after a non-marital birth. *Fragile Families Research Brief* (Vol. 39, pp. 1–4). Princeton, NJ: Center for Research on Child Well-Being.

Cherlin, A. J. (2004). The deinstitutionalization of American marriage. *Journal of Marriage and Family,66*, 848–861.

Cherlin, A. J., Chase-Lansdale, P. L., & McRae, C. (1998). Effects of parental divorce on mental health throughout the life course. *American Sociological Review, 63*, 239–249.

Clarkberg, M., Stolzenberg, R. M., & Waite, L. J. (1995). Attitudes, values, and entrance into cohabitational versus marital unions. *Social Forces, 74*, 609–633.

Cohn, D-V., Passel, J. S., Wang, W., & Livingston, G. (2011). Barely half of U.S. adults are married—A record low. *Social and Demographic Trends,* Retrieved from http://www.pewsocialtrends.org/2011/12/14/barely-half-of-u-s-adults-are-married-a-record-low/

Coleman, M., Ganong, L., & Fine, M. (2000). Reinvestigating remarriage: Another decade of progress. *Journal of Marriage and Family, 62*, 1288–1307.

Davey, A., & Szinovacz, M. E. (2004). Dimensions of marital quality and retirement. *Journal of Family Issues, 25*, 431–464.

DiBennardo, R., & Gates, G. L. (2014). U.S. Census same-sex couple data: Adjustments to reduce measurement error and empirical implications. *Population Research Policy and Review, 33*, 603–614.

Duvall, E. M. (1962). *Family development* (2nd ed.). Philadelphia, PA: Lippincott.

Elder, G. H., Jr., Johnson, M. K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. Mortimer & M. Shanahan (Eds.), *Handbook of the life course* (pp. 3–19). New York: Springer.

Elliott, D. B., & Simmons, T. (2011) Marital events of Americans: 2009. *Vol. ACS13. American Community Survey Reports*. Washington, DC: U.S. Census Bureau.

Fincham, F. D., & Beach, S. R. (2010). Marriage in the new millennium: A decade in review. *Journal of Marriage and Family, 72*(3), 630–649.

Fry, R. (2013). Long-term changes in young adult living arrangements. *Social and Demographic Trends*, Retrieved from http://www.pewsocialtrends.org/2013/08/01/long-term-changes-in-young-adult-living-arrangements/

Glick, J. E., & Hook, J. V. (2011). Does a house divided stand? Kinship and the continuity of shared living arrangements. *Journal of Marriage & Family, 73*, 1149–1164.

Glick, P. C. (1955). The life cycle of the family. *Marriage and Family Living, 17*, 3–9.

Guzzo, K. B. (2009). Marital intentions and the stability of first cohabitations. *Journal of Family Issues, 30*, 179–205.

Ha, J.-H. (2008). Changes in support from confidants, children, and friends following widowhood. *Journal of Marriage & Family, 70*, 306–318.

Hollingshead, A. B. (1975). Four factor index of social status. Unpublished working paper, Department of Sociology, Yale University.

Horowitz, J.M. (2010). Section 4: Children. In P. Taylor (Ed.), *The Decline of Marriage and the Rise of New Families*, Retrieved from http://www.pewsocialtrends.org/2010/11/18/the-decline-of-marriage-and-rise-of-new-families/.

Houser, A. (2007). Fact sheet: Nursing homes. Washington, DC: AARP Public Policy Institute.

Hughes, M. E., & Waite, L. J. (2009). Marital biography and health at did-life. *Journal of Health and Social Behavior, 50*, 344–358.

Joslin, C. G. (2010). Protecting children (?): Marriage, gender, and assisted reproductive technology. *Southern California Law Review,* 83, 1177–1229.

Kalmijn, M. (2007). Gender differences in the effects of divorce, widowhood and remarriage on intergenerational support: Does marriage protect fathers? *Social Forces, 85*, 1079–1104.

Kennedy, S., & Ruggles, S. (2014). Breaking up is hard to count: The rise of divorce in the United States, 1980–2010. *Demography, 51*, 587–598.

Lavelle, B., & Smock, P. J. (2012). Divorce and women's risk of health insurance loss. *Journal of Health and Social Behavior, 53*, 413–431.

Lauer, S., & Yodanis, C. (2010). The deinstitutionalization of marriage revisited: A new institutional approach to marriage. *Journal of Family Theory & Review, 2*, 58–72.

Lesthaeghe, R., & Meekers, D. (1986). Value change and the dimensions of familism in the European Community. *European Journal of Population, 2*, 225–268.

Liu, H., Reczek, C., & Brown, D. (2013). Same-sex cohabitors and health:The role of race-ethnicity, gender, and socioeconomic status. *Journal of Health and Social Behavior, 54*, 25–45.

Livingston, G. (2014). Four-in-ten couples are saying "I Do," again. *Social and Demographic Trends,* Retrieved from http://www.pewsocialtrends.org/2014/11/14/four-in-ten-couples-are-saying-i-do-again/

Manning, W. D. (2013). Trends in cohabitation: Over twenty years of change, 1987–2010. (FP-13–12). National Center for Family & Marriage Research. Retrieved from http://ncfmr.bgsu.edu/pdf/family_profiles/file130944.pdf

Marks, N. F., & Lambert, J. D. (1998). Marital status continuity and change among young and midlife adults longitudinal effects on psychological well-being. *Journal of Family Issues, 19*, 652–686.

McGarry, K., & Schoeni, R. F. (2000). Social security, economic growth, and the rise in elderly widows' independence in the twentieth century. *Demography, 37*(2), 221–236.

McLanahan, S., & Sandefur, G. (1997). *Growing up with a single parent: What hurts, what helps.* Cambridge, MA: Harvard University Press.

McWilliams, J. M. (2009). Health consequences of uninsurance among adults in the United States: Recent evidence and implications. *Milbank Quarterly, 87*, 443–494.

Myers, D., & Lee, S. W. (1996). Immigration cohorts and residential overcrowding in Southern California. *Demography, 33*, 51–65.

Nock, S. L. (2005). Marriage as a public issue. *The Future of Children, 15*, 13–32.

Oppenheimer, V. K., Kalmijn, M., & Lim, N. (1997). Economic aspects of marriage and cohabitation: Men's career development and marriage timing during a period of rising inequality. *Demography, 34*, 311–330.

Pew Research Center. (2013). Changing attitudes on same sex marriage, gay friends and family. *US Politics and Policy*, Retrieved from http://www.people-press.org/2013/06/06/changing-attitudes-on-same-sex-marriage-gay-friends-and-family/

Qian, Z., & Preston, S. H. (1993). Changes in American marriage, 1972 to 1987: Availability and forces of attraction by age and education. *American Sociological Review, 58,* 482–495.

Ruggles, S. (1997). The rise of divorce and separation in the United States, 1880–1990. *Demography, 34*, 455–466.

Rosenfeld, D. (1999). Identity work among lesbian and gay elderly. *Journal of Aging Studies, 13*, 121–144.

Shapiro, A., & Cooney, T. (2007). Divorce and intergenerational relationships across the life course. In T. J. Owens & J. J. Suitor (Eds.), *Advances in life course research* (Vol. 12, pp. 191–219). Oxford: Elsevier.

Schwartz, C. R. (2013), Trends and variation in assortative mating: Causes and consequences. *Annual Review of Sociology, 39*, 451–470.

Shor, E., Roelfs, D. J., Curreli, M., Clemow, L., Burg, M. M., & Schwartz, J. E. (2012). Widowhood and mortality: A meta-analysis and meta-regression. *Demography, 49*, 575–606.

Smock, P. J., Manning, W. D., & Gupta, S. (1999). The effect of marriage and divorce on women's economic well-being. *American Sociological Review*, *64*, 794–812.

Smock, P. J., Manning, W. D., & Porter, M. (2005). "Everything's there except money": How money shapes decisions to marry among cohabitors. *Journal of Marriage and Family, 67*, 680–696.

Stevenson, B., & Wolfers, J. (2007). Marriage and divorce: Changes in their driving forces. *Journal of Economic Perspectives, 21*, 27–52.

Stykes, B., Gibbs, L., & Payne K. K. (2014). First Divorce Rate, 2012. (FP-14–09). National Center for Family & Marriage Research. Retrieved from http://www.bgsu.edu/content/dam/BGSU/college-ofarts-and-sciences/NCFMR/documents/FP/FP-14–09-divorcerate-2012.pdf

Sweeney, M.M. (2010). Remarriage and stepfamilies: Strategic sites for research in the 21st century. *Journal of Marriage & Family, 72*, 667–684.

Taylor, P., Passel, J., Fry, R., Morin, R., Wang, W., Velasco, G., & Dockterman, D. (2010). The return of the multi-generational family household. *Pew Research Center. A Social & Demographic Trends Report,* Retrieved from http://pewsocialtrends.org/files/2010/10/752-multi-generational-families.pdf

Treas, J. (2002). How cohorts, education and ideology shaped a new sexual revolution on American attitudes toward nonmarital sex, 1972–1998. *Sociological Perspectives, 45*, 267–283.

Treas, J., Lui, J., & Gubernskaya, Z. (2014). Attitudes on marriage and new relationships: Cross-national evidence on the deinstitutionalization of marriage. *Demographic Research, 30*, 1495–1526.

Treas, J., & Mazumdar, S. (2004). Caregiving and kinkeeping: Contributions of older people to America's immigrant families. *Journal of Comparative Family Studies, 35*, 105–122.

Turney, K. (2014a). The intergenerational consequences of mass incarceration: Implications for children's co-residence and contact with grandparents. *Social Forces, 93*, 299–327.

Turney, K. (2014b). Stress proliferation across generations? Examining the relationship between parental incarceration and childhood health. *Journal of Health and Social Behavior, 55*, 302–319.

Umberson, D., Williams, K., Powers, D.A., Chen, M.D., & Campbell, A.M. (2005). As good as it gets? A life course perspective on marital quality. *Social Forces*, *84*(1), 493–511.

US v. Windsor. (2013), 133 S. Ct. 2675, 570 U.S. 12, 186 L. Ed. 2d 808.

U.S. Census Bureau. (2012). Marital status of the population by sex and age: 2010 [Table 57]. In *2012 Statistical Abstract, Section 1: Population,* Retrieved from http://www.census.gov/prod/2011pubs/12statab/pop.pdf

U.S. General Accountability Office. (2004). Defense of Marriage Act: An update to prior report. Washington, DC.

Vespa, J., Lewis, J.M., & Kreider, R.M. (2013) America's families and living arrangements: 2012. *Current Population Reports* (Vol. P20–P570). Washington, DC: U.S. Census Bureau.

Wakefield, S., & Uggen, C. (2010). Incarceration and stratification. *Annual Review of Sociology, 36*, 387–406.

Wang, W., & Parker, K. (2014). *Record share of Americans have never married as values, economics, and gender patterns change.* Washington, DC: Pew Research Center. Retrieved from http://www.pewsocialtrends.org/2014/09/24/record-share-of-americans-have-never-married/

Yi Zeng, S., Morgan, P., Wang, Z., Gu, D., & Yang, C. (2012). A multistate life table analysis of union regimes in the United States: Trends and racial differentials, 1970–2002. *Population Research and Policy Review, 31*, 207–234.

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CHAPTER ELEVEN

Grandparenthood: A Developmental Perspective

Bert Hayslip Jr. and Heidemarie Blumenthal

That becoming a grandparent is a common experience for many adults is underscored by the fact that as life expectancy has increased, the chances of becoming a grandparent have also increased (Hayslip & Page, 2012). Seventy-five percent of those born in 2000 can expect to have at least one grandparent still living when they reach age 30. Nearly 60 percent of older adults have at least one grandchild, and 80 percent of middle-aged and older adults are grandparents (AARP, 2002).

The focus of this chapter is to examine the *developmental* aspects of grandparenting. In this context, it is important to note that grandparenthood has many existential advantages: it can buffer an older person's fears about isolation, loneliness, dying, or not feeling valued as a person. This is supported by the work of Friedman, Hechter, and Kreager (2008), who found grandparents who invested themselves more fully into the grandparent role to be less uncertain about the end of life.

The Nature of Grandparenting and Grandparent-Grandchild Relationships

As middle-aged and older adults, grandparents are in a unique position to positively influence their grandchildren. They can transmit values to a younger grandchild (Pratt et al., 2008), and in serving as a support for that child and his/her family in times of crisis, grandparents can also positively influence their grandchildren; such grandparents experience greater

well-being (Won, 2010). Likewise, middle-aged and older grandparents who are more highly educated tend to positively impact their grandchildren's academic abilities (Ferguson & Ready, 2011) and their emotional/ego development (Scholl, 1997). Additionally, both greater emotional and financial involvement by grandparents longitudinally predict their grandchildren's prosocial behavior and school involvement (Yorgason et al., 2011). Indeed, in some cases, the *symbolic* nature of a grandparent's role—what grandparenting means or represents in a given family system—may be an influence on a grandchild's educational or career goals (see Mansson, 2013).

Another example of the positive influence middle-aged or older grandparents can have on their grandchildren is in terms of how they are seen by such persons. In this respect, adolescent and young adult grandchildren's perceptions of their closeness to a grandparent varies with grandchild-grandparent frequency of contact, grandparent age, health and level of education (see Hokoyama & MaloneBeach, 2013), as well as the grandparent's particular personality attributes (Hokoyama & MaloneBeach, 2013). Yet, emotional closeness to an older grandparent predicts the goals that grandchildren set for themselves as well as the likelihood of such goal attainment (Wise, 2010). Indeed, meaningful frequent contact with a grandparent can mitigate the effect of a parent's divorce, mental illness, or death on a grandchild (Henderson et al., 2009).

The Dyadic Nature of Grandparenthood

A central theme of this chapter is that developmentally, grandparents and grandchildren are best thought of in *dyadic* terms; their influence on one another is *dynamic* and *bidirectional*, wherein the *developmental trajectories* of both grandparents and their grandchildren coexist and, indeed, are superimposed upon one another (Combrinck-Graham, 1985). That is, in addition to being influenced by one's grandparent(s), it is likely that at least some grandchildren might also help socialize their grandparents to matters of contemporary culture, such as using modern technology, violence in the schools, or assistance in learning about aspects of culture particular to the child's world, such as music, new scientific discoveries, fashion, drug use, or sexuality.

In the context of a life span approach to developmental trajectory emphasizing its multiple antecedents (see Baltes, 1997; Baltes, Reese, & Nesselroade, 1988), we argue that reaching an understanding of grandparent-grandchildren dyads *must* be accomplished in a *developmental context*. This assumption about grandparent-grandchild dyads is critical to understanding such relationships in *normative age-related* terms, where roles and

relationships evolve over time; this is consistent with normal changes in physical and social-emotional functioning experienced by both the grandparent and the grandchild. In addition, acknowledging *cohort-related* influences on each generation's influence upon the other is essential to understanding grandparent-grandchild relationships, as each is uniquely shaped by the historical context in which they have grown up. Additionally, recognizing departures from what would be considered normative, such as *nonnormative* variations on typical grandparent-grandchild interactions, is also essential to fully understand and capture the complexity of such dyadic relationships.

In light of the above age-graded, history-graded, and nonnormative influences, it follows that the experience of grandparenting, and consequently the nature of the influence grandparents have on their grandchildren as well as the grandchild's impact upon a grandparent, is largely *unique* to each grandparent-grandchild dyad, wherein the emotional complexities particular to each dyad have been noted by Fingerman (1998).

This uniqueness is explained by numerous factors, wherein (Hayslip & Page, 2012), grandparent-grandchild relationships are impacted by (1) the *meaning* that grandparenting has for the individual, wherein there are advantages to middle-aged and older persons whose identities centralize the role of grandparent; (2) the particular behavioral *style* derived from this meaning that persons enact; (3) the cultural context in which the grandparent-grandchild relationship exists; (4) *how* that grandparent is perceived by the grandchild, whether negatively or positively, subject to the gender of the grandchild and the health of the grandparent; or (5) the *nature and extent of grandparent-grandchild contact*, as mediated by one's children or son/daughter-in-laws and geographic distance, and (6) each person's particular place along a *developmental continuum of youth to later life*, where changing life circumstances may alter the nature of this relationship, as when family dynamics are altered by events such as death or illness, or when grandchildren become independent (Bangerter & Waldron, 2014).

In this respect, the seeds of a continued close relationship with a grandparent in adulthood are often sown in childhood (Geurts, Van Tilburg, & Poortman, 2012). Yet, Villar et al. (2010) found that grandparents perceived greater positive changes in their relationships with their grandchildren as the latter grew older.

Grandparenthood and Development

At the minimum, a developmental life-course perspective suggests that grandparent-grandchild relationships are likely to be different when

grandchildren are young and grandparents are in good health versus when grandchildren are adults and grandparents are older or frail (Boon, Shaw, & McKinnon, 2008; Coali & Hertwig, 2011). For instance, when grandchildren are young, grandparents may focus on play and childcare, while during adolescence, grandparents' roles often revolve around listening, supporting, and serving as family historians (Hayslip & Page, 2012). While their contact with grandparents lessens as grandchildren get older and become more independent, older grandparents often provide emotional support or offer advice to adult grandchildren (Connidis, 2010). Indeed, reciprocal and ongoing grandparent-grandchild relationships in childhood are a precursor of close relationships in adulthood (Guerts, van Tiburg, & Poortman, 2012; Sigurdardottir & Julursdottir, 2013). Yet, grandparents who are ill, impaired, retired, or widowed may be viewed differently by grandchildren who expect their grandparents to be physically active, have the resources to travel, or expect to have both grandparents still living. In adulthood, grandchildren expect grandparents to buffer parental relationships and be a role model and a financial advisor (see Boon, Shaw, & Mackinnon).

From a developmental point of view, key to grandparenting is a *life course change* perspective (MacMillan & Copher, 2005), which stresses the changing intergenerational family system, centralizing the embeddedness of the grandparent in this system, which itself changes as grandparents' and grandchildren's lives change over time (Combrinck-Graham, 1985; Hayslip & White, 2008). Insight into the normative nature of such changes can be facilitated by framing them in terms of *developmental theory*, for example Erikson's (1968) psychosocial approach stressing such constructs as trust/mistrust, identity/role confusion, intimacy/isolation, generativity/stagnation, or integrity/despair, or upon *key points of developmental change* in the grandchild's life, such as early and middle childhood, adolescence, early/emerging adulthood. Additionally, developmental change points in the lives of grandparents are often pivotal to grandparent-grandchild relationships, as when grandparents experience health-related or cognitive decline, or when they are dying (see Bangerter & Waldron, 2014).

It is worth noting that the majority of work examining the grandparent-grandchild relationship has included data drawn solely from the grandparent (Attar-Schwarts, Tan, & Buchanan, 2009) or grandchild retrospective report (e.g., Soliz, 2008). Importantly, preliminary work indicates that child perspectives may differ from that reported by their caregivers (e.g., Lussier et al., 2002; Triadó et al., 2005), and retrospective reports may be prone to affective and memory bias (Nisbett & Ross, 1980). Accordingly, in discussing grandparenting and development, we will focus on work

utilizing grandchild reports on their *current* relationship with close and/or living grandparents.

Childhood and Early Adolescence

While the majority of the literature examining the content and nature of grandparent-grandchild relations has focused on families with young children, very little work has been conducted addressing the child's or adolescent's perspective (e.g., Dunifon, 2013). In one exception, Creasey and Kaliher (1994) collected data from 169 third, fifth, and seventh graders. Overall, these youth described the relationships with their grandparents as a source of great satisfaction. Although high levels of intimacy or self-disclosure were not typically reported, most youth did characterize their relationships as low in conflict and high in affection, respect, instrumental aid, and stability. Further, offspring age (as indexed by grade), frequency of contact, and grandparent health all played a role in the quality of the relationships reported. For example, third graders reported greater intimacy, instrumental support, and sense of approval as compared to older participants; seventh graders indicated lower levels of companionship and stability as compared to younger participants. Of note, significant age differences were *not* found in terms of frequency of contact, affection, conflict, or support of the grandparent by the child; this suggests continuity over time in such relationships. Frequency of contact evidenced the most consistent influence, relating positively to affection, intimacy, respect/approval, grandparent-directed support, as well as overall satisfaction. Finally, grandparent health also was related to increased child-reported support behaviors and was negatively related to companionship and instrumental support. Together, these findings indicate that grandchildren view their grandparents as playing several key roles in their lives and highlight the importance of grandparent contact and availability in maintaining these relationships in addition to (if not beyond) maturation-related changes across childhood and early adolescence (see Hurme, Westerback, & Quadello, 2010; Sims & Rofail, 2013).

Other work indicates that grandparents may take on a special role in aiding healthy adjustment among young grandchildren in risk-related situations (e.g., Bridges et al., 2007; Sheridan, Haight, & Cleeland, 2011). For instance, Sheridan, Haight, and Cleeland (2011) examined the role of grandparents in a sample of youth aged 6–14 years whose parents used methamphetamine. Overall, most children reported that their grandparents provided important social-emotional support, and many indicated that they enjoyed positive leisure activities together. Approximately 10–15 percent of children indicated that grandparents were a key

source of psychological support (e.g., comfort, advice) as well as material goods (e.g., school supplies, books, musical instruments). However, just under 10 percent also expressed quite negative relationships, indicating that their grandparents were harsh and/or also were using drugs. Of note, grandparents were the *only* source of support significantly related to child behavioral problems in this study, wherein children who reported social-emotional support from their grandparents evidenced lower overall externalizing problems, social problems, and aggression problems; no other adult figure in this study (e.g., parents, service professionals, school officials, siblings) evidenced a significant impact on these outcomes.

Children's perspectives on the grandchild-grandparent relationship require further study. Although preliminary data indicate that children view their relationship and respective roles with grandparents in congruence with the grandparent report, related work also suggests that differences do exist (e.g., Triadó et al., 2005), wherein this discrepancy has been termed the *generational stake* (Harwood, 2001)—that grandparents assign more importance to their roles in their grandchildren's lives than the grandchildren themselves report, hence the greater stake in the relationship as reported by the older generation. In addition to efforts incorporating child self-report, creative research designs such as dyadic interaction observation and interview (e.g., Kenner et al., 2007) will be required in efforts designed to further understand the dynamic relationship between children and their grandparents across a variety of contexts.

Adolescence

Adolescence is characterized by rapid biopsychosocial maturation (especially those associated with puberty, for example secondary sexual characteristics; Petersen et al., 1998). Gains in cognition (Schwartz, Maynard, & Uzelac, 2008), emotion (Zimmermann & Iwanski, 2014), and risk-related behaviors (Albert, Chein, & Steinberg, 2013) also normatively occur during this period. Of note, adolescence also is characterized by important shifts in interpersonal relationships, including sources of support and conflict (Albert, Chein, & Steinberg, 2013; Paikoff & Brooks-Gunn, 1991). Observed distancing and conflict between adolescent offspring and parents also may extend to relationships with grandparents. Indeed, Dellmann-Jenkins, Papalia, and Lopez (1987) found that adolescents' self-disclosure to grandparents reliably decreased across the high school years. Triadó et al. (2005) found that neither adolescents nor grandparents (n = 154) characterized the relationship as one of intimacy, mutual understanding, or mutual trust. Further, grandchildren (but not grandparents) also reported that trust in the relationship decreased over time. As seen in

the work conducted with children described above, frequency of contact was an important predictor in how the dyad viewed their relationship, and both parties characterized the grandparent as one who can provide history and context for the family. Complementing this work, Van Ranst, Verschueren, and Marcoen (1995) examined a sample of over 500 adolescents, also finding consistent differences in the grandchild-grandparent relationship as a function of age. Specifically, participant age was used to establish three categories: early adolescence (average age = 12.5 years), middle adolescence (average age = 15.7 years), and late adolescence (average age = 18.9 years). Across the sample, participants described their relationships with their grandparents as primarily characterized by emotional support, reassurance of worth, stability, and the role of the grandparent as a mentor/role model. However, participants in early adolescence rated each of these characteristics, as well as financial support and caregiving, significantly higher than those in middle and late adolescence, suggesting that grandparents' actual or perceived influence does indeed lessen across adolescence. Despite these shifts, all participants rated their grandparents as supportive and perceived the relationship to be close overall.

Taking a systems perspective, Attar-Schwartz, Tan, and Buchanan (2009) examined the additive and interactive influence of several offspring, parent, and grandparent variables in the grandchild-grandparent relationship among almost 1,500 adolescents aged 11–16 years. Consistent with the work described above, age was negatively related to emotional closeness and importance of the grandparent; however, once relevant grandparent (e.g., grandparent age; frequency of contact) and parent (e.g., closeness with grandparent; encouragement of the relationship) variables were taken into account, this relation was no longer significant. Indeed, *grandparent* characteristics contributed the largest amount of variance to the models; specifically, grandparent age was negatively related, and frequency of contact and grandparent involvement were positively related to child-reported emotional closeness and importance of the relationship. It also is important to note that across the entire sample, the majority of participants described the relationship as emotionally close, important, and one of respect for the grandparent. Finally, existing work supports the contention that grandparents also may play an important role in buffering the effects of negative life events (e.g., Flouri et al., 2010). For instance, Botcheva and Feldman (2004) found that grandparent support moderated the relation between harsh parenting and adolescent depression; specifically, harsh parenting predicted adolescent depression among those reporting nonsupportive grandparents, but not among those indicating grandparental support. Qualitative analyses highlighted the role of grandparents in providing both instrumental and emotional support.

Collectively, these data indicate that changes in family dynamics during adolescence also may effect relationships with grandparents; however, the nature and impact of these changes are far from simple. From a research perspective, future efforts including several key past and current variables, for example, grandchild psychopathology, parent-grandparent relationships, additional contextual factors, clearly are required to better understand the role of grandparents during this complex, significant period of development.

Emerging Adulthood

Although previously regarded solely as an artifact of convenience sampling (e.g., Roberto & Skoglund, 1996), a burgeoning literature highlights the importance of examining psychosocial functioning among college students from a developmental perspective (e.g., Arnett, 2000; Arnett & Tanner, 2006). The years encompassing the late teens and twenties have been referred to as a period of *psychosocial moratorium* (Erikson, 1968), the *novice phase* (Levinson, 1978), and most recently as one of *emerging adulthood* (Arnett, 2000). Indeed, in his seminal work on emerging adulthood, Arnett (2000) presents compelling theoretical and empirical work underscoring the distinctive psychological, behavioral, and sociodemographic characteristics of this period for many individuals in industrialized societies.

Several key characteristics of this developmental phase may have direct bearing on the dynamic relationship between emerging adult grandchildren and their grandparents. For instance, college students may be living outside of the family home for the first time, many in a different city, state, or country from their childhood friends and family (Arnett & Tanner, 2006). Several studies indicate that emerging adult grandchildren desire to maintain regular contact with their grandparents (Kornhaber & Woodward, 1981), and many are quite successful at doing so despite physical distance via electronic assistance (Hodgson, 1992; Taylor, Robila, & Lee, 2005). That noted, research also indicates that physical distance may have a direct effect on several aspects of the grandchild-grandparent relationship (e.g., Brussoni & Boon, 1998). In an examination of 171 undergraduate students in western Canada, physical distance not only was strongly correlated with frequency of contact, but also evidenced modest, though statistically significant correlations with current relationship strength, perceived benefits from, and overall importance of, participants' relationships with their closest grandparent (Brussoni & Boon, 1998). Further, Mills et al. (1998) found that frequency of contact with a grandparent was positively correlated with sensitivity to potential elder abuse in a vignette study including over 100 college students.

Emerging adulthood also is characterized by the opportunity for continued identity development (Arnett, 2000, 2007a; Arnett & Tanner, 2006). Although the emphasis on self-focus (Arnett, 2007b) and potential increase in physical distance might suggest a limited role for grandparents, college students still see their grandparents as key contributors in the course of self-exploration (e.g., Roberto & Skoglund, 1996; Taylor, Robila, & Lee, 2005). For example, Brussoni and Boon (1998) found that despite the negative impact of physical distance on several features of the grandchild-grandparent relationship, distance was *not* related to the role that college students perceived their grandparents to play in the shaping of their values. In a sample of 70 United States college students from 27 different countries, Taylor, Robila, and Lee (2005) found that international students reported that they viewed their grandparents as mentors, historians, and role models, and that for many students the influence of these relationships was maintained despite currently living in a different country. There are of course certain aspects of identity that students report are minimally influenced by grandparents; almost 90 percent of students reported that grandparents did not play a strong role in their sexual identity or political beliefs (Brussoni & Boon, 1998). However, given that a high proportion of college students indicate that their grandparents are a valuable source of advice and family history (e.g., Sanders & Trygstad, 1989) and are influential in shaping their family ideals, moral beliefs (Brussoni & Boon, 1998), and ethical standards (Perry & Nixon, 2005), it stands to reason that one of the key developmental tasks of this period, that of identity exploration and formation, continues to benefit from close relationships with living grandparents.

Finally, alongside the increased autonomy of emerging adulthood comes a sense of instability (e.g., Arnett, 2000). On average, emerging adults will change jobs, living arraignments, and romantic partners more frequently during this period than any other point in their lives (Arnett & Tanner, 2006). The stability and support provided by close relationships with grandparents may help offset the peak in loneliness experienced by many emerging adults (Rokach, 2000). Indeed, college students report that close grandparents continue to serve as important attachment figures, providing a secure base and sense of emotional connection (e.g., Taylor, Robila, & Lee, 2005). For example, Creasey and Koblewski (1991) examined a sample of 142 college students, finding that students characterized their relationships with their grandparents as including a very low level of conflict, high warmth/affection, and a strong sense of stability/consistency. Further, research indicates that many emerging adults report that their grandparents treat them with respect (Creasey & Koblewski, 1991), evidence trust in their independent decisions, and generally treat them

like an adult (Sanders & Trygstad, 1989). Given that individual responsibility and independent decision making typically are key features of the transition from adolescence to adulthood, as reported by emerging adults (Arnett, 1997, 1998), close relationships with grandparents may play a special role in helping emerging adults not only navigate their current developmental needs, but further support the successful transition into adulthood proper.

One key area requiring attention includes the forgotten half (Arnett, 2000) of this period. The emerging adulthood period described above is not entirely a maturationally based one, and thus is not experienced by all in their late teens-twenties. Indeed, even in industrialized countries only about half of those in this age-group experience this environmentally created period. Unfortunately, little work has sought to include, let alone compare, data across these distinct developmental experiences, and none has been conducted in terms of grandchild-grandparent relationships. From a research perspective, in addition to more sophisticated assessments of the relationships described above via dyadic interaction, multi-informant, multimodal assessments, work addressing the forgotten half, those persons not experiencing emerging adulthood, will be required in an effort to better understand maturational versus contextual influences in the young adult grandchild-grandparent relationship.

Historical-/Cohort-Related Aspects of Grandparenthood

Despite the fact that grandparents may be able to anticipate some aspects of their role while their grandchild is still in utero (Somary & Stricker, 1998), grandparents frame their expectations for their grandchild in light of their own *cultural traditions* (see Cole, 1999). That grandparents and their grandchildren will have grown up in distinctly different historical contexts underscores the relevance of seeing grandparenthood in cultural-historical terms. This cohort-related shift in the nature of grandparenting has been nicely expressed by Uhlenberg (2004, 2009) and Uhlenberg and Kirby (1998), who document a variety of sociodemographic influences (e.g., the number of grandchildren one has as well as their timing, one's longevity) on grandparenting that not only affect the nature of the role, but also influence grandparents' interactions with their grandchildren, supporting the contention that the grandparent role has indeed changed over historical time.

Hurme, Westerback, and Quadrelle (2010) found that as the physical proximity between grandparents and grandchildren increases, there were fewer face-to-face contacts and phone calls, but more letters and cards. Even given the accessibility of text messaging, this form of contact

from grandchildren lessened with greater physical proximity. To the extent that there is lessened contact between grandparents and grandchildren, the potential for *identity gaps* via identifying with one's own cohort increases the likelihood for poorer communication and lessened relationship quality (Kam & Hecht, 2009). In such cases, grandparents may need to be especially proactive in maintaining meaningful contacts with their grandchildren. At the same time, some families are able to maintain close intergenerational bonds despite changes in persons' lives and family circumstances, such as divorce or remarriage (Kemp, 2007).

Such experiential gaps between persons of different generations challenge each to find ways to meaningfully communicate with one another and also reinforce grandparents as persons whose life histories may reflect tradition, who can serve as transmitters of family history, and who can serve as role models to their grandchildren (Kahana et al., In Press). They may represent a living ancestor who teaches grandchildren ethnic traditions, experience, culture, and history (Reitzes & Mutran, 2004a), or advocate for/participate in school-related activities on behalf of their grandchildren (Watson, 2010). At the same time, grandchildren may bring to their interactions with grandparents representations of a culture where gender roles have changed, where technology is ever presently influential, and where mores and norms for child-rearing/parenting, sex roles, sexual behavior, drug use, and even violence reflect more historically recent cultural expectations. Key to such meaningful intergenerational communication are the lessening of age segregation, the sharing of personal concerns between generations, changing views about older adults as unproductive, an emphasis on adolescents as agents in the reconnection between generations, and an emphasis on maintaining emotional closeness and the family's identity in the face of change and in the face of adult role transitions among grandchildren (Soliz & Harwood, 2006; Mills, Wakeman, & Rea, 2001; Strom & Strom, 2015).

In this respect, the nature and extent of grandparents' contact with their grandchildren and, consequently, the nature of their relationship to a grandchild is primarily *mediated* by the quality of the grandparent's relationship to the grandchild's parent (see Connidis, 2010). This mediational role impacts the quality of the grandparent-adult child relationship, where the adult child serves as a *gatekeeper*. Consequently, how the adult child functions as a gatekeeper influences whether disagreements with adult children regarding the nature and extent of contact with grandchildren exist, and if they exist, how they are handled. Relatedly, intergenerational and intercultural differences in expectations about a grandparent's involvement or about issues relating to child care and discipline and/or values in raising a child can result in family conflicts, particularly when

such expectations are unclear or not mutually agreed upon prior to the birth of a grandchild (Maiden & Zuckerman, 2008). Indeed, it is out of the interaction of grandparents and their children (as well as their interactions with adult children) that these distinct perspectives are shared and in some cases modified. That is, consistent with a dialectical perspective on developmental change, persons both change and are changed via their interactions with others (Riegel, 1976).

Nonnormative/Idiosyncratic Aspects of Grandparenthood

To the extent that grandparenting is a normative age-graded experience, it is instructive to observe that most people become a grandparent in their late 40s or early 50s. On the other hand, for others it is nonnormative; they do not become grandparents until their 60s or 70s. Likewise, grandparents who must cope with the death or disability of a grandchild, those who must raise a grandchild due to the death, divorce, or drug use of an adult child, or those whose physical or cognitive skills have been compromised via illness or dementia and who are cared for by their grandchildren all experience the grandparent role in a uniquely nonnormative manner. In this respect, Stelle et al. (2010) found that grandparents' gender, sexual orientation, and extent of physical or mental decline accounted for the great diversity they observed in grandparent-grandchild relationships. Indeed, the essential nonnormativeness of grandparenting is underscored by its *countertransitional* nature; it is a role persons assume that is based upon the actions of *others* (Hagestad, 1985).

In emphasizing departures from grandparenthood as an age-graded normative role, it should be made clear that many persons enjoy their roles as grandparents and maintain happy and fulfilling relationships with their grandchildren and the parents of these children. Indeed, grandparents who can clearly and actively express their affection toward a grandchild positively influence that child's social-interpersonal development (Mansson, 2013). Complementarily, whether grandparents feel they are important in the lives of their grandchildren and consequently influence them in many ways influences and is influenced by how grandparents define their roles (as central or peripheral). This role definition lays the groundwork for their self-efficacy as grandparents, how (and if) they will aid in their grandchild's development as well as how they will influence the family as a whole.

As discussed by Hayslip et al. (2015), grandparents at risk for unsatisfying experiences in this role and/or mental health/communicative difficulties with their children and grandchildren may have experienced unanticipated role changes for which they are unprepared such as a

serious illness or a divorce, having to cope with the divorce of their adult children, the death of a grandchild, or having to assume full-time care of a grandchild. Still others must cope with the birth of a grandchild with a disability, teenage pregnancy, challenges in relationships with daughters- or sons-in-law who discourage their involvement, and unfulfilled expectations about the nature and degree of their involvement in a grandchild's life. Still others may have difficulty defining their roles as grandparent in the context of their roles as workers, retirees, or as caregivers for an ill spouse or older parent (see Hayslip et al., 2015). Indeed, even well-meaning and well-adjusted grandparents face numerous adjustments in dealing with the divorce/separation of an adult child (Christiansen & Smith, 2002; Doyle, O'Dywer, & Timonen, 2010), the serious illness of a grandchild (Wakefield e al., 2014), in discovering that a grandchild has been exposed to domestic violence (Semberg, 2013), or in dealing with the fact that a grandchild is GLBQ (Scherrer, 2012).

Culture and Grandparenting

While our focus here is to examine the developmental aspects of grandparenting, it is of note to observe that culture impacts grandparenting as well. Studying the cultural context in which grandparenting occurs can enhance our understanding of what is likely a normative life transition for most middle-aged and older adults. Culture is a fundamental factor in shaping the grandparent-grandchild relationship, and the grandparent-grandchild relationship is an integral part of intergenerational cultural transmission—the passing on of ideas for successful adaptation. The daily family interactions, practices and structure, which are heavily influenced and patterned by culture, shape the way developing children come to know and understand the world.

Culture pervades all aspects of life; it organizes perceptions, cognitions, and behaviors (Cole, 1999). Culture influences the way that grandparents experience aging and grandparenting, as well as the ways that grandchildren influence their grandparents and their own development. For these reasons, there must be an appreciation for the relevant cultural context in order to fully understand the meaning and function of interactions in the grandparent-grandchild relationship over time.

Strom et al. (2008) discussed how changes in China over the past 20 years (e.g., the end of martial law and media censorship) have dramatically changed Taiwanese culture and daily life (e.g., increases in women working and income, youth more immersed in Western culture) and thereby affected grandparent-grandchild relationships. Strom et al. (2008) explored how sociocultural changes put a strain on traditional cultural

values (e.g., moving away from intergenerational cohabitation and hierarchical structure), intergenerational relationships, and how they influenced each generation's perceptions of grandmothers' role and functioning.

Sharing culture has been described as one of the primary functions of grandparenting (Wiscott & Kopera-Frye, 2000). In a study of ethnically diverse students, grandchildren in general felt that it was typical to engage in cultural activities with grandparents including sharing stories and family photos, and learning about family traditions (Wiscott & Kopera-Frye, 2000). They also reported a moderate influence of their grandparents, particularly on issues of religion, family, morality, and personal identity (Wiscott & Kopera-Frye, 2000). While ethnicity was related to sharing everyday and cultural activities, as well as positive affect toward grandparents and culture, grandparent-grandchild relationship quality did not differ by ethnicity (Wiscott & Kopera-Frye, 2000).

Pratt, Norris, Hebblethwaite, and Arnold (2008) found that adolescents that rated themselves as having more close relationships with their maternal grandparents were more likely to tell stories about experiences of the grandparents' value teaching, and these stories were more likely to be interactive, specific, and caring. Telling stories with these characteristics was related to higher generativity scores for the adolescents, indicating higher concern about contributing to future generations. These results suggest that closeness to grandparents relates to more elaborate and positive perceptions of their value teaching, which would intuitively seem to be important for intergenerational cultural transmission.

Given that American culture is typically considered more individualistic and both African American and Hispanic cultures are typically more collectivistic, it is relevant to note that one cultural value that is central to African American and to Hispanic cultures is *familism*, which is characterized by "the desire to maintain strong family ties [nuclear and extended], the expectation that the family will be the primary source of instrumental and emotional support, the feeling of loyalty to the family, and the commitment to the family over individual needs and desires" (Halgunseth, Ispa, & Rudy, 2006, p. 1285). Familism influences Hispanic family structure in emphasizing intergenerational relationships, frequent shared activities and high levels of interaction and coresidency with older family members (Silverstein & Chen, 1999). Among Mexican American grandparents, the amount of shared activity time with grandchildren relates to increased satisfaction, feelings of success in family role performance, less difficulty with grandparent obligations, and importantly greater teaching involvement with grandchildren among Mexican American grandparents (Strom, Buki, & Strom, 1997). In a study comparing Euro-American grandchildren and Mexican American grandchildren, ratings of

grandparent-grandchild affection were generally moderate to high; but ratings were relatively higher for Mexican American grandchildren than Euro-American grandchildren (Giarusso et al., 2001; Wiscott & Kopera-Frye, 2000). Euro-American grandparents report more affection for and similarity with their grandchildren than the grandchildren report, while gaps are much closer among Mexican American dyads (Giarusso et al., 2001).

For grandparents, grandchild age and value of family responsibility, grandparent education, and grandparent acculturation predict grandparent affection for their grandchild (Silverstein & Chen, 1999). Among Mexican Americans, greater acculturation and grandchild's perception of similarity predict a larger gap between the affection reported by grandparent and grandchild toward each other (Giarusso et al., 2001). Thus, for both Mexican American grandparents and grandchildren, collectivistic values and lack of acculturation predict more affectionate and interactive relationships. In turn, affectionate relationships with adult grandchildren predict greater life satisfaction for older Mexican American grandparents (Markides & Krause, 1985).

Race and ethnicity, as reflections of culture, also affect grandparenting styles, where grandparents serve as mentors for younger parents, as transmitters of cultural values and heritage, as persons who are agents of socialization for and influence over their grandchildren, or as persons who can simply enjoy their grandchildren but not be responsible for raising them. Whether one's cultural or ethnic background uniquely define one's role as a grandparent depends upon whether this role is a valued one (see Hayslip, 2009; Hayslip & Page, 2012; Hayslip et al., 2015). For example, there are differences in grandparenting styles between African Americans and Whites, wherein African American grandparents have almost twice the degree of involvement with their grandchildren than whites. Compared to whites, African American grandmothers' parenting involvement is substantial, especially in the areas of control, support, and punishment (Cherlin & Ferstenberg, 1986; Pearson et al., 1990). Indeed, Mexican Americans belonging to larger, more multigenerational families, report higher satisfaction relating to their grandchildren, and have a greater degree of intergenerational contact (Schmidt & Padilla, 1983).

Race and ethnicity are also powerful influences on how the grandparent is viewed by one's grandchildren. For example, African Americans see the grandparent role as a more active one in the family than do Whites, reflecting racial and cultural differences in perceptions of the extended family network (Kornhaber, 1996). Among African American and white grandfathers, it seems to be that (1) the grandfather role is more affectionate than functional, (2) the grandfather role is more central among older African

Americans, and (3) other than geographic proximity, other factors are of little importance in the grandfather-grandchild relationship. This gender-specific role definition appears to be related to (a) the African American family's flexibility in expanding and contracting sources to meet the specialized needs of various extended family members, and (b) the flexibility of African American male family roles (see Kornhaber, 1996).

The Uniqueness of Grandparent-Grandchild Relationships

Beyond developmental, cohort-related, and cultural perspectives on grandparenthood, to an extent, each grandparent-grandchild is unique. In this respect, in times of family stress, maternal grandmothers are the most likely to be involved (Condon et al., 2013). Additionally, grandparents can aid in establishing and maintaining patterns of communication with a deafblind child (Shaw, 2005), in helping to care for an autistic child (Kahana et al., In Press), assist parents who have a child who is disabled (Findler, 2014; Lee, 2010), or in opening up communication on matters relating to sexuality (Cornelius, LeGrand, & Jemmot, 2009). On the other hand, *remote or distant* grandparents (Cherlin & Furstenberg, 1986) may cause additional stress to parents by bringing up long-standing family conflicts or insisting on being involved in decision making (Silverstein & Parrott, 1997). Grandparents can indeed foster maladaptive behavior in their grandchildren (Bailey et al., 2009) and can also contribute to marital discord or model pathological behaviors which grandchildren may internalize, reflecting the latter's response to underlying family conflict (Hayslip et al., 2015). Even investing oneself *too* heavily into a grandchild's life, such as spending more nights with a grandchild, can have counterintuitive and negative effects on a grandparent's self-esteem (Won, 2010). Thus, as there is much variability in grandparenting, the responsibility for child discipline, financial assistance, patterns of visitation, giving advice to the parents, sharing religious faith, and supporting the parents in decision-making are salient dimensions of the grandparent role for *some* persons but not others. Such variability contributes to differences in grandparent-grandchild dyads' contact, emotional closeness, and influence upon one another.

Just as grandparents may provide many types of support to a single, divorced, widowed, or never-married child, grandchildren may be called upon to care for an impaired or dying grandparent, wherein filial obligation and the need to prepare for the future helped make caring for a grandparent meaningful (Fruhauf, Jarrott, & Allen, 2002). Moreover, grandchildren caring for a grandparent experience a wide variety of emotions and developed a variety of coping strategies to deal with the demands of caregiving

(Fruhauf & Orel, 2008). Not surprisingly, grandchildren's perceptions of their grandparents' health and the degree to which such impairments affect their own lives each impact the quality of the relationship with the grandparent (Boon, Shaw, & Mackinnon, 2008). For grandparents who need help in managing their everyday affairs, emotional solidarity and frequency of telephone contact predict a grandchild's ability and motivation to provide functional assistance (Even-Zohar, 2011) and providing such assistance is often crucial to the mental health of grandparents. Ihara, Horio, and Tompkins (2012) have underscored the complexity of this caregiving in noting the salience of not only the grandchild's ability to provide care for a grandparent, but also his/her motivation for doing so, as influenced by the strength of the intergenerational bond, caregiver stress and financial hardship, the degree to which the grandchild has time to provide care, and the physical distance from the grandparent. Key however, is that feelings of closeness and affection must *first* exist if grandchildren are to provide help and assistance to a frail grandparent (Even-Zohar, 2011).

Grandparents with dementia present many socioemotional difficulties for grandchildren (Celdran, Tirado, & Villar, 2011), though while demented grandparents and their grandchildren attribute less attitudinal and behavioral importance to the grandparent role, they assigned no less symbolic and emotional salience to the grandparent role versus nondemented grandparents and their grandchildren (Werner & Lowenstein, 2001). Grandchildren caring for a grandparent with dementia may learn new ways of coping, develop patience, and gain insight about the meaning of life in caring for them (Celdran, Tirado, & Villar, 2011; Fruhauf & Orel, 2008). Grandchildren caring for dying grandparents also face unique challenges: dealing with physical and emotional fatigue, coping with the stresses of caregiving, guilt over having survived a grandparent, and the loss of their "grandchild" identity (Boquet et al., 2011). Boquet et al. found that grandchildren caring for a dying grandparent not only experience guilt, stress, and fatigue in doing so, but they also reported losing the role of "grandchild." Smith (2012) not only found that the dynamics of the grandparent-grandchild relationship were influential in affecting the experience of caregiving, but also that such dynamics were altered by the experience of caregiving, consistent with understanding such relationships in a dyadic, fluid manner.

Complementarily, how grandparents respond to a grandchild's disability or illness affects parents' adjustment to such issues (see Kahana et al., In Press; Miller, Buys, & Woodbridge, 2012), wherein previously established relationships and the perception that family members help one another in times of need become quite important (Mirfin-Vietch, Bray, & Watson, 1997).

In the context of nonnormative influences on grandparent-grandchild relationships and grandparenthood more generally, we briefly discuss three examples of such: the death of a grandchild, the divorce of an adult child, and having to raise a grandchild.

Losing a grandchild through death is nonnormative, though its impact on grandparents is substantial. Grandparents' emotional needs when a grandchild dies are twofold; they grieve for their adult child as well as for themselves (Reed, 2000). A grandchild's death can undermine relationships with surviving grandchildren or with an adult child in that the grief that grandparents often experience is *disenfranchised* (Doka, 2002). Disenfranchised grief typically undermines the opportunities grandparents have to share their feelings with others and to get emotional support from them. Complicating matters is the fact that family customs and rituals may not meet a grandparent's needs. While grandparents are often put in the delicate position of supporting their adult child as well as meeting their own needs for support from others, grandparents respond to loss in a similar manner compared to the grandchild's own parents (see Hayslip & White, 2008).

Another salient nonnormative aspect of grandparenthood is when contact is lost with a grandchild because of an adult child's divorce. While there are exceptions (see Holladay et al., 1998), both maternal grandmothers' and paternal grandparents' contact with their grandchildren are diminished when a parent divorces (Ahrons, 2007), and such losses can predispose grandparents to depression (Drew & Silverstein, 2007). Importantly, the impact of divorce on the grandparent depends upon whether the grandparent is an *agent* in the life of a grandchild (in providing support and serving as a role model for a grandchild), or whether the grandparent is seen as a *victim* (where grandparents view grandparenting as compensating for the lack of other sources of life satisfaction; Drew & Smith, 1999).

Taking on the responsibility of raising one's grandchild is a unique aspect of grandparenthood. While the numbers of grandparents raising grandchildren has increased over the last few decades (Hayslip & Kaminiski, 2005), the number of caregiving grandparents has risen again in recent years as a result of the recession of 2008–2009 (Pew Foundation, 2010). Normatively, custodial grandparents tend to be younger, the mother's parents, in worse health, more socially isolated, poorer, less highly educated, and raising boys, all relative to noncustodial grandparents (Generations United, 2009). In some cases, grandparent caregiving exists in a *skipped generation* household, where the adult parent is absent. In contrast, *coparenting* households are defined by the coresidence of the grandparent and adult child. Even in these situations, the grandparent may still have primary caregiving responsibility. Not surprisingly, grandparents in skipped generation households tend to fare worse physically and emotionally,

due to their diminished resources and greater comparative isolation from others compared to coparenting grandfamily households (Generations United, 2009). The incidence of skipped generation versus coparenting grandfamily households varies with ethnicity (see Hayslip et al., 2015; Park & Greenberg, 2007), with skipped generation families being more common among Caucasians and coparenting families being more common among African Americans and especially among Hispanics.

Grandparent caregiving may be linked to the divorce, drug use, incarceration, job loss, teenage pregnancy, or death of the adult child, as well as to the abandonment or abuse of the grandchild. These circumstances often stigmatize and isolate grandparents from needed social and emotional support, making it difficult for them to be treated equitably by social service providers and fellow grandparents who are not raising a grandchild (Hayslip & Glover, 2008; Hayslip, Glover, & Pollard, In Press). Indeed, grandparent caregivers often experience health difficulties as a consequence of having neglected their health to the exclusion of their grandchildren's (Baker & Silverstein, 2008). They also sometimes experience difficulties in parenting a grandchild (Hayslip & Kaminski, 2005). Indeed, the impact of grandmothers' distress on grandchildren's adjustment is mediated by dysfunctional parenting (Smith et al., 2008). This distress may be exacerbated by the grandparent's negative attitudes toward child-rearing as well be reflected in the tendency of some grandparents to rely on their grandchildren for emotional support (Kaminski et al., 2008) and their failure to set boundaries on their involvement with grandchildren (Breheny, Stephens, & Spilsbury, 2013). Not surprisingly, disappointment in that adult child as a poor parent are experienced by many grandparent caregivers (Hayslip et al., 2009), and grandparent caregivers grieve over the many losses they have experienced in taking on this responsibility (Backhouse & Graham, 2013), wherein their plans for the future, the quality of their relationship to the grandchild, and even their satisfaction with their marriages are all often undermined. If the relationship with the adult child is ambivalent, conflictual, or poorly structured, the demands on the grandparent caregiver are more debilitating (Hayslip et al., 2009).

Discussion and Future Directions for Research

Examining grandparenthood from a dyadic developmental perspective allows us to understand it in light of its multiple influences, which are interactive (see Baltes, Reese, & Nesselroade, 1988), reflecting the complexity of grandparent-grandchild relationships. Viewed in this manner, we can well understand grandparent-grandchild dyads in light of the age-graded and history-graded contexts in which they exist as well as what is unique and particular to each grandparent-grandchild dyad. Clearly, the

developmental issues we have discussed here bearing on grandparenting interact with those related to cohort effects, historical change, and culture.

A major research issue yet to be dealt with is the nature of the interaction between these factors. For example, do the developmental patterns we have presented here vary by cohort membership and/or historical change? To what extent does culture alter these developmental patterns of grandparent-grandchild relationships? What is the relative balance between those aspects of grandparenting which are age-graded and normative and those which are nonnormative in nature?

At a finer grain level of understanding, more attention needs to be paid to how grandparents and grandchildren negotiate and renegotiate their relationships *over time* in light of developmental periods such as emerging adulthood of grandchildren, health-related impairments experienced by grandparents, or the death, divorce, or remarriage of adult children. In each scenario, how do grandparents and grandchildren fare? What is the impact of losing a spouse or divorce on the experience of grandparenthood? Additionally, despite recent attention to this issue (see Hayslip & Kaminski, 2005; Park & Greenberg, 2007) more needs to be learned about grandparents as caregivers, be they raising a grandchild, or caring for an ill spouse or an impaired older parent. What are the long-term effects on such persons who have provided care oftentimes many for years? Complementarily, what are the long-term effects on grandchildren who have either been raised by a grandparent or who have otherwise enjoyed a loving relationship a traditional non-caregiver grandparent?

These and other questions specific to distinct life periods (see above) regarding the developmentally normative and nonnormative aspects of grandparenthood remain to be answered. As more persons live into their 80s and beyond, the experience of grandparents and great-grandparents as significant influences on the lives of their grandchildren will become more salient and perhaps even rival the direct influence that parents have on their children. At the minimum, our understanding of grandparenthood is enhanced via a recognition of the importance of the developmental context in which grandparents and grandchildren are embedded. In a dyadic, developmental sense, grandparents can both influence and are potentially influenced by their grandchildren, to the benefit of both.

References

Ahrons, C. R. (2007). Family ties after divorce: Long-term implications for children. *Family Process, 46*, 53–65.

American Association of Retired Persons (AARP). (2002). *The grandparent study*. Washington, DC.

Albert, D., Chein, J., & Steinberg, L. (2013). The teenage brain peer influences on adolescent decision making. *Current Directions in Psychological Science, 22*, 114–120.

Arnett, J.J. (1997). Young people's conceptions of the transition to adulthood, *Youth & Society, 29*, 3–23.

Arnett, J.J. (1998). Learning to stand alone: The contemporary American transition to adulthood in cultural and historical context. *Human Development, 41*, 295–315.

Arnett, J.J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*, 469.

Arnett, J.J. (2007a). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, *1*, 68–73.

Arnett, J.J. (2007b). Suffering, selfish, slackers? Myths and reality about emerging adults. *Journal of Youth and Adolescence, 36*, 23–29.

Arnett, J.J., & Tanner, J.L. (Eds.). (2006). *Emerging adults in America: Coming of age in the 21st century*. Washington, DC: American Psychological Association.

Attar-Schwartz, S., Tan, J.P., & Buchanan, A. (2009). Adolescents' perspectives on relationships with grandparents: The contribution of adolescent, grandparent, and parent–grandparent relationship variables. *Children and Youth Services Review, 31*, 1057–1066.

Backhouse, J., & Graham, A. (2012). Grandparents raising grandchildren: Negotiating the complexities of role identity conflict. *Child and Family Social Work, 17,* 305–315.

Backhouse, J., & Graham, A. (2013). Grandparents raising grandchildren: Acknowledging the experience of grief. *Australian Social Work, 66,* 440–454.

Bailey, J., Hill, K., Oesterle, S., & Hawkins, D. (2009). Parenting practices and problem behavior across three generations: Monitoring, harsh discipline, and drug use in the intergenerational transmission of externalizing behavior. *Developmental Psychology, 45*, 1214–1226.

Baker, L., & Silverstein, M. (2008). Preventative health behaviors among grandmothers raising grandchildren. *Journals of Gerontology: Psychological and Social Sciences, 63B*, S304–S311.

Baltes, P.B. (1997). On the incomplete architecture on human ontogeny: Selection, optimization, and compensation of developmental theory. *American Psychologist*, *52*, 366–379.

Baltes, P., Reese, H., & Nesselorade, J. (1988). *Life span developmental psychology: Introduction to research methods.* Hillsdale, NJ: Erlbaum.

Bangerter, L., & Waldron, V. (2014). Turning points in long distance grandparent–grandchild relationships. *Journal of Aging Studies, 29*, 88–97.

Boon, S., Shaw, M., & MacKinnon, S. (2008). Grandparent health and young adults' judgments of grandparent–grandchild relationships. *Journal of Intergenerational Relationships, 6*, 155–173.

Boquet, J., Oliver, D., Wittenberg-Styles, E., Doorenbos, A., & Demiris, G. (2011). Taking care of a dying grandparent: Case studies of grandchildren in the hospice caregiver role. *American Journal of Hospice and Palliative Medicine, 28*, 564–568.

Botcheva, L. B., & Feldman, S. S. (2004). Grandparents as family stabilizers during economic hardship in Bulgaria. *International Journal of Psychology, 39*, 157–168.

Breheny, M., Stephens, C., & Spilsbury, L. (2013). Involvement without interference: How grandparents negotiate intergenerations expectations in relationship with grandchildren. *Journal of Family Studies, 19*, 174–184.

Bridges, L. J., Roe, A. E., Dunn, J., & O'Connor, T. G. (2007). Children's perspectives on their relationships with grandparents following parental separation: A longitudinal study. *Social Development, 16*, 539–554.

Brussoni, M. J., & Boon, S. D. (1998). Grandparental impact in young adults' relationships with their closest grandparents: The role of relationship strength and emotional closeness. *The International Journal of Aging and Human Development, 46*, 267–286.

Celdran, M., Tirado, C., & Villar, F. (2011). Learning from the disease: Lessons drawn from adolescents having a grandparent suffering from dementia. *International Journal of Aging and Human Development, 68*, 243–259.

Cherlin, A., & Furstenberg, F. (1986). *The new American grandparent.* New York: Basic Books.

Christiansen, F., & Smith, T. (2002). What is happening to satisfaction and quality of relationships between step/grandparents and step/grandchildren? *Journal of Divorce and Remarriage, 37*,117–133.

Coali, D., & Hertwig, R. (2011). Grandparental investment: A relic of the past or reinvestment in the future? *Current Directions in Psychological Science, 20*, 93–98.

Cole, M. (1999). Culture in development. In M. Bernstein & M. Lamb (Eds.), *Developmental psychology: An advanced textbook* (pp. 73–124). Mahwah, NJ: Erlbaum.

Combrinck-Graham, L. (1985). A developmental model for family systems. *Family Process, 24*,139–150.

Condon, J., Corkindale, C., Luszcz, M., & Gamble, E. (2013). The Australian first-time grandparents study: Time spent with a grandchild and its predictors. *Australasian Journal on Ageing, 32*, 21–27.

Connidis, I. A. (2010). *Family ties and aging*. Thousand Oaks, CA: Pine Forge Press.

Cornelius, J., Le Grand, S., & Jemmot, L. (2009). African American grandfamilies' attitudes and feelings about sexual communication: Focus group results. *Journal of the Association of Nurses in AIDS Care, 20*, 133–140.

Creasey, G. L., & Kaliher, G. (1994). Age differences in grandchildren's perceptions of relations with grandparents. *Journal of Adolescence, 17*, 411–426.

Creasey, G. L., & Koblewski, P. J. (1991). Adolescent grandchildren's relationships with maternal and paternal grandmothers and grandfathers. *Journal of Adolescence, 14*, 373–387.

Dellmann-Jenkins, M., Papalia, D., & Lopez, M. (1987). Teenagers' reported interaction with grandparents: Exploring the extent of alienation. *Lifestyles, 8*, 35–46.

Doka, K. J. (Ed.). (2002). *Disenfranchised grief: New directions, challenges, and strategies for practice.* Champaign, IL: Research Press.

Doyle, M., O'Dywer, C., & Timonen, V. (2010). "How can you just cut off a whole side of the family and say move on?" The reshaping of paternal grandparent–grandchild relationships following divorce or separation in the middle generation. *Family Relations, 59*, 587–598.

Drew, L., & Silverstein, M. (2007). Grandparents' psychological well-being after loss of contact with their grandchildren. *Journal of Family Psychology, 21*, 372–379.

Drew, L., & Smith, P. (1999). The impact of parental separation/divorce on grandparent–grandchild relationships. *International Journal of Aging and Human Development, 48*, 191–216.

Dunifon, R. (2013). The influence of grandparents on the lives of children and adolescents. *Child Development Perspectives, 7*, 55–60.

Erikson, E. H. (1968). *Identity: Youth and crisis.* New York: Norton.

Even-Zohar, A. (2011). Intergenerational solidarity between adult grandchildren and their grandparents with different levels of functional ability. *Journal of Intergenerational Relationships, 9*, 128–145.

Ferguson, J., & Ready, D. (2011). Expanding notions of social reproduction: Grandparents' educational attainment and grandchildren's cognitive skills. *Early Childhood Research Quarterly, 26*, 216–226.

Findler, L. (2014). The experience of stress and personal growth among grandparents of children with and without intellectual disability. *Intellectual and Developmental Disabilities, 52*, 32–48.

Fingerman, K. (1998). The good, the bad, and the worrisome: Emotional complexities in grandparents' experiences with individual grandchildren. *The Family Life Coordinator, 47*, 403–414.

Flouri, E., Buchanan, A., Tan, J. P., Griggs, J., & Attar-Schwartz, S. (2010). Adverse life events, area socio-economic disadvantage, and adolescent psychopathology: The role of closeness to grandparents in moderating the effect of contextual stress. *Stress, 13*, 402–412.

Friedman, D., Hechter, M., & Kreager, D. (2008). A theory of the value of grandchildren. *Rationality and Society, 20*, 31–63.

Fruhauf, C., Jarrott, S., & Allen, K. (2002). Grandchildren's perceptions of caring for grandparents. *Journal of Family Issues, 27*, 887–911.

Fruhauf, C., & Orel, N. (2008). Developmental issues of grandchildren who provide care to grandparents. *International Journal of Aging and Human Development, 67*, 209–230.

Generations United. (2009). *Grandfacts: Data, interpretation, and implications for caregivers.* Washington, DC: Author.

Giarusso, R., Feng, D., Silverstein, M., & Bengtson, V. L. (2001). Grandparent–adult grandchild affection and consensus. *Journal of Family Issues, 22*, 456–477.

Geurts, T., Van Tilburg, T., & Poortman, A. (2012). The grandparent–grandchild relationship in childhood and adulthood: A matter of continuation? *Personal Relationships, 19*, 267–278.

Hagestad, G. O. (1985). Continuity and connectedness. In V. L. Bengtson & J. F. Robertson (Eds.), *Grandparenthood* (pp. 31–48). Beverly Hills, CA: Sage.

Halgunseth, L. C., Ispa, J. M., & Rudy, D. (2006). Parental control in Latino families: An integrated review of the literature. *Child Development, 77*, 1282–1297.

Harwood, J. (2001). Comparing grandchildren's and grandparent's stake in their relationship. *International Journal of Aging and Human Development, 53*, 195–210.

Hayslip, B. (2009). Ethnic and cross cultural perspectives on custodial grandparenting. In J. Sokolovsky (Ed.), *The cultural context of aging: Worldwide perspectives* (3rd ed., pp. 346–356). Westport, CT: Greenwood Publishing.

Hayslip, B., Glover, R., Harris, B., Miltenberger, P., Baird, A., & Kaminski, P. (2009). Perceptions of custodial grandparents among young adults. *Journal of Intergenerational Relationships, 7*, 209–224.

Hayslip, B., & Kaminski, P. (2005). Grandparents raising their grandchildren: A review of the literature and suggestions for practice. *The Gerontologist, 45*, 262–269.

Hayslip, B., Maiden, R., Page, K., & Dolbin-MacNab, M. (2015). Grandparenting. In P. Lichtenberg, B. Mast, B. Carpenter, & J. Wetherell (Eds.), *APA handbook of clinical geropsychology* (pp. 497–511). Washington, DC: American Psychological Association.

Hayslip, B., & Page, K. (2012). Grandparenthood: Grandchild and great-grandchild relationships. In R. Blieszner & V. Bedford (Eds.), *Handbook of families and aging* (pp. 183–212). Santa Barbara, CA: Praeger.

Hayslip, B., & White, D. (2008). Grandparents as grievers. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research* (3rd ed., pp. 441–460). Washington, DC: American Psychological Association.

Hayslip, B., Glover, R., & Pollard, S. (In Press). Traditional grandparent peers' perceptions of custodial grandparents: Extent of life disruption and needs for social support, social, and mental health services. In M. H. Meyer (Ed.), *Grandparenting in the US*. Amityville, NY: Baywood.

Henderson, C., Hayslip, B., Sanders, L., & Louden, L. (2009). Grandmother–grandchild relationship quality predicts psychological adjustment among youth from divorced families. *Journal of Family Issues, 30*, 1245–1264.

Hodgson, L. G. (1992). Adult grandchildren and their grandparents: The enduring bond. *International Journal of Aging and Human Development, 34*, 209–225.

Hokoyama, M., & MaloneBeach, E. (2013). Predictors of grandparent–grandchild closeness: An ecological perspective. *Journal of Intergenerational Relationships, 11*, 32–49.

Holladay, S., Lackovich, R., Lee, M., Coleman, M., Harding, D., & Dento, D. (1998). (Re)constructing relationships with grandparents: A turning point analysis of granddaughters' relational development with maternal grandmothers. *International Journal of Aging and Human Development, 46*, 287–303.

Hurme, H., Westerback, S., & Quadello, T. (2010). Traditional and new forms of contact between grandparents and grandchildren. *Journal of Intergenerational Relationships, 8*, 264–280.

Ihara, E., Horio, B., & Tompkins, C. (2012). Grandchildren caring for grandparents: Modeling the complexity of family caregiving. *Journal of Social Service Research, 38*, 629–636.

Kahana, E. et al. (In Press). Childhood autism and proactive family coping: Intergenerational perspectives. *Journal of Intergenerational Relationships*.

Kam, J., & Hecht, M. (2009). Investigating the role of identity gaps among communicative and relational outcomes within the grandparent–grandchild relationship: The young-adult grandchildren's perspective. *Western Journal of Communication, 73*, 456–480.

Kaminski, P., Hayslip, B., Wilson, J., & Casto, L. (2008). Parenting attitudes and adjustment among custodial grandparents. *Journal of Intergenerational Relationships, 6*, 263–284.

Kemp, C. (2007). Grandparent–grandchild ties: Reflections on continuity and change across three generations. *Journal of Family Issues, 28*, 855–881.

Kenner, C., Ruby, M., Jessel, J., Gregory, E., & Arju, T. (2007). Intergenerational learning between children and grandparents in East London. *Journal of Early Childhood Research, 5*, 219–243.

Kornhaber, A. (1996). *Contemporary grandparenting.* Thousand Oaks, CA: Sage.

Kornhaber, A., & Woodward, K.L. (1981). *Grandparents, grandchildren: The vital connection*. Piscataway, NJ: Transaction Publishers.

Lee, M. (2010). Grandparents' involvement and support in families with children with disabilities. *Educational Gerontology, 36*, 467–499.

Levinson, D.J. (1978). *The seasons of a man's life.* New York: Ballantine.

Lussier, G., Deater-Deckard, K., Dunn, J., & Davies, L. (2002). Support across two generations: Children's closeness to grandparents following parental divorce and remarriage. *Journal of Family Psychology, 16*, 363–376.

MacMillan, R., & Copher, R. (2005). Families in the life course: Interdependencies of roles, role configurations, and pathways. *Journal of Marriage and the Family, 67*, 858–879.

Maiden, R.J., & Zuckerman, C. (2008). Counseling grandparents parenting their children's children: Case studies. In B. Hayslip Jr. & P. Kaminski (Eds.), *Parenting the custodial grandchild: Implications for clinical practice* (pp. 197–214). New York: Springer.

Mansson, D. (2013). Affectionate communication and relational characteristics in the grandparent–grandchild relationship. *Communication Reports, 26*, 47–60.

Markides, K.S., & Krause, N. (1985). Intergenerational solidarity and psychological well-being among older Mexican–Americans: A three-generations study. *Journal of Gerontology, 40*(3), 390–392.

Miller, L., Buys, L., & Woodbridge, S. (2012). Impact of disability on families: Grandparents' perspectives. *Journal of Intellectual Disability Research, 56*, 102–110.

Mills, R.B., Vermette, V., & Malley-Morrison, K. (1998). Judgments about elder abuse and college students' relationship with grandparents. *Gerontology & Geriatrics Education, 19*, 17–30.

Mills, T., Wakeman, M., & Rea, C. (2001). Adult grandchildren's perceptions of emotional closeness and consensus with their maternal and paternal grandparents. *Journal of Family Issues, 22*, 427–455.

Mirfin-Vietch, B., Bray, A., & Watson, M. (1997). "We're just that sort of family": Intergenerational relationships in families including children with disabilities. *Family Relations, 46*, 305–311.

Nisbett, R., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment.* Englewood Cliffs, NJ: Prentice Hall.

Paikoff, R. L., & Brooks-Gunn, J. (1991). Do parent–child relationships change during puberty? *Psychological Bulletin, 110*, 47–66.

Park, H., & Greenberg, J. (2007). Parenting grandchildren. In J. Blackburn & C. Dumus (Eds.), *Handbook of gerontology: Evidence-based approaches to theory, practice, and policy* (pp. 397–425). New York: Wiley.

Pearson, J., Hunter, A., Ensminger, M., & Kellam, S. (1990). Black grandmothers in intergenerational households: Diversity in family structure and parenting involvement in the Woodlawn community. *Child Development, 61*, 434–442.

Perry, G. M., & Nixon, C. J. (2005). The influence of role models on negotiation ethics of college students. *Journal of Business Ethics, 62*, 25–40.

Petersen, A. C., Crockett, L., Richards, M., & Boxer, A. (1998). A self-report measure of pubertal status: Reliability, validity, and initial norms. *Journal of Youth and Adolescence, 17*, 117–133.

Pew Foundation. (2010). *Since the start of the great recession, more children raised by grandparents.* http://pewreseacrh.org/pubs/1724

Pratt, N., Norris, J. E., Hebblethwaite, S., & Arnold, M. (2008). Intergenerational transmission of values: Family generativity and adolescents' narratives of parent and grandparent value teaching. *Journal of Personality, 76*, 171–198.

Reed, M. L. (2000). *Grandparents cry twice: Help for bereaved grandparents.* Amityville, NY: Baywood Publishing Company.

Reitzes, D. C., & Mutran, E. J. (2004). Grandparent identity, intergenerational family identity, and well-being. *The Journal of Gerontology: Social Sciences, 59B*, S213–S219.

Riegel, K. (1976). The dialectics of human development. *American Psychologist, 31*, 689–700.

Roberto, K. A., & Skoglund, R. R. (1996). Interactions with grandparents and great-grandparents: A comparison of activities, influences, and relationships. *The International Journal of Aging and Human Development, 43*, 107–117.

Rokach, A. (2000). Loneliness and the life cycle. *Psychological Reports*, *86*(2), 629–642.

Sanders, G. F., & Trygstad, D. W. (1989). Stepgrandparents and grandparents: The view from young adults. *Family Relations*, *38,* 71–75.

Scherrer, K. (2012). The intergenerational family relationships of grandparents of GLBQ grandchildren. *Dissertation Abstracts International: Humanities and Social Sciences, 72*(12-A), 4762 (abstract).

Schmidt, A., & Padilla, A. M. (1983). Grandparent–grandchild interaction in a Mexican–American group. *Hispanic Journal of Behavioral Sciences, 5*, 181–198.

Scholl, P. (1997). Relationships among adolescents' ego development, their academic achievement, and the amount of contact and social distance from grandparents. *Dissertation Abstracts International, 57*(8-B), 5391 (abstract).

Schwartz, P. D., Maynard, A. M., & Uzelac, S. M. (2008). Adolescent egocentrism: A contemporary view. *Adolescence, 43*, 441–448.

Semberg, L. (2013). Be there for my grandchild–grandparents' responses to their grandchildren's exposure to domestic violence. *Child and Family Social Work, 18*, 23–30.

Shaw, S. (2005). Grandparent involvement and communication development of children who are deaf blind. *Educational Gerontology, 31*, 51–71.

Sheridan, K., Haight, W.L., & Cleeland, L. (2011). The role of grandparents in preventing aggressive and other externalizing behavior problems in children from rural, methamphetamine-involved families. *Children and Youth Services Review, 33*, 1583–1591.

Sigurdardottir, S., & Julursdottir, S. (2013). Reciprocity in relationships and support between grandparents and grandchildren: An Icelandic example. *Journal of Intergenerational Relationships, 11*, 118–133.

Silverstein, M., & Chen, X. (1999). The impact of acculturation in Mexican American families on the quality of adult grandchild–grandparent relationships. *Journal of Marriage and the Family, 61*, 188–198.

Silverstein, M., & Parrott, T.M. (1997). Attitudes toward public support of the elderly does early involvement with grandparents moderate generational tensions? *Research on Aging, 19*, 108–132.

Sims, M., & Rofail, M. (2013). The experience of grandparents who have limited or no contact with their grandchildren. *Journal of Aging Studies, 27*, 377–386.

Smith, G.C., Palmieri, P., Hancock, G., & Richardson, R. (2008). Custodial grandmothers' psychological distress, dysfunctional parenting, and grandchildren's adjustment. *International Journal of Aging and Human Development, 67*, 327–358.

Smith, T. (2012). Adult grandchildren providing care to frail elderly grandparents. *Dissertation Abstracts International: Section A: Humanities and Social Sciences, 72*(11-A), 4320 (abstract).

Soliz, J. (2008). Intergenerational support and the role of grandparents in post-divorce families: Retrospective accounts of young adult grandchildren. *Qualitative Research Reports in Communication, 9*, 72–80.

Soliz, J., & Harwood, J. (2006). Shared family identity, age salience, and intergroup contact: Investigation of the grandparent–grandchild relationship. *Communication Monographs, 73*, 87–107.

Somary, K., & Stricker, G. (1998). Becoming a grandparent: A longitudinal study of expectations and early experiences as a function of age and lineage. *The Gerontologist, 38*, 53–61.

Stelle, C., Fruhauf, C., Orel, N., & Landry-Meyer, L. (2010). Grandparenting in the 21st century: Issues of diversity in grandparent–grandchild relationships. *Journal of Gerontological Social Work, 53*, 682–701.

Strom, R.D., Buki, L.P., & Strom, S.K. (1997). Intergenerational perceptions of English speaking and Spanish speaking Mexican-American grandparents. *International Journal of Aging and Human Development, 45*, 1–21.

Strom, R.D., Lee, T., Strom, P.S., Nakagawa, K., & Beckert, T.E. (2008). Taiwanese grandmothers: Strengths and learning needs as perceived by grandmothers, mothers, and granddaughters. *Educational Gerontology, 34*, 812–830.

Strom, P.S., & Strom, R.D. (2015). Assessment of intergenerational communication and relationships. *Educational Gerontology, 41*, 41–52.

Taylor, A.C., Robila, M., & Lee, H.S. (2005). Distance, contact, and intergenerational relationships: Grandparents and adult grandchildren from an international perspective. *Journal of Adult Development, 12*, 33–41.

Triadó, C., Villar, F., Solé, C., Osuna, M.J., & Pinazo, S. (2005). The meaning of grandparenthood: Do adolescent grandchildren perceive the relationship and

role in the same way as their grandparents do? *Journal of Intergenerational Relationships, 3*, 101–121.

Uhlenberg, P. (2004). Historical forces shaping grandparent–grandchild relationships: Demography and beyond. *Annual Review of Gerontology and Geriatrics, 26*, 77–97.

Uhlenberg, P. (2009). Children in an aging society. *Journal of Gerontology: Social Sciences, 64B*, S489–S496.

Uhlenberg, P., & Kirby, J. (1998). Grandparent over time: Historical and demographic trends. In M. Szionovacz (Ed.), *Handbook on grandparenthood* (pp. 23–39). Westport, CT: Greenwood Press.

Van Ranst, N., Verschueren, K., & Marcoen, A. (1995). The meaning of grandparents as viewed by adolescent grandchildren: An empirical study in Belgium. *The International Journal of Aging and Human Development, 41*, 311–324.

Villar, F., Triado, C., Piazo-Hernandis, S., Cedlran, M., & Sole, C. (2010). Grandparents and their adolescent grandchildren: Generational stake or generational complaint? A study with dyads in Spain. *Journal of Intergenerational Relationships, 8*, 281–297.

Wakefield, C., Drew, D., Ellis, S., Doolan, E., McLoone, J., & Cohn, R. (2014). "What they're not telling you": A new scale to measure grandparents' information needs when their grandchild has cancer. *Patient Care and Counseling, 94*, 351–355.

Watson, M. (2010). The facilitators and inhibitors for grandparents raising grandchildren in relation to parental involvement in school on behalf of their grandchildren. *Dissertation Abstracts International: Humanities and Social Sciences, 70*(7-A), 2839 (abstract).

Werner, P., & Lowenstein, A. (2001). Grandparenthood and dementia. *Clinical Gerontologist, 23*, 115–129.

Wiscott, R., & Kopera-Frye, K. (2000). Sharing of culture: Adult grandchildren's perceptions of intergenerational relations. *International Journal of Aging and Human Development, 51*, 199–215.

Wise, R. (2010). Intergenerational relationship characteristics and grandchildren's perceptions of grandparent goal influence. *Journal of Intergenerational Relationships, 8*, 54–68.

Won, S. (2010). The closeness between grandparents and grandchildren and its impact on grandparents' well-being. *Dissertation Abstracts International Section A: Humanities and Social Sciences, 71*(2-A), 717 (abstract).

Yorgason, J., Padilla-Walker, L., & Jackson, J. (2013). Nonresidential grandparents emotional and financial involvement in relation to early adolescent grandchild outcomes. *Journal of Research on Adolescence, 21*, 552–558.

Zimmermann, P., & Iwanski, A. (2014). Emotion regulation from early adolescence to emerging adulthood and middle adulthood age differences, gender differences, and emotion-specific developmental variations. *International Journal of Behavioral Development, 38*, 182–194.

CHAPTER TWELVE

The Transformation of Aging Politics and Policy in the United States

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Aging-related issues have found an increasingly prominent place on the nation's political agenda in recent years. After several decades of growing slowly and accompanied by little controversy, aging policies have more recently expanded dramatically and have yielded a more highly charged politics than had earlier been the case. This chapter speaks to three factors, dating from the New Deal period to the present, that lie at the heart of this transformation: (1) changes in the political standing of the older population over time and understanding of what are its collective policy needs; (2) an imposing political presence of older Americans in Washington, a presence created in part by programs enacted on their behalf; and (3) constraints in the economic and political environment impinging on elders' emergent policy domain. Taken together, these developments have served to expand the scope of conflict around aging policy whereby the heightened political and policy presence of the old is now encountering a series of countervailing economic and political pressures.

Early Years and Growth of Aging Policy and Politics

At least in historical perspective, the first 50 years of aging policy and politics were relatively benign. The older population was small in size and uniquely vulnerable, the larger social and economic environment was largely favorable, and there was little political resistance to promoting programs to address older persons' needs.

Vulnerable Elders

Dating back to the early 1900s, most elders led a precarious existence, one marked by lack of income, marginal health status, and a presumed inability to work. The great fear of late life was outliving one's income and, in the absence of individual wealth or family supports, people in old age were left to mercies of private charity or public alms. Such data as exist point to this host of perilous circumstances. Writing in the first issue of the *Social Security Bulletin*, Shearon (1938) reported some two-thirds of the older population to be dependent on others, but found—perhaps more striking—that one-half of those she was able to categorize as self-dependent were reliant on family or friends for additional income. Addressing the same period, Upp (1982) estimated that three-quarters of elders' income had come from their adult children.

Illness and disability were a second great concern of older people, both because they made work difficult or impossible and because there were few health and social supports to address those needs. Failed public health insurance initiatives during the Roosevelt and Truman years and restrictive private insurance provisions had left half of the older population with no form of health insurance at the time of Medicare's enactment in 1965. In the case of chronic illness and disability, elders were reliant principally on the care of family, friends, and private charities, with those of modest means occasionally gaining access to early "mom and pop" nursing homes (Vladeck, 1980). As late as 1961, a husband, testifying before the Senate Special Committee on Aging, asked what would happen if either he or his wife became ill, lamented that "I will have to seek come charity institution . . . and pronounce to the whole world that I am a pauper, a beggar" (Sundquist, 1968, p. 288).

Finally, there was a presumption that older people either could not work (due to illness) or should not work (in order than younger people might have jobs). That older people did work was frequently seen as unfairly burdensome to them, inefficient for employers, and unjust for unemployed younger workers (Graebner, 1980). As such, for many years Social Security was seen as much as labor market policy (encouraging retirement) as it was understood to be social welfare policy (assuring adequate income in old age). Until 2000, there was an earnings test under Social Security which served as a work disincentive by essentially taxing benefits above a modest income disregard. The formulas in defined-benefit pension plans, which grew dramatically in the immediate postwar years, also contained major disincentives to continued work. Only recently has eliminating the earnings test and the movement toward 401(k)-type retirement savings plans recognized and promoted continued work among older adults.

The Politics of Vulnerability

The political importance of these early understandings of elders as systematically at risk was its having lent significant legitimacy to their needs, that is, it granted elders the critical status that they *should* be supported through some public policy mechanism (Sherman & Kolker, 1987). Social insurance pioneer Isaac Rubinow (1934) spoke of the unquestioned needs of older people as "the final emergency"; Franklin Roosevelt opined that poverty in old age was not a result of a lack of thrift but was a "mere by-product of modern industrial life" (cited in Rimlinger, 1971, p. 212); and Gordon (1998) writes that, compared to single mothers in the early twentieth century, elders were a "group to be quintessentially deserving" of public support. These conditions lay at the heart of what Binstock (1983) identified as the long-standing "compassionate stereotype" of older adults. If one is understood as not being able or expected to work, pensions or savings vehicles should be put in place; if older people are understandably more ill than young people; and if the private market will not serve them, provision should be made for publicly sponsored health insurance.

A policy typology put forth by Schneider and Ingram (1993) neatly captures this reality. Interested in how different "target populations" fare in the public policy world, the authors suggest that populations be ranged along two dimensions: social construction (positive or negative) and political power (high or low). Four population types result from this configuration: Dependents (positive construction, low power), Advantaged (positive construction, high power), Contenders (negative construction, high power), and Deviants (negative construction, low power).

This typology has great utility in tracing the origins and evolution of aging politics and policy. As suggested by the preceding material, positive construction (or legitimacy) was an early hallmark of elders' social standing: they appeared deserving and in need of a variety of supports. At the same time—being relatively few in number and possessing few material resources—elders constituted a weak, bordering on nonexistent, political constituency. This combination of positive construction and low political power rendered them as Dependents as seen through the Schneider and Ingram construct.

Elders' needs generated both sympathy and political support from advocates for social reform and from policy makers sympathetic to those needs. Three critical legislative episodes speak to the political utility of their marginal social standing. The original Social Security Act featured seniors in both Title I (Old-Age Assistance) and Title II (Old-Age Insurance). A federal-state public assistance program, OAA was the sweetener to introduce the more controversial social insurance titles directed to both

elders and to the unemployed (Title V). Driving these developments were the desperate conditions produced by the Depression, the leadership of Franklin Roosevelt, and the workings of a small group of policy reformers constituting the Committee on Economic Security. While economic circumstances set the stage for major policy initiatives, it was key elite actors invoking the plight of seniors that brought agency to those circumstances and led to Social Security's enactment (Witte, 1962).

The second policy episode centered on Medicare represents an equally clear example of elders' standing and agendas which it serves. Attempts by Presidents Roosevelt and Truman to enact national health insurance having failed in the 1930s and 1950s, policy advocates turned toward older Americans as a politically sympathetic target population in devising Medicare proposals in the early 1960s. Elders' health-care needs and their limited resources were beyond question; as put by Medicare architect Wilbur Cohen, "massing statistical data to prove that the aged were sicker, poorer, and less insured than other adult groups was like using a steamroller to crush an ant of opposition" (quoted in Marmor, 1970, p. 17). In conjunction with intense lobbying by organized labor and its retirees, Medicare became law in 1965 (Sundquist, 1968). In no other country have older people served as either the sole or primary beneficiaries of national health insurance initiatives.

A third instance of the political utility of elders' vulnerability is found in the enactment of Supplemental Security Income in 1973. In 1970, President Richard Nixon proposed a fundamental restructuring of the Aid to Families with the Dependent Children program, calling for creation of a national minimum cash benefit and ending a so-called services approach to welfare dependency among young families (Moynihan, 1973). The proposal made considerable legislative headway until it was finally defeated in the Senate Finance Committee, conservatives appalled by the income guarantee and liberals finding the actual amount woefully low. Because the underlying idea of an income guarantee was dear to reform-minded officials, they set about to see if it would find acceptance directed to a different population. They concluded that such might be the case with regard to the so-called adult public assistance categories, those directed to the old, the blind, and the disabled, the Old-Age Assistance program being by far the largest of the three. In a remarkable turn of legislative fortune, the proposal was redirected to those groups and enacted shortly thereafter. Health, Education, and Welfare Secretary Wilbur Cohen, seated in the House chamber at the time of passage, exclaimed, "do you realize what they're doing? It's not even controversial, it's not even controversial!" (quoted in Burke and Burke, 1974, p. 198). Again, the policy legitimacy of

the aged held center stage, and the nation's first public income guarantee, as a supplement to low Social Security benefits, was enacted as SSI.

The remainder of the remarkable 1965–1974 policy decade saw additional policy activity on behalf of older Americans: enactment of Medicaid, the Older Americans Act, the Age Discrimination in Employment Act, and the Employee Retirement Income Security Act. As well, an Institute on Aging was created within the National Institutes of Health, and, importantly, Social Security benefits were increased by 58 percent between 1967 and 1973 (U.S. Office of Management and Budget, 2013). To be sure, elders were not alone in enjoying policy gains during these years, but they were disproportionately favored. This is seen perhaps most dramatically in a comparison in expenditure differences between aging programs the much heralded War on Poverty of the late 1960s. Expenditures for the latter never exceeded $2 billion per year whereas outlays for Social Security alone totaled $30 billion in 1970.

Policy Benefits and Political Activism

By the mid-1970s, these policy gains began generating positive both personal and political outcomes. The poverty rate among older Americans fell from 35 percent in 1959, to 25 percent in 1969, and to 15 percent in 1979 (U.S. Bureau of the Census, 2012). By the early 1980s, Social Security benefits constituted two-thirds of all income for one-half of older Americans. Median income among seniors increased from $19,900 in 1970 to $33,800 in 2001 (U.S. Bureau of the Census, 2002). Private pension coverage doubled between 1945 and 1980 (Employee Benefit Research Institute, 1998). Medicare and Veterans benefits resulted in over 95 percent of elders having health insurance coverage. These and other developments helped to both create retirement as a fully institutionalized life stage (Ekerdt, 1989) and, more broadly, to allow Treas and Bengtson (1982) to represent them as nothing less than "the democratization of aging."

These gains translated into the political as well as the social and economic spheres. A new Senate Select Committee on Aging trumpeted during the mid-1970s that seniors had gone from one-in-eleven to one-in-ten and then to one-in-nine, speaking to their new prominence (Brotman, 1977). Yet more to the point, elders were being transformed from a demographic cluster to a political constituency, evolving from "a category created by policy analysts" (Heclo, 1988) to one held together by a common characteristic, being distinct policy beneficiaries (Campbell, 2003).

After the rise and fall of the Townsend Movement of the 1930s and the postwar lull in organized activity, political involvement of the old ratcheted up beginning in the 1970s. To this point the policy gains made

by elders had resulted largely from their indisputable needs and advocates' desire to both assist them and promote progressive social policy. Now, a new period dawned in which needs were translated into interests and newly aware elders attracted the attention of business, service, and research organizations eager to associate with their new prominence. In rough cut, the need-to-demand part of the equation manifested itself principally in the birth of elder participation in politics; the organized interest element was seen in the formation of new advocacy groups targeting aging issues.

This extent of this transformation of elders' involvement in politics is remarkable on several counts. First, older people's rate of voting has not only increased over the ensuing years but has done so to the point that older Americans now vote at a higher rate than any other age group. This is in stark contrast to the pre-1970s scenario wherein seniors voted less than any group other than those aged under 24. Older people's high levels of voting have become even more pronounced in off-year elections, and presumably even more so in primaries where candidates for elective office are chosen. Beginning in 1986, elders voted at a higher level in off-year elections than other age groups, doing so at a rate twice that of the youngest voters and considerably more than the middle-aged (Campbell, 2003).

Elders' increasing involvement in politics extended beyond the formal act of voting. From a time when Schmidhauser (1970) suggested that older people ranked lowest in sense of political efficacy and among the lowest in "sense of citizen duty," elders have dramatically elevated their political game: they have quadrupled their rate of campaign contributing since 1952 (catching up to 35–64-year-olds in the 1980s), increased their level of campaigning (now equaling the 35–64-year-old group), and are increasingly in contact with Congressional representatives from the mid-1970s to the mid-1990s (whereas all nonsenior groups were in less frequent contact) (Campbell, 2003).

Elders' success in developing and attracting organized political support is perhaps even more stunning than their heightened levels of individual involvement. The birth and growth of contemporary aging interest groups began with the founding of the National Retired Teachers Association (NRTA) by an insurance executive creating a new market for his policies; NRTA later expanded into the American Association of Retired Persons, the name since abbreviated to AARP (Binstock, 2005). This group's reach now extends to over 40 million members with an operating budget in hundreds of millions of dollars, much of it centered on service provision and reduced-rate travel and kindred packages for members. A second mass-membership group—today named the Alliance for Retired Americans—began as Senior Citizens for Kennedy in

1960 and later became the National Council of Senior Citizens, where as an offshoot of organized labor it played a major role in the promotion of Medicare legislation in the early 1960s.

A host of additional groups sprang up in the wake of the late 1960s/early 1970s, watershed years of aging policy. Some are self-standing, others are sections within larger professional organizations such as law, nursing, or medicine. Yet others are more directly involved in the implementation of federal and state aging policy, notably the National Association of State Agencies on Aging and Disability and the National Association of Area Agencies on Aging (N4A). The number of such groups has continued to grow, and they came together in 1980 to form the Leadership Council of Aging Organizations, a confederation consisting of new fewer than 64 organizational members. Under the LCAO umbrella, these groups promote and defend aging policy provisions, both on behalf of elders themselves but especially around service contracts, research grants, and professional advancement opportunities (Lowi, 1969; Binstock, 1972; Walker, 1983).

Political and Policy Advantage: Elders

By the 1980s, this combination of policy benefits and political activity had introduced a new stage to aging politics. Abject need had generated policies that in the prosperous post–World War II years had begun to grow substantially. These policy benefits, in turn, had led to a dawning of political awareness among older people. What resulted was a symbiotic relationship between the policies and the politics that—in the Schneider and Ingram formulation—transformed elders from being a Dependent to an advantaged target population. While still maintaining their legitimate or deserving political standing, they had now emerged as a formidable political constituency.

In unraveling this connection, conventional wisdom would suggest that political activity came first, being requisite to public policy formation. Given the voting and lobbying presence of older Americans and their advocates, the necessary ingredients were surely in place. Yet, the picture is more complicated, and there is today strong evidence that the causal connection was largely in the other direction, that is, that the policies themselves helped generate elder political involvement. This dynamic has become a major focus of policy studies in recent years, referred to variously as "path dependency" (Pierson, 1993) or "bringing the state back in" (Skocpol, 1985). Looking at the policy process through this lens, policy at Time 1 is an independent factor shaping subsequent political activity at Time 2. In Campbell's (2012) words: "The central insight was that public policies are not merely products of politics but also shape the political

arena and the possibilities for further policymaking" (p. 334). This relationship has been documented in the cases of the GI Bill of the 1940s and 1950s (Mettler, 2005), Disability Insurance in the 1950s and 1960s (Soss, 2000), and welfare reform in the 1990s (Soss and Schram, 2007).

However, there may be no arena other than aging policy where this dynamic is seen more clearly. Examining the interplay in the particular case of aging policy during and in the wake of the 1960s–1970s growth of aging policies, Walker (1983) determined that more than one-half of the 46 aging-related interest groups emerging during this period were formed after 1965, the year in which Medicare, Medicaid, and the Older Americans Act were enacted. Walker concludes that:

> In all of these cases, the formation of new groups was one of the *consequences* of major new legislation, not one of the *causes* of its passage. A pressure model of the policymaking process in which an essentially passive legislature responds to positions from groups of citizens who have spontaneously organized because common social or economic concerns must yield to a model in which influences for change come as much from inside the government as from beyond its institutional boundaries. (p. 403; emphasis in original)

The most direct piece of evidence in support of the policy's independent role in aging politics was the creation of the two trade associations whose state and local affiliates were brought into existence by federal legislation. The Older Americans Act mandated creation of State Units on Aging across the country in 1965, and Amendments passed in 1973 required creation of substate planning bodies, designated as Area Agencies on Aging. Within a year of each of these enactments, both the National Association of State Units on Aging (NASUA) and the N4A had established offices in Washington through which they continued to bring the social service needs of older persons to the attention of Congress and federal agencies (Hudson and Strate, 1985).

The most compelling application of this model to aging policy centers on the role of Social Security in helping to create a sense of political identity among older people. In her book, *How Policies Make Citizens: Senior Political Activism and the American Welfare State*, Campbell (2003) establishes a clear connection between the dramatic expansion of Old-Age and Survivors benefits under Social Security and the heightened participation by older Americans in the political process. She juxtaposes Social Security liberalization—involving both eligibility for benefits and benefit increases—against measures of participation—voting, contributing, campaign work, contacting—and finds increases in each of these types of activity in the wake of Social Security expansion and, more recently, in the wake of perceived threats to existing benefits. While broadening concern

from a few score groups to millions of individuals, Campbell's conclusions are very reminiscent of Walker's:

> Absent Social Security, senior citizens are a disparate group of people whose common characteristic, age, has little political meaning. Once governmental benefits are conferred, however, the group has political relevance and is ripe for mobilization by policy entrepreneurs, interest groups, and political parties. (p. 36)

As a result of this interplay of critical aging-centric forces—demographic (growing population), social (heightened self-identification), economic (increasing prosperity), and political (imposing presence)—older Americans had clearly achieved Schneider and Ingram's Advantaged status by the turn of the century. They had largely maintained their legitimacy based on a deeply held, though somewhat suspect, belief in their universal vulnerability, and they had attained major standing in domestic politics, at one point seen as "America's most powerful lobby" (Van Atta, 1998). It is hard to overstate the magnitude of this transformation over little more than half a century, and it is nearly as important to highlight the role of public policy in bringing it about.

Emergence of a Transformed Aging Policy Environment

Elders, attaining an Advantaged status, were a function of a supportive environment and the improvements in life circumstances fostered by that environment. Emerging in the late-1970s, however, was a different set of forces which introduced new and unprecedented pressures into the aging policy domain. In the years since, this newly constrained environment has greatly expanded the scope of conflict around age-related policy and, as a consequence, has fundamentally transformed its dynamics.

A Downshifting Economy

The United States enjoyed a period of virtually uninterrupted economic expansion in the quarter-century following World War II. The Depression had suppressed economic growth, and the war had diverted resources from the domestic economy. Moreover, these two climactic events had led to a dramatic decline in birth rates over a 15-year period. In the postwar years, a combination of pent-up consumer demand, arrival of the baby boom, and the United States' domination of the international economy yielded enormous economic gains. During the century's fourth quarter, however, major changes occurred in each of these realms, with economic growth slowing, birth rates declining, and international economic competition exploding.

The significant slowdown in economic growth impacted both the larger economy and government revenues. Between 1950 and 1973, growth in the gross domestic product (GDP) averaged 4.25 percent annually; between 1974 and 2013, that average had fallen to 2.65 percent annually, a decline of more than one-third (U.S. Bureau of Economic Analysis, 2012). Persistent and increasing federal budget deficits also represented a great divide between the two periods. In constant 2005 dollars, the average annual deficit (including periodic surpluses in the calculation) from 1950 to 1973 was $37 billion, or 0.71 percent of GDP; for the period 1974–2013, annual deficits (also in constant dollars) averaged $320 billion, equal to 3.37 percent of GDP (U.S. Office of Management and Budget, 2013), with the deficit at 9.8 percent of GDP at the height of the recession in 2009 (U.S. Congressional Budget Office, 2013). The accumulated federal debt level also accelerated during this period, today totaling $17 trillion.

The combination of slowed economic growth and federal budget deficits has had clear relevance to aging policy. Social Security and Medicare constitute the second and third largest federal budget items after national defense. Not all of these dollars are directed to older Americans—Disability and Survivors Insurance constitute roughly one-third of Social Security outlays, and Medicare beneficiaries include individuals with disability and end-stage renal disease. Nonetheless, in much political parlance it is assumed that older people are virtually the sole recipients of these expenditures, and federal expenditures on behalf of seniors from all federal government sources are very large. The Congressional Budget Office calculated the amount to be $615 billion in 2000 (U.S. Congressional Budget Office, 2002), and a more recent calculation by Isaacs (2009) placed the figure at $767 billion. In broader perspective, CBO found expenditures for individuals aged 65 and over to constitute 35 percent of federal spending and projected it to be 43 percent by 2010; Isaacs estimates that such spending may constitute no less than 47 percent of spending by 2050. This contrasts with spending on behalf of older Americans during the earlier period to have equaled 22 percent of the budget in 1971, or $46 billion (U.S. Congressional Budget Office, 2002).

Political Realignments

The political context in which old-age policy found itself also underwent fundamental changes beginning in the late 1970s. Rising levels of inflation and unemployment, the travails of the Nixon/Ford (Reeves, 1975) and Carter presidencies (Johnson, 1980), and a rising conservative movement assailing the Great Society programs of the 1960s brought new players into

the political arena. Conservative think tanks (Cato Institute, Heritage Foundation), new journals (*The Public Interest*, *Commentary*, *National Review*), and nationally syndicated columnists (William F. Buckley, George Will, Robert Samuelson, Charles Krauthammer) all joined the fray.

The election of Ronald Reagan in 1980 solidified the rise of conservatism. Its encompassing attack on federal social policy was captured by three of the President's stock phrases promoting his alternative agenda: privatization ("getting the government off your back"), decentralization ("bringing government closer to the people"), and individualization ("promoting traditional family values") (Palmer & Sawhill, 1984). Hacker (2006) captured the totality of this agenda, labeling it "the great risk shift." From a time when government offered protection against selected risks of modern life—old age, disability, illness—and large companies provided guaranteed pensions and health-care coverage—defined-benefit plans and employee and retiree health insurance—the emergent conservative agenda stressed the roles of families, communities, and the private sector. More generally, the entire domestic political agenda moved to the right post-Reagan, as captured by Thrush (2011), contending during the 2011 federal debt ceiling debate that "the center has shifted to the right" and that in today's politics "there is no such thing as a liberal victory."

Aging Policy and the New Environment

Prior to this period, aging policy had enjoyed—by the prevailing standards of American social policy—a charmed existence. From a time when "you couldn't do enough for the elderly," older Americans entered a more contested arena captured in the title of Derthick's (1979) seminal article "How Easy Votes for Social Security Came to an End." Similar analyses abounded, as in Estes (1979) critiquing "the aging enterprise," Hudson (1978) cautioning advocates around "the graying of the federal budget," and Samuelson (1978) bemoaning the challenge of "shouldering the growing burden" of aging-related expenditures. Indeed, expenditures did continue to grow despite new clouds on the aging horizon, whether automatically (Weaver, 1988), unsustainably (Concord Coalition, 2003), or understandably (Ball, 2000). Social Security benefits rose 67 percent between 1967 and 1973, and spending under the nascent Medicare program jumped from $33 billion in 1971 to $105 billion in 1980.

Pressures began to rise against these and other aging expenditures. Early in his administration, Reagan proposed major Social Security cuts which, while rescinded in the face of fierce resistance, were unprecedented in their intent (Palmer & Sawhill, 1984). Seven years later, the Administration proposed a liberalization of Medicare benefits through the Medicare

Catastrophic Coverage Act, but with the catch that—unlike all previous social insurance benefits for seniors—these would have to be paid for by seniors themselves (Himelfarb, 1995). Vocal opposition led to the law being repealed, but the intragenerational funding mechanism spoke to an entirely new aging politics playing field. Some years later, President Clinton fought a successful two-year battle against Congressional Republicans trying to enact major cuts in Medicare and Medicaid, but once again elder interests were defending turf they already occupied rather than expanding benefits in a manner seen in the earlier years (Smith, 2002).

The contested politics around aging continued after the turn of the century. The results were mixed, but in no way were the politics benign. Republicans and Democrats came to a grudging agreement to add a prescription drug benefit to Medicare, with Republicans putting in place an entirely private insurance delivery system and Democrats claiming credit for a benefit that they had long advocated (Pear, 2003). In 2005, the Bush Administration sought to partially privatize Social Security as well, but was defeated by opposition from elders, their organizations, and a wide array of progressive policy interests (Weisberg, 2005).

There have been fewer policy fireworks than these in the Obama years, but two somewhat tangential episodes, both centered on Medicare, speak to the tensions that continue to surround aging policy. Passage of the Affordable Care Act (aka "Obamacare") in 2009 dominated the domestic policy agenda at the end of the decade. While the ACA's benefits and requirements are directed exclusively at working-age and younger Americans, negative reaction to the legislation resonated loudly among older Americans and politicians seeking their support. Republicans, who had pressed for Medicare cuts in the 1990s, suddenly rushed to the program's defense, arguing that major cuts were being made to Medicare to fund the ACA (Nagourney, 2009). The ACA's defenders contended that the cost savings would come from providers, not beneficiaries, but many older voters were convinced that the ACA was an attack on their program. Indeed, support for the ACA was lower among older voters than any other age group, and analysts associated gains made by Republicans in the 2010 off-year election to elders' concerns (Binstock, 2012).

In 2012, Representative Paul Ryan of Wisconsin, arguing that competition would hold down rising Medicare costs, proposed converting Medicare into a voucher program whereby elders would get a fixed-amount "premium support" to take into the private insurance market. Opponents argued that this was a clear example of risk-shifting and that elders (and providers) would be penalized by what was certain to be failure of the voucher amounts to keep up with utilization and cost growth (Morgan, 2014).

The dual conclusion to be drawn from this series of legislative episodes is that new political, economic, and budgetary pressures are now growing on aging programs but that elders and their advocates have emerged as a potent political force willing and usually able to withstand these growing pressures, It is in that sense that aging politics has moved into a third of Schneider and Ingram's (1993) categories, that of Contenders: a population whose legitimacy has come into question but whose power has been maintained or increased. In the specific case of older Americans, the lessened legitimacy has resulted in new questions about their collective needs and the seeming political consequence that seniors seem to be perfectly able to take care of themselves. In sum, through the Schneider and Ingram formulation, over the course of some 75 years elders' political life has segued from being that of Dependents, to becoming Advantaged, and most recently as having to do battle as Contenders.

The Challenges of Issue Framing

The positive political news for today's elders is that they are politically powerful; the more cautionary message is that they had better be powerful given the forces and trends that are confronting them. No longer being helped along by others or helping themselves in a supportive environment, elders now must muster their energies to maintain benefits and prepare for future challenges.

Much of their success will revolve around the seemingly abstract notion of issue framing. When groups can largely control their policy agendas, as seniors long could, issue framing was a nonissue. But when political actors with different and/or opposing agendas are in place, whose issues are placed on the political agenda and how they are framed becomes all important. In recent years, older Americans have faced three such framing challenges that have tested their political mettle.

The first frame to reconfigure understandings of aging policy centered on the notion of intergenerational equity. Beginning in the late-1980s, various commentators argued that public benefits being weighted so heavily in favor of older people was putting an unfair burden on younger people and threatening their very future. Article and book titles such as "The Tyranny of America's Old" (Smith, 1992) and "Meet the Greedy Grandparents" (Chapman, 2003) suggested the rise of some of kind of generational warfare as old and young would be pitted against each other. *Washington Post* columnist Robert Samuelson has captured this framing repeatedly with articles over the decades such as "The withering freedom to govern" (1978), "Why are we in this debt fix? It's the elderly, stupid," (2011)

and "We need to stop coddling the elderly" (2013). Most notorious was Alan Simpson's (Co-Chair of the Simpson–Bowles Deficit Reduction Commission of 2010), declaring "people on Social Security milk it to the last degree. . . . We've reached a point now where it's like a milk cow with 310 million tits. Call when you get honest work" (Simpson, 2010).

Two substantive arguments are made in defense of this alleged intergenerational injustice. First, the federal government spends a great deal more money on behalf of elders than it does of children, estimated to be seven times as much (Isaacs, 2009). Second, elders are faring much better than has ever been the case. Poverty among the old has been reduced fourfold between 1959 and 2012, and average incomes increased by 50 percent between 1974 and 2010. Moreover, during this time period, the poverty rate for elders fell, remarkably, below that of children, and middle-aged and younger families had much smaller percentage gains in average income and net wealth than did seniors over that time frame (Interagency Forum on Aging-Related Statistics, 2012; Fry, 2011).

Elder advocates have mounted strong rebuttals to these assertions, arguing most fundamentally that there is overwhelming sociological evidence that generations are tightly bound together and that their relationships are more about reciprocity than opposition (Williamson & Watts-Roy, 1999). In addition, on the empirical side, there is a wealth of evidence that conclusions being drawn from these averaged data are highly misleading. Disparities in wealth and well-being among the old are enormous, with non-Hispanic whites being twice as well-off as Hispanics and blacks, and with the differences between older men and women being nearly as large. Social Security may be an expensive program, but half of elders receive more than three-quarters of their income from the program, and the average annual old-age benefit is roughly $15,000, hardly a king's ransom.

More broadly, advocates argue that the entire generational argument is a Trojan horse, used by conservatives to mask their real concern, which is to cut federal social spending. The harshest critics contend that there is no genuine concern for children in this framing, arguing that if age-related spending were substantially reduced, the savings might well result in tax cuts and increased defense spending rather than being directed toward children (Marmor & Hacker, 1997). Nonetheless, the intergenerational frame has put aging policy in a defensive mode in a range of policy venues.

The second frame directed at aging policy and expenditures is centered on benefit and delivery privatization. Private alternatives speak directly to individual ownership rather than publicly pooled trust funds (as an alternative to Social Security), the promotion of market competition (as an alternative to traditional Medicare), and the sanctity of family values and responsibility (the principal home of long-term care services and supports

in addition to the means-tested Medicaid program). Whatever the theoretical benefits of private provision, privatizing old-age benefits would represent an enormous assault on overall federal social programs. It is in this vein, that observers occasionally invoke the words of notorious bank robber Willy Sutton who, when asked why he robbed banks, said "because that's where the money is." With the partial exception of the Part D prescription drug program, the privatization tack has not seriously eroded the federal government's central role in aging policy, but ongoing privatization initiatives—including those associated with the Affordable Care Act and its Medicaid provisions—press directly against elders' policy interests. The abrupt repeal of the so-called CLASS Act to create a federal long-term care insurance program illustrated how difficult it will be to see enactment of new public sector initiatives in aging (*Public Policy & Aging Report*, 2010).

The most recent recasting of aging policy has centered on the alleged "entitlement crisis" that the nation has been facing. Once an arcane budgetary term, the entitlement moniker came to suggest people getting something for nothing or at least something for not enough. And because formal entitlements are indeed free from annual appropriation cycles, they could be argued to be growing uncontrollably. Couple this with the state of the Social Security Trust Funds—money presumably set aside for future retirees but which has long been used for general government purposes in exchange for which the U.S. Treasury now owes the Social Security system billions of dollars—and critics argue that the arrangement has reduced the system to little more than a Ponzi Scheme. Defenders retort that of course Treasury will pay back the borrowed funds as it would to any lender, for example, the Chinese government. Moreover, they argue that a modest tweaking of the existing system will resolve any potential shortfalls on the ongoing flow of payroll tax revenues. But the larger argument here is that yet another framing puts aging benefits in political crosshairs, which was seldom the case previously. In short, aging policy has been extended beyond aging by its challengers. Doing so has imperiled aging advocates from setting their own agenda and promoting what they see to be ongoing needs among older Americans.

Political Dynamics and Population Characteristics

This analysis has focused exclusively on the political dynamics surrounding the impressive expansion of aging policy over the course of several decades. In a colloquial phrasing, there is a widespread assumption that these "rising policy tides have lifted most (older) boats." But, not coincidentally, these framings not only place aging advocates into a defensive posture, but they also bring with them the collateral damage of ignoring

the harsh realities facing large numbers of older people. Put differently, the battle over these indisputably large aging programs—totaling well over $1 trillion dollars and being largely universal—loses sight of the modest level of benefits that individual elders actually receive from them. Yes, the $760 billion elders receive from Social Security is a great deal of money, but the $1,300 per month received by any one of them is very difficult to live on.

Data speaking to the remaining and ongoing vulnerabilities faced by many elders are voluminous, a very partial enumeration of which finds:

- 48 percent of seniors are economically vulnerable by virtue of having incomes less than two times the Census Bureau's Supplemental Poverty measure for adults (Gould & Cooper, 2013).
- 31 percent of black women living alone are in poverty compared to 11 percent of white men (Gonyea, 2014).
- 45 percent of working-age households have no dedicated retirement savings (Kingson & Checksfield, 2015).
- 39 percent of non-Hispanic black and 27 percent of Hispanic older households have employer-sponsored pensions or IRA/Keogh retirement accounts in contrast to 72 percent of non-Hispanic whites who have such plans (Mudraziija & Angel, 2014).
- 73 percent of women over 85 are widows compared to 35 percent of men (Federal Inter-Agency Forum on Aging-Related Statistics, 2013).
- 54 percent of people 85 and older living in the community reported having functional limitations inhibiting daily activities (U.S. Congressional Budget Office, 2013).
- 7 of the top 10 causes of death are chronic illnesses, a risk addressed only marginally through the means-tested Medicaid program (Carstensen et al., 2015).
- 10 percent of elders are the victims of physical, mental, financial mistreatment or neglect (Kaplan and Pillemer, 2015).

These are grim indicators of structured inequality among the old, where the predictors of vulnerability are distressingly clear. Yet, on the other end of these distributions are elders who are prosperous, healthy, safe, and secure. The richest 10 percent of individuals aged 65 have incomes averaging $87,000 whereas the income for the poorest 10 percent have ones averaging $7,500 (U.S. Bureau of the Census, 2012), and the longevity of the richest 10 percent (born in 1940) is 35 years compared to 25 years for the poorest 10 percent (Bosworth & Burke, 2014). To say that there are shades of gray marking disparities in elders' well-being does not do justice to the differences; the more apt metaphor would be black and white striations.

These dueling political realities bring us back to the Schneider and Ingram (1993) formulation, which has guided much of the discussion here. In the earliest stage, most elders were in fact dependent; in the second stage most, but certainly not all, elders were advantaged. In the current contender stage, the existing policy template seems to be firmly in place, with critics and advocates engaged in much of a policy standoff.

Should the pressures remain and the plight of many baby boomers headed to retirement become the crisis that some are predicting (Ellis, Munnell, & Eschtruth, 2014), we can speculate that a fourth stage may emerge, one which splits the shifting singularity that has captured elders as a target population over time. This fracturing would result in a large subset of elders being recast—politically, at least—as dependents, understood to be in demonstrable need of support from all quarters, with more prosperous elders able to defend existing benefits in a manner consistent with being seen and behaving as contenders.

The policy consequences of such a bifurcation might take one of two forms, and the struggle between them would be intense. Conservative forces would see the logical policy extension of elders understood as Dependent to be devising or expanding means-tested programs, ones that by definition were directed to the neediest individuals. Such public assistance programs would resemble or, in fact, be extensions of existing programs, such as SSI or Medicaid. But, as public assistance programs, they would be funded out of general revenues and would involve formal income and/or functional means-testing. The liberal alternative would follow along the lines of what Skocpol (1995) has labeled "targeting within universalism" through which broad-based social insurance programs, notably Social Security, would have the benefit formula increasingly tilted toward low-income and/or impaired individuals, but all would remain in the same pool. Either system could generate benefits that were more or less generous or more or less progressive, but the underlying philosophies would be very different. The extension of assistance programs represents public charity, whereas the modification of social insurance programs represents contractual reciprocity, albeit in a form that mixes elements of adequacy with insurance's core element of equity.

However future policy debates may play out, the present analysis suggests that the days in which elders were considered politically as singular and legitimate beneficiaries of public benefits may have ended. This singular understanding has long served elders very well, but for it to continue would require that higher-income elders and organizations representing them be open to more progressive allocations benefitting lower-income compatriots. Income and wealth inequalities mark contemporary and emerging aging populations every bit as much as younger ones, and policy will need to recognize this one way or the other.

References

Ball, R. (2000). *Insuring the essentials*. New York: Century Foundation.

Binstock, R. B. (1972). Interest group liberalism and the politics of aging. *Gerontologist, 12*(3), 265–280.

Binstock, R. B. (1983). The aged as scapegoat. *Gerontologist, 23*(2), 136–143.

Binstock, R. B. (2005). Contemporary politics of old age policies. In R. B. Hudson (Ed.), *New politics of old age policy* (pp. 265–293). Baltimore, MD: Johns Hopkins University Press.

Binstock, R. B. (2012). Older voters and the 2010 US election: Implications for 2012 and beyond? *Gerontologist, 52*(3), 408–417.

Bosworth, B., & Burke, K. (2014). *Differential mortality and retirement benefits in the health and retirement study*. Washington, DC: Brookings Institution.

Brotman, H. (1977). The graying of every 10th American or every 9th American. *Developments in aging* (pp. xv–xxiii). Washington, DC: U.S. Senate Committee on Aging.

Burke, V., & Burke, V. (1974). *Nixon's good deed: Welfare reform*. New York: Columbia University Press.

Campbell, A. L. (2003). *How policies make citizens: Senior political activism and the American welfare state*. Princeton, NJ: Princeton University Press.

Campbell, A. L. (2012). Policy makes mass politics. *Annual review of Political Science,* (15), 333–351.

Carstensen, L., Rosenberger, M., Smith, K., & Modrek, S. (2015). Organizing health in aging societies. *Public Policy & Aging Report, 25*(2): 38–42.

Chapman, S. (2003). Meet the greedy grandparents. *Slate*. http://slate.msn.com/id/2092302/%20

Concord Coalition. (2003, March 19). Seniors still come first in the budget. *Facing Facts Alert, 9*(2).

Derthick, M. (1979). How easy votes on Social Security came to an end. *Public Interest, 54*, 94–105.

Ekerdt, D. J. (Ed.) (1989). Retirement comes of age. *Generations, 13*(2), 5–6.

Ellis, C. D., Munnell, A. H., & Eschtruth, A. D. (2014). *Falling short: The coming retirement crisis and what to do about it*. New York: Oxford University Press.

Employee Benefit Research Institute. (1998). *History of pensions.* www.ebri.org/publications/facts/index.cfm?fa=0398afact

Estes, C. (1979). *The aging enterprise*. San Francisco, CA: Jossey-Bass.

Federal Inter-Agency Forum on Aging-Related Statistics. (2013). *Older Americans: Indicators of well-being.* http://www.agingstats.gov/agingstatsdotnet/Main_Site/Data/2012_Documents/Docs/EntireChartbook.pdf

Fry, R. (2011). The rising gap in economic well-being: The old prosper relative to the young. *Pew Research: Social and demographic trends.* New York: Pew Foundation.

Gonyea, J. G. (2014). The policy challenges of a larger and more diverse oldest-old population. In R. B. Hudson (Ed.), *The new politics of old age policy* (3rd ed., pp. 155–181). Baltimore, MD: Johns Hopkins University Press.

Gordon. L. (1998). *Pitied but not entitled: Single mothers and the history of welfare*. New York: Free Press.

Gould, E., & Cooper, D. (2013). *Financial security of elderly Americans at risk*. Washington, DC: Economic Policy Institute. http://www.epi.org/publication/economic-security-elderly-americans-risk/

Graebner, W. (1980). *A history of retirement: The meaning and function of an American institution*. New Haven, CT: Yale University Press.

Hacker, J. (2006). *The great risk-shift*. New York: Oxford University Press.

Heclo, H. (1988). Generational politics. In J. L. Palmer, T. Smeeding, & B. B. Torrey (Eds.), *The vulnerable* (pp. 381–412). Washington, DC: Urban Institute.

Himelfarb, R. (1995). *Catastrophic politics: The rise and fall of the Medicare Catastrophic Coverage Act of 1988*. State College, Pennsylvania State University Press.

Hudson, R. B. (1978). The graying of the federal budget and its consequences for old-age policy. *Gerontologist, 18*(5), 28–40.

Hudson, R. B., & Strate, J. (1985). Aging and political systems. In R. H. Binstock & E. Shanas (Eds.), *Handbook of aging and the social sciences* (pp. 554–588). New York: Van Nostreand Reinhold.

Isaacs, S. (2009). *Spend on children and the elderly*. http://www.brookings.edu/~/media/research/files/reports/2009/11/05-spending-children-isaacs/1105_children_elderly_isaacs.pdf

Johnson, H. (1980). *In the absence of power*. New York: Viking.

Kaplan, D., & Pillemer, K. (2015). Fulfilling the promise of the Elder Justice Act: Priority goals for the White House Conference on Aging. *Public Policy & Aging Report, 25*(2), 63-66.

Kingson, E. R., & Checksfield, M. (2015. Advancing a retirement income security agenda for all ages. *Public Policy & Aging Report, 25*(2), 47-51.

Lowi, T. J. (1969). *The end of liberalism*. Chicago, IL: W.W. Norton.

Marmor, T. R. (1970). *The politics of Medicare*. Chicago, IL: Aldine.

Marmor, T. R., & Hacker, J. (1997). Ends don't justify the means-test. *Los Angeles Times*. http://articles.latimes.com/1997/jul/14/local/me-12570

Mettler, S. (2005). *Soldiers to citizens: The GI Bill and the making of the greatest generation*. New York: Oxford University Press.

Morgan, K. J. (2014). Medicare: Clients, cost controls, and Congress. In R. B. Hudson (Ed.), *The new politics of old age policy* (3rd ed., pp. 201–220). Baltimore, MD: Johns Hopkins University Press.

Moynihan, D. P. (1973). *The politics of a guaranteed income.* New York: Vintage.

Mudraziija, S., & Angel, J. (2014). Diversity and the economic security of older Americans. In R. B. Hudson (Ed.), *The new politics of old age policy* (3rd ed., pp. 38–154). Baltimore, MD: Johns Hopkins University Press.

Nagourney, A. (2009, September 13). Politics and the age gap. *New York Times*, p.1.

Palmer, J. L., & Sawhill, I. (1984). *The Reagan record*. New York: Ballinger.

Pear. R. (2003, November 18). Medicare plan covering drugs backed by AARP. *New York Times*, A1.

Pierson, P. (1993). When effect becomes cause: Policy feedback and political change. *World Politics, 45*(4), 595–618.

Pressman, J., & Wildavsky, A. (1973). *Implementation: How great expectations in Washington are dashed in Oakland*. Berkeley: University of California Press.

Public Policy & Aging Report (2010). Bringing CLASS to long-term care, *20*(2), 3–42.

Reeves, R. (1975). *A Ford, not a Lincoln*. New York: Harcourt.

Rimlinger, G. (1971). *Welfare policy and industrialization in Europe, America, and Russia*. New York: Wiley.

Rubinow, I. (1934). *The quest for security*. New York: Holt.

Samuelson, R.J. (1978, March 5). The withering freedom to govern. *Washington Post*.

Samuelson, R.J. (2011, July 28). Why are we in this debt fix? It's the elderly, stupid! *Washington Post*. http://www.washingtonpost.com/opinions/why-are-we-in-this-debt-fix-its-the-elderly- stupid/2011/07/28/gIQA08LtfI_story.html

Samuelson, R.J. (2013, November 3). We need to stop coddling the elderly. *Washington Post*. http://www.washingtonpost.com/opinions/robert-j-samuelson-we-need-to-stop-coddling-the-elderly/2013/11/03/4063ebc0–430f-11e3-a624-41d661b0bb78_story.html

Schmidhauser, J.R. (1970). The elderly and politics. In A.M. Hoffman (Ed.), *The daily needs and interests of older people* (pp. 72–89). Springfield, IL: Charles C Thomas.

Schneider, A., & Ingram, H. (1993). Social construction of target populations. *American Political Science Review, 87*, 333–347.

Shearon, M. (1938). The economic status of the aged. *Social Security Bulletin, 1*, 5–16.

Sherman, A.K., & Kolker, A. (1987). *The social bases of politics*. Belmont, CA: Wadsworth.

Simpson, A. (2010). http://money.cnn.com/2010/08/25/news/economy/alan_simpson_fiscal_commission/

Skocpol, T. (1985). Bringing the state back in. In P. Evans, D. Rueschemeyer, & T. Skocpol (Eds.), *American society and politics* (pp. 3–37). New York: Cambridge University Press.

Skocpol, T. (1995). Targeting within universalism: Politically viable strategies to fight poverty in the United States. In T. Skocpol (Ed.), *Social policy in the United States* (pp. 250–274). Princeton, NJ: Princeton University Press.

Smith, D.G. (2002). *Entitlement politics: Medicare and Medicaid 1995–2001*. New York: Aldine.

Smith. L. (1992). The tyranny of America's old. *Fortune, 125*(1), 68–72.

Soss, J. (2000). *Unwanted claims: The politics of participation in the U.S. welfare system*. Ann Arbor: University of Michigan Press.

Soss, J., & Schram, S.F. (2007). A public transformed? Welfare reform as policy feedback. *American Political Science Review, 101*(1), 111–127.

Sundquist, J.L. (1968). *Politics and policy: The Eisenhower, Kennedy, and Johnson years*. Washington, DC: Brookings Institution.

Thrush, G. (2011). The summer of liberal discontent. *Politico*. http://dyn.politico.com/printstory.cfm?uuid=9D50ABF4–22CE-4945-B01B-9CAF16F5C9B8

Treas, J., & Bengtson, V.L. (1982). The demography of mid- and late-life transitions. *Annals of the American Academy of Political and Social Science, 446*, 11–21.
Upp, M. (1982). A look at the economic status of the aged then and now. *Social Security Bulletin*, *45*, 16–20.
U.S. Bureau of the Census. (2002). *Current population survey, annual social and economic supplement.* Washington, DC.
U.S. Bureau of the Census. (2012). *Current population survey, annual social and economic supplement*, Table PINC 01.
U.S. Bureau of Economic Analysis. (2012). *U.S. GDP by year since 1929 compared to major events*. Washington, DC: U.S. Department of Commerce.
U.S. Congressional Budget Office. (2002). *Federal spending for the elderly and children*. http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/23xx/doc2300/fsec.pdf
U.S. Congressional Budget Office. (2013). *The budget and economic outlook, fiscal years 2013 to 2023 and supplementary data*.
U.S. Office of Management and Budget. (2013). *Summary of Receipts, Outlays, Surpluses and Deficits Table 1.1*. http://www.whitehouse.gov/omb/budget/Historicals
Van Atta, D. (1998). *Trust betrayed: Inside the AARP*. New York: Regnery Press.
Vladeck, B. (1980). *Unloving care: The nursing home tragedy*. New York: Basic Books.
Walker, J. (1983). The origins and maintenance of interest groups in America. *American Political Science Review, 77*(2), 390–406.
Weisberg, J. (2005, March 31). Bush's first defeat: The president has lost on social security. *Slate*. www.slate.com/id/2115141
Weaver, R.K. (1988). *Automatic government: The politics of indexation*. Washington, DC: Brookings Institution.
Williamson, J.B., & Watts-Roy, D. (1999). Framing the generational equity debate. In J.B. Williamson, D. Watts-Roy, & E.R. Kingson (Eds.), *The generational equity debate* (pp. 3–37). New York: Columbia University Press.
Witte, E. (1962). *Development of the Social Security Act*. Madison: University of Wisconsin Press.

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Gerontology

Changes, Challenges, and Solutions

Volume 2: Health and Wellbeing

Madonna Harrington Meyer and
Elizabeth A. Daniele, Editors



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Manufactured in the United States of America

To my family,
my greatest joy
M.H.M.

To my family,
my first teachers and greatest support
E.A.D.

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Introduction

Madonna Harrington Meyer

Volume 2: Health and Wellbeing

As socioeconomic disparities grow in the United States, so do health disparities. Volume 2 focuses on causes and consequences of growing inequalities in health and well-being. The health and wellness of older people is tremendously diverse. By the time they reach age 65, millions of older Americans have enjoyed decades of cumulative advantage and report good health and abundant resources with which to protect their health. But millions of others have faced decades of cumulative disadvantage and report poor health and insufficient resources with which to protect their health (Ferraro, Shippee, & Schafer, 2009; Avendano & Kawachi, 2014). While some fight hard against age-related health and disability problems, others are overwhelmed by both the physical and economic consequences.

These differences become apparent in a comparison of Harriette and Bennie. In May of 2015, Syracuse University Alumni Harriette Thompson of Charlotte, North Carolina, completed her 16th Rock 'n' Roll Marathon in San Diego in less than 7½ hours. At age 92, she became the oldest woman to finish a marathon (Associated Press, 2015). It wasn't easy. Harriette is a cancer survivor who had, just months earlier, buried her husband and struggled with a staph infection in her leg. But the classically trained pianist, who studied at the New England Conservatory and performed at Carnegie Hall three times, told reporters that she mentally played piano pieces as she ran more than 26 miles. Perhaps most surprising? When she ran her very first marathon, she was already in her seventies (Associated Press, 2015). During her runs, she raises money for cancer research. Additionally, she told reporters, running has helped to keep her healthy. "I don't think I'd be living today if I didn't do this running."

In stark contrast, 53-year-old Bennie is struggling to walk any distance at all. I interviewed Bennie, a white, married, mother of three and grandmother of three, for my book, *Grandmothers at Work: Juggling Families and*

Jobs (Harrington Meyer, 2014). She told me that her husband no longer works due to a series of health problems and disabilities. "My husband is disabled. He has a bad back from working years as a mechanic. He is only 47, and he has been disabled for three years. Just two weeks ago he had a heart attack, and had two stents put in. And he is borderline diabetic and has a hernia." Bennie completed high school and works full time as a lab technician. "Now I have the only job, I have the only income." But health problems have also interfered with Bennie's mobility. "I have just spent three months recovering from my second knee replacement." Her salary—and his disability benefits—provide them with a household income of just $40,000. Though they find a great deal of joy caring for their grandchildren, they are foregoing plans to travel or move to a quieter neighborhood. "We are much more financially strapped and have many more physical problems than we ever thought. It has been rough, had a hard life," she explained. "I thought we would be working, travelling, spending on the grandkids, not struggling with health and money."

As the U.S. population ages, and we reach record numbers and proportions of older Americans, how healthy will we be? The answer is not simple. For every article tracing improvements in life expectancy or decreases in cancer rates, there are articles predicting longer but sicker older ages (Siegel, Miller, & Jemal, 2015; Avendano & Kawachi, 2014). Will we see more like Harriette or more like Bennie? Surely we will see more of both. Scholars expect to see growing diversity in health and well-being and, as the chapters in this volume suggest, our old-age health will be shaped by macrolevel factors including economic inequality, social policies, and health-care policies, as well as microlevel factors including our own health behaviors.

Overview of Chapters

With each generation, higher proportions of Americans are completing higher levels of education. That said, access to, and quality of, education continues to vary significantly by race, ethnicity, and socioeconomic status. Moreover, we are not keeping pace with our European neighbors. In Chapter 1, Elizabeth Daniele examines trends in, and impacts of, educational attainment across the life course. She demonstrates the powerful impact of education on health and well-being across the life course. She then focuses on lifelong learning for older adults, assessing the importance of adult education, various types of learning, best practices for older learners, and the increasingly important role of technology. She concludes with thoughts about the future of education for all ages.

Many artists produce some of their most creative works after serious health problems and when they are well into old age (Dormandy, 2000). Georgia O'Keefe was still painting when she was nearly blind and 96 years old. Creativity and wisdom are a highly valued part of human existence throughout the life course. In Chapter 2, Monika Ardelt and Carolyn Adams-Price review how researchers define and measure creativity and wisdom. They explore similarities and differences related to age and personality and then describe the benefits in later life. They reveal that both creativity and wisdom improve well-being in old age, particularly during difficult times.

How important is it to volunteer? Or go to church? Both have significant positive impacts on health and well-being, and it turns out that those who do one are more likely to do the other. Though religious preferences and attachments may change over the life course, generally those who attend church during childhood are more likely to attend, and volunteer, at older ages. In Chapter 3, Fengyan Tang explores the links between volunteering and religion by analyzing the four dimensions in religion: religiosity, religious identity, religious socialization, and religious social networks. Tang explores how the links between volunteering, religion, and the four dimensions influence health and well-being, paying careful attention to how those links vary by age, gender, race, and socioeconomic status. Ultimately, most research suggests that those who volunteer and are religious have longer, healthier, more satisfying lives (McDougle, Handy, Konracth, & Walk, 2014; Li & Ferraro, 2006).

Since the 1800s, the human lifespan has increased worldwide. Dramatic increases have caused us to ponder, what are the limits? In Chapter 4, Donna Holmes demonstrates how the answers to that question integrate evolutionary, demographic, physiological, cellular, and molecular approaches. Currently scientists are focusing their studies on cell-signaling pathways involved in energy metabolism, the accumulation of cellular damage, and physiological dysregulation. She notes the extent to which morbidity and mortality vary by gender, particularly with regard to cardiovascular disease and various forms of disability, providing important insights into the evolving human lifespan. But of course lifespan depends on more than biological factors; a wide variety of cultural factors also shape these trends.

Americans are living longer but how healthy are those added years? The answers to this question are complex. Gerontologists have long said that men have higher mortality rates and women have higher morbidity rates, meaning that women live longer, but sicker, lives. In Chapter 5, Anna Zajacova and Vicki Johnson-Lawrence explore new and conflicting trends

in morbidity and mortality among our aging populations. They focus on fundamental causes of health disparities and contextualize health behaviors as risk factors for morbidity and mortality. In examining the leading causes of morbidity and mortality, they pay close attention to the disparities by socioeconomic status, gender, and race/ethnicity. Ultimately, they demonstrate how a complete understanding of morbidity and mortality is critical to individuals, their families, and our national economic and health-care policies.

Mental and cognitive health are complex matters. The risk of mental health problems such as depression are highest at younger ages, the risk of cognitive disorders such as dementia are highest at older ages, and the risk of both are higher for those who have additional medical conditions. In Chapter 6, Donna McAlpine and Taeho Greg Rhee examine social and life-course characteristics that help explain class and race differences in risk factors, costs, burdens, and consequences of cognitive and other mental health disorders in later life. They emphasize the degree to which cognitive disorders, particularly when they coexist with other mental disorders, create significant burdens for individuals, their families, and our society.

Experts estimate that care provided by family and friends comprised well over one-half of all long-term care costs for the elderly in the United States (Congressional Budget Office, 2013). In fact most of us will, at some point in our lives, be both the provider, and the recipient, of informal care. In Chapter 7, Eliza Pavalko and Joseph Wolfe examine who provides care, how it has changed over time, and how it varies by gender, race, ethnicity, and socioeconomic status. They review the health and economic consequences of providing care and explore the ways people balance unpaid care work with employment. They conclude by discussing workplace and national policies that help—and hinder—care workers balance competing demands.

Elder abuse is one of the darkest secrets of old age. As many as 10 percent of those aged 60 and older living in the community, and an even higher percent of those living in nursing homes and assisted living facilities, have experienced some form of abuse in the past year (Acierno et al., 2010). Rates may be even higher given that many are too fearful, or too embarrassed, to report abuse. In Chapter 8, Joah Williams, Melba Hernandez-Tejada, Emily Fanguy, and Ron Acierno review the types of abuse and neglect, including psychological, physical, sexual, and financial. They assess the risk and protective factors associated with elder abuse, screening and assessment strategies, and elder abuse policy issues. Most important, they highlight preventive interventions, such as maintaining social connection and educating proximal bystanders about intervening.

If you ask Americans whether they would like to someday move to a nursing home, few will say yes. Indeed, though the proportion of older Americans is rising steadily, the proportion moving into nursing homes is shrinking steadily. In Chapter 9, Stephanie W. Burge explores what is behind this trend. She discusses functional health and cognitive status of those in nursing homes and in residential care facilities, the factors that determine nursing home placement, and barriers to nursing home access for minority elders. She concludes by analyzing recent changes in nursing home culture and the impact on residents and their families.

We know that we should plan ahead for our own deaths, but there is little about U.S. tradition or health practices that encourages us to do so. In Chapter 10, Megumi Inoue, Sara Keary, and Sara Moorman discuss death and dying, perceptions of good and bad deaths, and the much overlooked capacity to plan death. Though most wish to die at home, without pain or anguish, and in the company of loved ones, medical technology sustains many for longer than they and their families may wish. The authors review the alternatives, including advance care planning, hospice, euthanasia, physician-assisted suicide, and palliative sedation. Whether death comes quickly from an accident or acute illness, or slowly from a long-term chronic condition, the quality of the experience for us, and our families, can be much improved with forethought.

One of the most difficult challenges of old age is saying good-bye to all of those who pass before you. Bereavement and grief become increasingly commonplace as we age. But as Deborah Carr shows in Chapter 11, the intensity of grief varies based on characteristics of the survivor, the decedent, and circumstances surrounding the death. Carr provides a historical overview of death in the United States, describes the types of grief reactions, and summarizes the distinctive characteristics of spouse, partner, sibling, parent, and child loss. She concludes with recommendations for future research.

Resources for those who want to work with, or learn more about, older Americans are plentiful. The appendices provide links for a variety of such resources. In Appendix A, Elizabeth Daniele provides an annotated list of several of the many federal, state, and local organizations that represent the interests of aging Americans. Far from exhaustive, the list provides links to numerous important and diverse organizations that research, serve, and lobby for our aging population. In Appendix B, Elizabeth Daniele provides summaries of several documentaries on older persons. Such documentaries are multiplying, and her list describes only some of the recent films that highlight variation in the old-age experience by gender, class, race, and ethnicity. These films are useful for older persons and their families, scholars and their students, and policy makers and their constituents.

Together the chapters in this volume reveal the structural, and the individual, factors that shape health and well-being at older ages. They show sweeping trends and stark inequalities. They also demonstrate what we, as a society and as individuals, might do to reduce disparities in health and well-being for generations to come.

References

Acierno, R., Hernandez, M. A., Amstadter, A. B., Resnick, H. S., Steve, K., Muzzy, W., & Kilpatrick, D. G. (2010). Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: The National Elder Mistreatment Study. *American Journal of Public Health, 100*, 292–297.

Associated Press. 2015. *92 year old becomes oldest woman to finish marathon. May 31, 2015*. http://www.nytimes.com/aponline/2015/05/31/us/ap-ath-marathon-record.html?_r=0

Avendano, M., & Kawachi, I. (2014). Why do Americans have shorter life expectancy and worse health than people in other high-income countries? *Annual Review of Public Health, 35*, 307.

Congressional Budget Office (2013). *Rising demand for long-term services and supports for elderly people*. Washington, DC.

Dormandy, T. (2000). *Old masters: Great artists in old age*. New York: Hambledon Press.

Harrington Meyer, M. (2014). *Grandmothers at work: Juggling families and jobs*. New York, NY: NYU Press.

Li, Y., & Ferraro, K. F. (2006). Volunteering in middle and later life: Is health a benefit, barrier or both? *Social Forces, 85*, 497–519.

McDougle, L., Handy, F., Konrath, S., & Walk, M. (2014). Health outcomes and volunteering: The moderating role of religiosity. *Social Indicator Research, 117*, 337–351.

Siegel, R. L., Miller, K. D., & Jemal, A. (2015). Cancer statistics, 2015. *CA: A Cancer Journal for Clinicians, 65*(1), 5–29.

CHAPTER ONE

Education across the Life Course

Elizabeth A. Daniele

While the United States has become a more educated society over time, persistent gaps in educational attainment remain. This chapter reviews educational trends at the secondary and tertiary levels, while highlighting disparities by age, race and ethnicity, gender, and socioeconomic status. The chapter then explores the impacts of education on earnings and economic well-being, unemployment, and health at the individual and societal levels. Finally, the chapter focuses on adult education and lifelong learning, exploring the reasons to educate adults, the types of learning encompassed by adult education, best practices for educating older adults, and the increasing importance of technology in the information age. I conclude with some thoughts about the future of education in the United States.

Trends in Education

For the past 50 years, each cohort has had higher educational attainment than the one that preceded it. According to the Profile of Older Americans (AoA, 2013), in 1970 only 28 percent of Americans aged 65 or older had completed high school, whereas by 2013 the percentage of older Americans who had completed high school was 83 percent. Among adults aged 25 to 29 in 2013, 90 percent had a high school diploma or an equivalent certification (Kena et al., 2014).

Similarly, college-degree-attainment trends have generally been increasing since the middle of the 20th century—except during the 1980s, when the proportion of adults aged 25 to 34 with bachelor's degrees consistently

hovered around 24 percent (Baum, Ma, & Payea, 2010; Mettler, 2014). In 1947, only 6 percent among those aged 25 to 29 had bachelor's degrees, compared to 24 percent in 1977 (Mettler, 2014). Compared to 1940 when only 1 in 20 Americans had a bachelor's degree, by 1977 1 in 4 Americans had a four-year college education (Mettler, 2014). The proportion of adults between 25 and 34 years old with bachelor's degrees increased by an average of 2 percent per year throughout the 1990s; between 2000 and 2009, the rate of increase for 25- to 34-year-old adults with four-year degrees was about 1 percent per year (Baum, Ma, & Payea, 2010).

Because more Americans have pursued and completed bachelor's degrees, the younger cohorts of adults are more educated than their predecessors. In 2013, approximately 25 percent of adults, aged 65 and over, had a bachelor's degree or higher (AoA, 2013) compared to 34 percent of young adults aged 25 to 29 (Kena et al., 2014). For adults aged 65 and older in 2000, only 4 percent had a graduate or professional degree (National Center for Higher Education Management Systems, 2015). Among 25- to 29-year-olds in 2013, approximately 7 percent had already completed a master's degree or higher despite their young age (NCES, 2013). As these young adults continue to age, we will see a more highly educated population of older adults in the next 30 years.

But when compared to other nations, U.S. higher education enrollment lags far behind. As Mettler (2014) cautions, despite the upward trajectory in postsecondary education completion rates, the United States is losing ground to other nations. Based on the percentage of 25- to 34-year-olds with higher education in 2012, the United States ranked 14th in the world (Organization for Economic Cooperation and Development [OECD], 2012). Other nations are increasing their proportions of citizens with tertiary educational attainment at faster rates than the United States. In 2012, about 26 percent of 20- to 29-year-olds in the United States were enrolled in education compared to 43 percent in Denmark (OECD, 2014). Further, because higher education systems are dependent upon well-educated elementary- and secondary-level students, it is worth noting that the United States spends above average on each pupil, but yields average or below average results as compared to other nations in the OECD. The Programme for International Student Assessment, or PISA, is a test given to 15-year-olds in 65 countries and used as a tool to compare student skill in different subject areas across national borders. Out of 34 OECD nations, the U.S. students ranked 27th on mathematics; U.S. scores were closer to average performance on reading and science despite the fact that the United States ranks 5th on spending per student (OECD-PISA, 2012).

Though education rates are rising, they are not rising for all in the United States. Whites and Asians continue to be more educated than African Americans and Latinos (the terms Latino and Hispanic are used interchangeably throughout). As shown in Figure 1.1, among older Americans in 2012, non-Hispanic whites were the group most likely to have completed high school. Nearly 87 percent of older whites compared to 76 percent of older Asians, 71 percent of older African Americans, and 60 percent of older Native Americans had completed high school (AoA, 2013). Only 51 percent of older adult Hispanic Americans had completed high school in 2012 (AoA, 2013). Among the 25- to 29-year-old U.S. population in 2014, the percentages of those with a high school diploma or an equivalent certification were 96 percent for whites, 92 percent for blacks, and 75 percent for Hispanics (NCES, 2014b). Hispanics increased high school attainment by 17 percentage points since 1990 when the rate was 58 percent of Hispanics in this age range having high school certifications; most of this educational progress occurred after 2005 (NCES, n.d.). These educational attainment rates reflect considerable reductions of gaps between whites and blacks, and whites and Hispanics from two decades prior. High school completion rates for Asians/Pacific Islanders between 1990 and 2014 increased from 92 percent to 97 percent (NCES, 2014b).

Postsecondary educational levels also reflect persistent inequality. As shown in Figure 1.1, among young adults aged 25 to 29 years in 2013, attainment of a bachelor's degree or higher for whites was almost double that

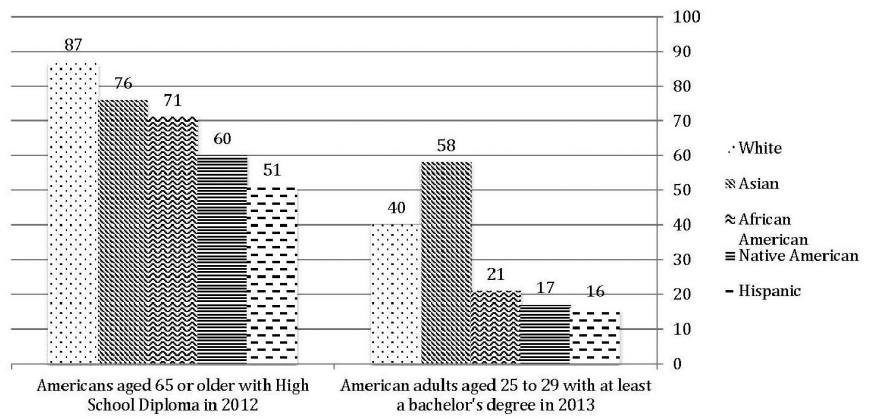


Figure 1.1 Percentage of U.S. population with completed degree by age and race. (Administration on Aging [2013]. A Profile of Older Americans: 2013. Retrieved from http://www.aoa.acl.gov/Aging_Statistics/Profile/2013/docs/2013_Profile.pdf. National Center for Education Statistics. (2013). Table 104.20. Retrieved from https://nces.ed.gov/programs/digest/d13/tables/dt13_104.20.asp/)

of African Americans, 40 percent compared to 21 percent (NCES, 2013). Attainment of at least a bachelor's degree for Hispanic young adults was 16 percent whereas for Asian/Pacific Islanders it was 58 percent (NCES, 2013). When disaggregated, these data reflect a graduation rate for Asians more than double that of Pacific Islanders, who comprise such a numerically small population that it is difficult to get accurate statistics (NCES, 2013). American Indian/Alaskan Native young adult college attainment rates were at 17 percent in 2013 while 30 percent of those identifying as two or more races had a bachelor's degree or higher that year (NCES, 2013). Between 1991 and 2011, there was a 67 percent increase in the number of doctorates conferred upon African Americans, but they still earned only 6 percent of all doctorates in 2011 (National Science Foundation, 2012). Similarly, in that same 20-year timespan Latinos more than doubled their proportion of doctorates to 6 percent, but these groups are still underrepresented at all levels of higher education (National Science Foundation, 2012).

Throughout U.S. history, federal and state government legislation as well as individual college and university policies enabled some segments of the population to become better educated than others. White males dominated postsecondary education since the first higher educational institution was founded in 1636 (see Beckert et al., 2011 for Harvard's connections with slavery). This practice of providing more education to a white male demographic was supported and reinforced by legal segregation, exclusion of racial and ethnic minorities from most institutions of higher education, and de facto practices of institutional discrimination (Thelin, 2004; Wallenstein, 2008). It seems likely that the nation's history of exclusion is reflected in persistent racial gaps in education.

Presently there are some programs in place to improve the enrollment and retention rates for underrepresented minorities. The federal definition pertaining to underrepresented minorities in education includes African Americans, Native Americans, Pacific Islanders, Alaskan Natives, and Hispanics/Latinos (U.S. Government Printing Office, 2011); international students are not underrepresented minorities (National Academies Press, 2011). These demographics are underrepresented in higher education insofar as they enroll in postsecondary education at rates below parity with their representation in the general population. In some cases, there are opportunities for underrepresented minorities to apply for programs to increase minority participation in higher education. Some federally funded TRiO programs, for example, like the Ronald E. McNair Postbaccalaureate Achievement Program, serve primarily low-income and first-generation students who are interested in pursuing graduate education, but also underrepresented minorities (http://www2.ed.gov/programs/triomcnair/eligibility.html).

How will the future look? As the nation moves toward the majority-minority population composition predicted for 2050 (Passel & Cohn, 2008), it will be ever more important to incorporate all segments of the American populace into the higher educational system and adjust the college and university structure to serve increasingly diverse student populations, faculty, and staff. Without such efforts, it is not clear that greater proportion of people of color in the general population will lead to a correspondingly greater presence in higher education.

Traditionally women's educational attainment lagged behind men's, but now women are ahead of men at every level. Women were typically excluded from formal higher education until the 1840s (American Association of University Women in St. Lawrence County, n.d.), which contributed to the construction of women's colleges toward the end of the 19th century. Much of higher education remained single-sex until the late 1960s and early 1970s. In 1972, the creation of Pell grants for low-income students and passage of Title IX—mandating that institutions receiving federal funds treat individuals equitably regardless of sex—both opened doors for lower-income students to access higher education and for women to take advantage of student loans and work-study (Mettler, 2014). Due to such legislation and increasingly widespread feminist sentiments, trends in higher education attainment shifted from postsecondary education being male dominated to being increasingly female dominated (DiPrete & Buchmann, 2013).

In recent years, women are consistently achieving higher educational attainment than men—a trend that holds across various demographics. Kim and Joo (2013) used longitudinal data to show that between 1960 and 1990 women became more likely to obtain general educational development (GED) credentials and pursue postsecondary education than men. Zhang (2010) found that female GED holders were substantially more likely to participate in postsecondary education than male GED holders. As Figure 1.2 shows, women have been more likely to earn degrees than men at almost every level of education since 2000 (NCES, n.d.). Between 2000 and 2010, females earned between 60 percent and 62 percent of associate's degrees, as well as 58 percent of bachelor's degrees conferred to U.S. residents during those years (NCES, 2012). Women between the ages of 25 and 29 in 2009 pursued and completed bachelor's degrees at rates higher than men within white, black, and Latino demographics (Baum, Ma, & Payea, 2010). In 2014, females in the 25- to 29-year-old age range were 6 percentage points higher than males for educational attainment of a bachelor's degree or higher (NCES, n.d.).

This trend of females surpassing males in educational attainment is true at the highest levels of education as well. The postgraduate trend

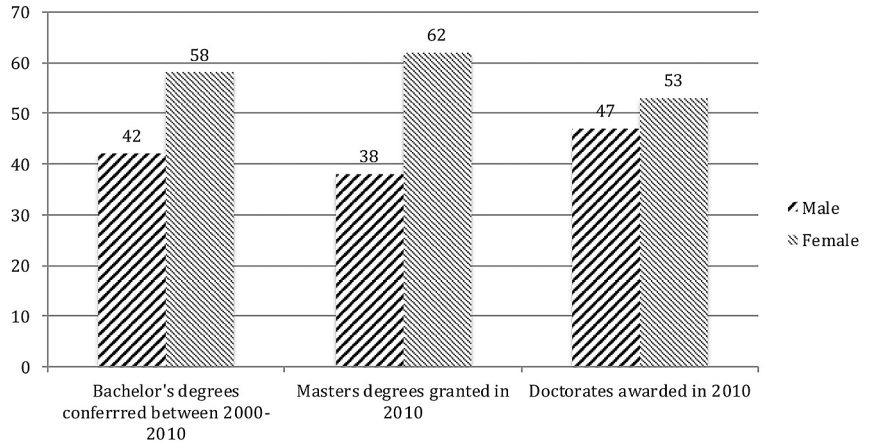


Figure 1.2 Percentage of U.S. population who attained degree by gender. (National Center for Education Statistics [2012]. Degrees conferred by sex and race. Retrieved from http://nces.ed.gov/FastFacts/display.asp?id=72/)

for women between 2000 and 2010 indicates an increased participation, with women earning 62 percent of master's degrees awarded in 2010 and 53 percent of doctorates that year (NCES, 2012). In 2013, 9 percent of women had completed a master's degree or higher whereas only 6 percent of males had (NCES, n.d.). Barriers remain, among them the equal representation and full incorporation of women into faculty positions in Science, Technology, Engineering, and Math (STEM) fields at research universities (National Academies Press, 2011).

Thus far, I have focused on education attainment, but it is important to also examine differences in quality of education. Because students throughout the United States are generally required to go to neighborhood schools, those with higher incomes, greater wealth, and comparatively more power continue to tend to have significantly better schools than those with fewer resources. Nationwide the poverty rate for the United States was 15 percent in 2013 (Kaiser Family Foundation, 2015), but that same year more than half of the public school students were low income (Jordan, 2015). Poor and low-income students are likely to attend schools where poverty is concentrated, known by the federal government as high-poverty schools, and also sometimes known as Title I schools, in which 76 percent to 100 percent of students are eligible for free or reduced price lunch, or FRPL (Aud et al., 2010). In recent years, high-poverty schools produced fewer graduates than they used to; in 2008 the graduation rate of 68 percent for high-poverty schools was 18 percentage points lower than the 1999–2000 high-poverty schools graduation rate of 86 percent

(Aud et al., 2010). As compared to low-poverty schools, where up to 25 percent of students are eligible for FRPL, between 2000 and 2009, high-poverty schools consistently averaged lower scores on fourth and eighth grade tests of reading, mathematics, and music and visual arts (Aud et al., 2010). High-poverty high schools consistently produce significantly fewer graduates than low-poverty high schools. In 2007–2008, only 68 percent of 12th graders in high poverty schools graduated while 91 percent of 12th grade students from low-poverty schools received diplomas that year (Aud et al., 2010). Reports on the tests and surveys of PISA indicate that socioeconomic disadvantage has a greater impact on the scores of American students than it does on the score differentials of students of different socioeconomic statuses in other nations (OECD-PISA, 2012).

There is increasing racial and ethnic wealth inequality (Kochhar & Fry, 2014; Pfeffer, Danzinger, & Schoeni, 2013), which may interact with other social identities like gender. In both rural and urban areas, high-poverty schools were disproportionately attended by African American and Latino students (Aud et al., 2010; Jordan, 2015). In addition to financial resources, other types of capital may be important for student success as well. A study by Perna and Titus (2005) suggested that lower rates of enrollment for African Americans and Hispanics as compared to whites may be due to the fact that their schools have fewer resources regardless of the cultural, social, and economic capital possessed by a given individual.

Low-income students and students from districts with highly concentrated poverty show lower rates of immediate college enrollment, college persistence, and college graduation. In 2007–2008, high-poverty high schools had an average rate of 28 percent of students going to a four-year college or university the autumn following high school graduation; among high school graduates from low-poverty schools, the rate was 52 percent (Aud et al., 2010). College-continuation rates by family income quartile in 2012 revealed a 37 percentage point gap between top and bottom quartiles; while 82 percent of 18- to 24-year-olds from the top family income quartile went to college, only 45 percent of those from families in the bottom income quartile did so (Pell Institute, 2015). In 2013, bachelor's degree attainment rates were 66 percentage points lower for students from low-income families than for students from high-income families such that students from high-income families were eight times more likely to graduate with a bachelor's degree by age 24 than those from low-income families (Pell Institute, 2015).

Not only have low-income students been less likely to go to college and persist to graduation, but first-generation students also show similar struggles. Parental education level and family income are among the strongest

predictors of college enrollment and success. Children of college-educated parents have been more likely to go to college themselves (Robert Wood Johnson Foundation [RWJF], 2013), which implies a unique struggle for those who are first-generation college students, namely individuals whose parents did not attend or complete college. In 2008, the immediate college enrollment rate for students whose parents had a bachelor's degree or higher was 82 percent whereas it was 54 percent for those whose parents' highest educational attainment was high school or less (Aud et al., 2010).

The cost of education has risen dramatically, leading to increased accrual of debts to pay for postsecondary education. In 1972, the federally funded Pell grant program opened the doors of higher education for more low-income students (Mettler, 2014). Since that time, the cost of college has increased tremendously, and more Americans have taken out loans to fund their education (Ratcliffe & McKernan, 2013). In 2010, outstanding student loans totaled $1 trillion worth of debt (Ratcliffe & McKernan, 2013), and this debt burden is disproportionately concentrated in the bottom-income quintile (Fry, 2012). Though fewer than 5 percent of households headed by Americans aged 65 and older had outstanding student debt in 2010, 19 percent of all American households had outstanding student debt at that time (Fry, 2012). The disparity between low levels of debt for older Americans and higher levels of debt among younger populations likely reflects the fact that college education is more expensive now than when older adults were traditional college-going age (see College Board, 2013).

In addition to evidence that cost of higher education is already a deterrent or prohibitive for many Americans, as time goes on there is some concern whether it will become increasingly difficult for middle-income Americans to afford higher education. Astin and Oseguera (2004) found that there is significant inequity of access to highly selective postsecondary educational institutions, which increased over time. With the proportion of high-income students growing while the lowest income students remained at a steady proportion, middle-income students were increasingly underrepresented.

While approximately one-third of younger adults in the United States have bachelor's degrees, many American adults remain undereducated. In 2013, slightly more than 45 percent of all Americans aged 25 years or older, which is nearly half the total adult population in the United States, had either not finished high school or had not pursued any education beyond the secondary level (RWJF, 2013). In 2000 more than 39 million adults over age 16 lacked a high school credential and were not enrolled in any educational program (American Council on Education, 2011). Though 2013 represented the lowest U.S. high school dropout rates ever recorded (Fry, 2014),

that year there were over 2 million 18- to 24-year-olds who neither had completed high school nor were enrolled in school. In 2007, the percentage of high school status dropouts, those 16- to 24-year-olds who are not enrolled in school and do not have a high school degree, was at 9 percent overall and 21 percent for Hispanics, which was more than double the dropout rate of any of the other groups (Aud, Fox, & KewelRamani, 2010). More recently, dropout rate levels were lower due largely to the fact that Latino and black youth were persisting to finish high school at higher rates than in years prior. Though Hispanics still had the highest dropout rate among any racial or ethnic group in 2013, at 14 percent, their high school completion and college-going rates had increased even as the youth population had grown considerably (Fry, 2014).

The GED is a "uniquely American education credential" (Tyler, 2005, p. 46) available to individuals who did not complete high school following a proscribed course of study. The history of the GED is tied to the U.S. military, but today people of many demographic characteristics take the GED subtests on writing, reading, social studies, mathematics, and science. Army leaders created the GED in the early 1940s to demonstrate that vets who left high school for military service were cognitively on par with high school graduates (Boesel, Alsalam, & Smith, 1998; Tyler, 2005). By 1959, more of the 56,500 GED test takers were civilians than armed forces affiliates (Boesel, Alsalam, & Smith, 1998; GED Testing, 2014). In the mid-1960s, high school dropout rates shot up, and there was tremendous growth in GED testing such that by 1970, 331,500 people took the GED and a decade later 816,000 completed at least one subsection (GED Testing, 2014; Tyler, 2005). In 2013, 743,000 people took the GED exam and three-quarters of them passed, which brings the total number of people who have passed the GED close to 20 million (GED Testing, 2014). Over 46,000 took the Spanish version of the exam in 2013 and 1,000 people took the French language version (GED Testing, 2014). Whites comprised 43 percent of test takers, but of the 50 percent who passed, Hispanics were 25 percent of takers and 23 percent of passers, African Americans were 27 percent of test takers and 22 percent of test passers; American Indian/Alaskan Natives as well as Asians each represented 2 percent of test takers and passers (GED Testing, 2014).

Noncompletion of high school may occur for any number of reasons, but regardless of cause to pursue a GED, many postsecondary educational institutions plus most employers accept this credential as representing educational equivalency to a high school diploma (American Council on Education, 2009). Since its inception, there have been four versions of the GED exam; the 2002 series GED test concluded in 2013 and comprised five parts that took just under 8 hours to complete (GED Testing Service,

2014; Tyler, 2005). It may be thought of as an alternative pathway or second chance for individuals who wish to pursue their educational aspirations. Data suggest, however, that in comparison to those who graduate high school, those with GEDs do not earn as much in wages or income and do not enroll in, or complete postsecondary education at the same rate; nor do GED-credentialed individuals obtain employment at the same rates as high school graduates (Cameron & Heckman, 1993; Chapman, Laird, Ifill, & KewelRamani, 2011). Tyler (2002) poignantly pointed out that "earning a GED is not a path out of poverty" (p. 4).

Today the GED remains pertinent as a field of study because it raises and addresses questions about how the nation plans to handle its least-educated citizens who have not obtained a high school diploma or equivalent credential. Among the most pressing of these questions is whether to direct public funds toward supporting individuals to pass the GED. Some studies challenge the value of the GED (Tyler & Lofstrom, 2010; Tyler, Murnane, & Willett, 2000) while others suggest the primary benefit of the GED seems to be the potential to pursue postsecondary degrees and reap subsequent benefits of those more advanced credentials (Boesel, Alsalam, & Smith, 1998; Murnane, Willett, & Boudett, 1999). Work by Kim and Joo (2013) indicates that from the 1960s to the 1990s, high-school dropouts from all racial or ethnic groups have become more likely to obtain a GED, but over these generations only white and African Americans have become more likely to pursue postsecondary education; probability for Hispanics to do so has not changed over time. It is also important to query how the GED differentially impacts incarcerated versus nonimprisoned individuals. Tyler (2002) suggested that earning the degree while incarcerated limited the positive effects associated with the credential.

Worldwide, and in the United States, there is a rising bar of expected minimum education, but not all are reaching that bar. Given the patterns of differential educational attainment that exist along racial and gender differences as well by varying socioeconomic status and parental education, it is important to note that despite improvements in education overall, there is no guarantee of continued educational advancement for the United States overall. The following section explores the effects of education on individuals and also at the societal level.

Impacts of Education

The positive effects of education are myriad and accrue to both the educated individuals and the society in which they live. Those with more education tend to have better fiscal, employment, and health outcomes over the life course.

Higher levels of education are generally associated with better economic standing over the life course. The relationship between socioeconomic status and college can be thought of as mutually reinforcing: "Poverty of education is a principal factor responsible for income poverty; and income poverty, in turn, does not allow the people to overcome poverty of education" (Tilak, 2002, p. 198). In the aggregate, the more postsecondary education individuals accrue, the better their earnings are. Also, because those with postsecondary education are generally in higher-paid positions, they usually contribute to the tax base at higher rates (Baum, Ma, & Payea, 2013). According to a report from the Robert Wood Johnson Foundation (2013), college graduates earned nearly double what high school graduates earned over the course of their lives. Those with a professional degree earned $3.2 million more over the course of their working lives compared to those with a maximum educational attainment of eighth grade education (Julian, 2012). One exception to the rule of economic return on education is that as compared to high school dropouts, high school graduates do not have many benefits in terms of earnings and wealth benefits (Bernstein, 2007). Recently the Pew Research Center (2014b) suggested the benefits of education in the United States showed "the dramatic decline in the value of a high school education" (p. 7) and corresponding "growing economic return to a college degree" (p. 8). Though since 2000, wages of college graduates and benefits like health insurance coverage from one's employer fell (Mishel, Gould, & Bivens, 2015), there is also evidence that pursuing postsecondary education was worth the investment: "the typical bachelor's degree recipient," for example, "can expect to earn about 66% more during a 40-year working life than the typical high-school graduate earns over the same period" (Baum, Ma, & Payea, 2010, p. 12). More education leads to higher likelihood of full-time work and greater fulfillment from work (Ross & Wu, 1995), but even among those with parity of educational attainment, there are different levels of earnings. There is greater return on educational investment for males of almost any race when compared with women, and for whites and Asians when compared with blacks and Hispanics (Ashton, 2014; Pew Research Center, 2014a).

Those with lower levels of education are more likely to suffer from higher unemployment rates and have a greater likelihood of living in poverty. In both good and bad economic times, those with lower levels of educational attainment were hit harder by unemployment than those with more education (Hoynes, Miller, & Schaller, 2012). Unemployment rates were usually lower for those with high school education than dropouts and were lower for those with tertiary education than secondary (Chapman, Laird, & KewalRamani, 2011; Stanford Center on Poverty and Inequality,

2014). In 2014, the poverty rates for Americans aged 25- to 64-years were 4 percent for those with college degrees, 11 percent for those with some college, 16 percent for those with only high school, and 34 percent for those with less than high school education (Stanford Center on Poverty and Inequality, 2014).

Individuals with more education are more likely to get benefits from employers such as private pensions and health insurance through their job. College-educated workers are more likely to be offered employer-provided pension plans than those with lower levels of education, and likelihood of employee participation increases as education level increases such that those with advanced degrees are most likely to participate in such plans (Baum, Ma, & Payea, 2013). Individuals with more advanced levels of tertiary education are more likely to have employer-provided health insurance regardless of status as a full-time or part-time employee. In 2008, only 50 percent of high school graduates had employer-provided health insurance whereas 68 percent of those with a bachelor's degree or higher who were working at least half time in the private sector had this benefit; this 18 percentage point gap in coverage between those with secondary and tertiary education grew from a 10 percentage point difference in 1979 (College Board, n.d.). In 2011, 73 percent of full-time, year-round workers over age 25 who had advanced degrees had employer-provided health insurance; among part-time workers in 2011, 39 percent of those with a bachelor's degree and 48 percent of those with an advanced degree had this benefit (Baum, Ma, & Payea, 2013). That same year 30 percent of all adults over age 17 had government-sponsored health-care plans, which included 36 percent of high school graduates and 20 percent of those with a four-year degree or higher (Baum, Ma, & Payea, 2013).

Higher levels of education are consistently associated with better health outcomes. Higher education indicates lower likelihood of working in the most dangerous jobs, fewer health-risking behaviors such as smoking and alcohol use, and greater use of health services (Cutler & Llevras-Muney, 2006; Feinstein et al., 2006). Even among individuals with similar health-care coverage, those with higher levels of education exhibit better health outcomes (see Klein, 2014). Those with college degrees have better health outcomes compared to those without high school diplomas along metrics of increased longevity—living five or more years longer; overall higher reports of healthy behaviors like not smoking; and lower likelihood to have or die from common diseases, like heart disease or diabetes (RWJF, 2013). According to Feinstein et al. (2006, p. 187), health services utilization can be preventative, for example, by having regular physical examinations; or responsive when one seeks medical attention in situations of pain, ailment, or injury; and can also happen in the context

of management of conditions that require ongoing treatment. There are also benefits such as the fact that higher levels of education are associated with greater likelihood of receiving retirement benefits and health insurance from the employer (Baum, Ma, & Payea, 2010; RWJF, 2013). Finally, well-educated citizens tend to produce to better educated future generations because children of college-educated parents are more likely to pursue and obtain bachelor's degrees. RWJF (2013) suggested that higher earnings associated with advanced education produce greater access to healthy foods and safer home environments in addition to noting that college-educated women demonstrated lower infant mortality rates as compared to those who never graduated high school. A consequence of well-educated society can be reduced public expenditure on public health and medical care.

Older Adult Learning and Geragogy

Though we tend to emphasize education for children, education for adults generally, and older adults specifically, can be beneficial as well. Adult learning can be defined as the acquisition of skills, knowledge, and abilities during the course of adult life. Learning among older adults takes a variety of forms. Adult learning encompasses formal education like earning credentials and certifications, as well as vocational trainings, or leisure-based educational enrichment, and learning health-related information for self-care. This section details the what, how, and why of older adult education.

Defining Education and Learning

Older adult education may be formal, nonformal, or informal to use the language of Jarvis (as cited in Findsen, 2006). These frameworks correspond to notions of education, training, and learning. Education denotes a formal process that occurs at officially recognized institutions; education is schooling replete with formal and sequential paths to earning a credential. Nonformal learning among older adults is any form of structured and organized learning that occurs outside formal educational institutions. An example would be training, which implies absorbing new information in order to achieve professional or vocational success. As a type of learning with the aim of acquiring a set of skills usually tied to employer initiatives or individual aims to maximize employment outcomes such as earning capacity, training is usually formalized, likely comprises in-person or web-based instruction, and increasingly relevant as seniors are working longer (Liu, Courtenay, & Valentine, 2011). Other examples of nonformal

learning include seniors enrolled in art or music classes at a local museum or senior center.

While few adults pursue formal education, many are engaged in the pursuit of knowledge, skills, and abilities or the informal learning that enhances life. In contrast to education, which tends to be regulated by policies and receives recognition from the public, learning is a personal endeavor that can be ongoing and private (Jarvis in Preece, 2009). The seemingly semantic distinction between education and learning belies an ongoing debate over choice of language in the field of adult education (see Hager, 2011). To stress the ongoing nature of learning, the term lifelong learning evolved in the 1970s. The European Commission (2001) defines lifelong learning (LLL) as "all learning activity undertaken throughout life with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective" (p. 9). This expansive definition is inclusive of the fact that one cannot learn during formal schooling in early life, every aspect of what they will need for rewarding employment over the life course (London, 2011). As Cross (1981) famously highlighted, learning is necessary for everyone who wishes to survive in the modern age.

Adult learning can be understood as an extension of education that occurred in earlier phases of life, but it may also be considered a different type of learning that requires altogether different modes and philosophies of teaching. Like most nations, the United States generally follows an age-differentiated (Riley & Riley, 2000, p. 267) model of life that designates early life or youth as the time for education, assigns midlife as the time for work, and expects later life stages to be filled with leisure. This model has become highly normalized as the schooling-employment-retirement trajectory. Adult education challenges this model by inserting formal learning later in life.

Educating Adults

Pedagogy is the method for instructing children, so andragogy has been proposed as a means of teaching adults; geragogy is a method for educating older adults. According to Schuetz (1982), "geragogy emphasizes the guided learning of persons in old age" (p. 339). This concept recognizes older adults as a distinctive learning population that merits unique teaching methods. McClusky (cited in Hiemstra, 1998) proposed that older learners must have five needs met: coping needs, expressive needs, contributive needs, influence needs, and transcendence needs. These needs cover the ability to be minimally literate and self-sufficient, be involved in activities, help others, improve quality of life, and to rise above limitations

associated with one's age (Hiemstra, 1998). There is some debate over whether working with older populations necessitates different methods of teaching (see Tam, 2014). Accompanying questions over how to best teach for particular results are concerns over what older learners need to learn. Ansello (2011) highlights older adults' need for wisdom more than facts or figures. With so much data readily available in the information age, he suggests that it may be useful to turn toward "reflections on what we are, who we have been, what it means to 'be'" (p. 210), which can be explored, for example, through study of literary and visual arts that inspire the soul, heart, and mind. Ansello (2011) astutely suggests that wisdom may include more ethereal ways of knowing that do not fit categorically into typical classifications of substantial knowledge such as tying a shoelace or doing an algebra problem.

Older adults have different cognitive abilities and physical abilities than younger learners. According to Van Gerven, Paas, Van Merrienboer, and Schmidt (2000) cognitive aging occurs on three levels: "(1) working-memory capacity decreases, (2) processing speed goes down, and (3) there is a reduced ability to distinguish relevant from irrelevant information" (p. 507). These authors propose using Cognitive Load Theory to modify instructions to enable older learners to grasp otherwise overly complicated new skills. By providing less extraneous information and reducing the cognitive load on the learner, individuals can learn more complicated skills. The authors suggest that a diagram and caption, for example, is unnecessary separation of two pieces of information that can be integrated and unified into a single depiction, thereby focusing rather than splitting the attention of the viewer. Jeske and Roßnagel (2015) propose a *contextual view* suggesting that cognitive decline is neither linear nor inevitable; they argue that training and development among older adults can continue and flourish in supportive work climates that encourage learning among older workers.

Nonformal learning programs can be found in the United States and many European nations as well—some of the more established examples from the United States are Elderhostel's Road Scholar program, and Osher Foundation's Lifelong Learning Institutes. Elderhostel is an organization started in 1975 at colleges in New Hampshire designed as a living and learning educational model. Since the 1980s, Elderhostel has offered international experiential learning that combines study and travel for middle-aged to older adults (http://www.roadscholar.org/about/history.asp). In 2010, Elderhostel renamed their travel component Road Scholar, and presently they offer travel-and-learn programs in 150 countries on all 7 continents (http://www.roadscholar.org/default.asp). Research on Elderhostel program participants by Ahn and Janke (2011) indicates that those who enroll in the Road Scholar program are interested in physical benefits

as well as maintaining their sharpness through mental stimulation. Osher Lifelong Learning Institute's Programs, which have existed since 2001, occur on college campuses throughout the United States and offer noncredit courses for adults aged 50 or above. These programs feature recreational learning, which is noncredit and does not lead toward a formal educational credential. Indeed their website advertises the programs as for those "who are interested in learning for the joy of learning" (http://www.osherfoundation.org/index.php?programs). Participation in noncredit programs such as Elderhostel and Osher Institutes tends to be dominated by those with higher socioeconomic status backgrounds though both programs offer scholarship opportunities.

In addition to nonformal learning for fulfillment, vocational learning is also important for older adults who continue working in an increasingly knowledge-based economy that almost always requires mastery of at least some technology—frequently computer-based skill sets for individual workers. Trainings may occur in the workplace or be mandated and contracted out by the employer. As the population around the world ages and technology continues to develop, these trends of aging and rapidly developing technology will have significant impact on economic development (Huber & Watson, 2014). In the postindustrial labor market that has emerged since 1970, there is an increasingly bifurcated economy with professional and technical occupations at the top, semi-skilled jobs at the bottom, and a shrinking pool of lower white collar jobs in the middle (see Portes & Rumbaut, 2014). The Information Age features greater economic disparity that often falls along lines of education; those who have degrees are more likely to find jobs that are well paid and feature benefits.

Health-related education is another important arena of nonformal education of older adults that happens outside the realm of schooling but can have important impacts. This type of education includes patient release instructions or giving clear instruction to seniors on using new medications. Successful health-related education includes teaching older African Americans about diabetes, high blood pressure through storytelling (Bertera 2014), and about fall prevention (Gitlin et al., 2008; Hill et al., 2011: Perry et al., 2012). Educating communities that have traditionally not been targeted or included does pose challenges that are not guaranteed to disappear as our society becomes more diverse. Work by Dentato et al. (2014) indicates that older adults who are LGBT often avoid seeking care because they mistrust health and mental health-care professionals due to past experiences with denial of services or discrimination based on their sexual orientation. This illustrates a two-fold need for adult education insofar as there is need to educate an isolated population of older LGBT adults, and because it prompts us to think about how we educate

caregiving professionals who will be encountering an ever-more diverse older adult population.

There is much to be resolved in terms of logistics of educating an adult population. The formal American education system has not been particularly concerned with the need to provide service for adults and older adults even though adults are an increasing component of the student population—particularly at community colleges (Lane, Michelau, & Palmer, 2012). Yet Many of the practices that benefit older adults may also benefit other types of students. Persistence rates for older adult and first-generation college students, for example, can generally be improved by attention to academic advising and counseling, flexibility in scheduling options, academic assistance services, financial support, and resources that promote and assist students with balancing multiple responsibilities (Cummins, 2014). Because outreach programs with a particular target population and student-centered advising will differ based on the individuals served, it is important to take into consideration the unique facets of adult and older adult learners.

Why Educate Adults?

The primary reasons to educate adults fall into categories of economic, social/citizenship, and individual well-being. Adult education offers the opportunity to teach nontraditionally aged students skills for economic productivity in a knowledge-based economy. This is in accord with the human capital model of education, which states that individuals accumulate skills for increased competitiveness on the market. As the population becomes more educated overall, it requires a higher minimum level of education for sustainable employment. With the advent of digital communication and the computer age, for example, there is increased need to constantly update one's skill set in order to keep current and stay relevant in the job market. The other framework or model for education has more to do with the fact that education accrues benefits to the broader society as well as the individual. Well-educated persons are more likely to be actively engaged citizens who vote and volunteer at higher rates than those with lower levels of education; thus, ramifications of education as a social good, such as a politically engaged and civically active populace as well lower public expenditures, will accumulate at a higher rate in societies that nurture LLL (Baum, Ma, & Payea, 2013). Finally, we must remember the health and well-being that individuals garner from LLL (Weinstein, 2004). In addition to health benefits such as maintaining mental sharpness in older adults, for many there is genuine thrill in learning. Regardless of whether one chooses immersion in government-run or

government-overseen institutional settings, which could be readily identified as supporting education for older adults, we would be remiss to reject out of hand the possibilities for LLL. There should be some attention to the benefits of some formal structuring for those who seek or appreciate such a format.

Education promotes both tangible and intrinsic benefits that accrue at individual and societal levels, but the efforts to promote educating adults have been too few and far between. A pronouncement from the World Conference on Education for All in 1990 stated, "basic education is more than an end in itself. It is the foundation for lifelong learning and human development on which countries may build, systematically, further levels and types of education and training" (UNESCO 1990:3–4 as quoted in Preece, 2009: 11). If we accept the idea that learning begets learning, we must foster initiatives across all age sectors of our society so that individuals can remain economically competitive, accrue social benefits for the greater good, and remain physically healthy.

Role of Technology in the Information Age

It is common for older adults to seek training regarding technology. Though only about half of American adults aged 65 and older reported using the Internet or e-mail in 2012, this figure represents progress since August of 2008 when only 38 percent of the same demographic reported going online, or in 2011 when 41 percent of seniors reported being online at least occasionally (Pew Internet and American Life Project, 2012). Huber and Watson (2014) insightfully claim that "designers are inclined toward the new and cool, creating a rapidly moving target of web-based interfaces that requires constant relearning," and hence, "the digital divide must be crossed not once, but many times" (p. 19). Wide ranges of trainings cover a broad swath of topics to help older adults constantly cross the digital divide. One can find, for example, private corporations offering workshops that train customers on how to use their new cell phone or other devices (Verizon Wireless, n.d.). According to the Pew Internet and American Life Project (2012), once older adults "are given the tools and training needed to start using the internet, they become fervent users of the technology" (n.p.). Many consider basic literacy in the contemporary age as including ability to manipulate computers and search the Internet.

It has become somewhat common for community colleges to offer programs teaching computer skills. Some such courses attract significant numbers of adult learners in no small part because most occupations require some ability to use computers. Familiarity with technology can be a barrier for older adults—especially those reentering the workforce who

find they are seeking work in a different type of economy. Many turn to community colleges to learn new skills that both increase employability and exhibit willingness to learn: "recent education, especially in the use of technology, is important to potential employers; it demonstrates that the potential employee is teachable" (Cummins, 2014, p. 347). This type of learning allows older workers to maximize their employability, which harkens to the human capital model discussed above.

Learning about technology is not limited to vocational training, but can also be nonformal enrichment learning as well. Russell (2008) reports that older adults learning about computers have a unique perspective on time that is informed by the facts that they have more time available following retirement, and that they have a limited amount of time left to live. As such, time becomes valuable to the participant-learners because it is clearly finite. Russell (2008: 221) summarizes that the later-life learners she studied "want continuity, inclusion, and integrity in their relations with others and prefer autonomy to dependence... . Participants found ways of authenticating the self in learning." There is a valuable takeaway from Russell's eloquent phrasing, which captures the fact that many individuals can *authenticate the self* through learning, which is certainly one of the more lofty goals of LLL as it pertains to acquisition of any skill, ability or knowledge—ranging from using a new mobile device to learning to play an instrument or gaining a credential. There may also be intrinsic benefits to connecting through media that enable older adults to reconnect with friends or family members who use technology like e-mail, texting, and social networking sites.

Discussion

The dilemmas of financing older adult education, advocating for it, and providing instruction for adults and older adults have proven significant. In the foreword of Weinstock's (1978) *The Graying of the Campus*, she suggested, "with 'the graying of America,' educators will face an entirely new series of financial, political, and curricular problems" (p. 6). Moving forward, the questions of convincing the public of the need for a "learning society" (London, 2011, p. 5) will continue to plague efforts to remain competitive. Moreover, the persistent racial and socioeconomic inequality of the American educational system—from the elementary through postsecondary levels—indicates that the United States must travel a difficult path before reclaiming its status as the most college-educated nation in the world. Because younger American adults aged 25 to 34 are currently not educated at the same rates as those of other OECD nations and the college-going rates among the youngest adults aged 18 to 24 are not spiking,

Americans will see a persistent educational lag in the coming decades. This fact creates a pressing need to educate midlife and older adults if we wish to close the education gap with economic competitors on the global scale. We must adamantly resist the idea of "lifelong learning as serious leisure" (Jones & Symon, 2001, p. 269).

Despite the fact that the United States lags behind other nations, there is also the quandary of how to continue education for advanced credentials among a population that has more bachelor's degrees than any previous generation in this country. Infinite educational growth is impossible, but more learning among adults of all ages promises better nationwide fiscal well-being and health. Moreover, given the inequitable access to good education across many sectors of American society, providing more opportunities for learning to more people is a matter of social justice. There are questions as to what type of learning is necessary, how to motivate older learners to pursue such initiatives, as well as how to most effectively provide, fund, and legislatively support formal and informal learning programs. There are still questions about adult-learner motivations in general, and specifically how those may differ over time due to cohort effects. We know that World War II veterans went to college at much higher rates than their parents due to legislation, namely the first GI Bill. The impact of the 9/11 GI Bill on veterans and their families is not yet clear. Answers may be found in pursuit of the learning society, but our nation is largely distracted by extant, and very serious, problems in K-12 education. These problems of youth- and adult-oriented education are likely not as separate as they appear, but it will take "transformative learners [who] have the skills to confront and create frame-breaking change" (London, 2011, p. 4) if we are to accrue, as a nation, the benefits of widespread education and the justice of broad educational access.

References

Ahn, Y., & Janke, M. C. (2011). Motivations and benefits of the travel experiences of older adults. *Educational Gerontology, 37*, 653–673. doi: 10.1080/03601271003716010

American Council on Education (July 2009). *2008 GED testing program statistical report*. Retrieved from http://www.gedtestingservice.com/uploads/files/9d42c6660ec6184f73f466f2c53ef279.5MB%29

American Council on Education (2011). *2010 GED testing program statistical report*. Retrieved from http://www.gedtestingservice.com/uploads/files/3ba1916d8a9c6f7682f51216b9f10ff7.3MB/

American Association of University Women in St. Lawrence County (n.d.). Retrieved from http://www.northnet.org/stlawrenceaauw/college.htm

Ansello, E. F. (2011). Marginal gerontology and the curriculum palette. *Gerontology & Geriatrics Education, 32*, 199–214. doi: 10.1080/02701960.2011.583962

AoA/Administration on Aging (2013). *A profile of older Americans: 2013*. Retrieved from http://www.aoa.acl.gov/Aging_Statistics/Profile/2013/docs/2013_Profile.pdf

Ashton, D. (2014, June 10). Does race or gender matter more to your paycheck? *Harvard Business Review*. Retrieved from https://hbr.org/2014/06/does-race-or-gender-matter-more-to-your-paycheck/

Astin, A. W., & Oseguera, L. (2004). The declining "equity" of American higher education. *The Review of Higher Education, 27*(3), 321-341.

Aud, S., Fox, M. A., & KewelRamani, A. (2010). *Status and trends in the education of racial and ethnic groups* (NCES 2010-106). US Department of Education, National Center for Education Statistics. Washington, DC: US Government Printing Office.

Aud, S., Hussar, W., Planty, M., Snyder, T., Bianco, K., Fox, M., Frohlich, L., Kemp, J., & Drake, L. (2010). *The condition of education 2010* (NCES 2010-028). National Center for Education Statistics, Institute of Education Sciences, US Department of Education. Washington, DC. Retrieved from http://nces.ed.gov/pubs2010/2010028.pdf

Baum, S., Ma, J., & Payea, K. (2010). *Education pays 2010: The benefits of higher education for individuals and society*. College Board. Retrieved from https://trends.collegeboard.org/sites/default/files/education-pays-2010-full-report.pdf

Baum, S., Ma, J., & Payea, K. (2013). *Education pays 2013: The benefits of higher education for individuals and society*. College Board. Retrieved from https://trends.collegeboard.org/sites/default/files/education-pays-2013-full-report.pdf

Beckert, S., Stevens, K., et al. (2011). *Harvard and slavery: Seeking a forgotten history*. Retrieved from http://www.harvardandslavery.com/wp-content/uploads/2011/11/Harvard-Slavery-Book-111110.pdf

Bernstein, J. (2007, April 22). Is education the cure for poverty? *The American Prospect*. Retrieved from http://prospect.org/article/education-cure-poverty

Bertera, E. M. (2014). Storytelling slide shows to improve diabetes and high blood pressure knowledge and self-efficacy: Three-year results among community dwelling older African Americans. *Educational Gerontology, 40*(11), 785–800. doi: 10.1080/03601277.2014.894381

Boesel, D., Alsalam, N., & Smith, T. M. (1998). *Educational and labor market performance of GED recipients: Research synthesis. Executive summary* (NLE-98-2033). Washington, DC: National Library of Education. Retrieved from http://files.eric.ed.gov/fulltext/ED418239.pdf

Cameron, S. V., & Heckman, J. J. (1993). The nonequivalence of high school equivalents. *Journal of Labor Economics, 11*(1), 1–47.

Chapman, C., Laird, J., Ifill, N., & KewelRamani, A. (2011). *Trends in high school dropout and completion rates in the United States: 1972–2009* (NCES 2012-006). US Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2012006

College Board (n.d.). *Health insurance coverage by education level, 1979–2008*. Retrieved from http://trends.collegeboard.org/education-pays/figures-tables/health-insurance-coverage-education-level-1979-2008

College Board (2013). *Trends in college pricing 2013*. Retrieved from http://trends.collegeboard.org/sites/default/files/college-pricing-2013-full-report.pdf

Cross, P. K. (1981). *Adults as learners: Increasing participation and facilitating learning*. San Francisco, CA: Jossey-Bass.

Cummins, P. A. (2014). Effective strategies for educating older workers at community colleges. *Educational Gerontology*, *40*(5), 338–352. doi: 10.1080/03601277.2013.802193

Cutler, D. M., & Lleras-Muney, A. (2006). *Education and health: Evaluating theories and evidence* (working paper 12352). Cambridge, MA: National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w12352.pdf

Dentato, M. P., Orwat J., Spira M., & Walker, B. (2014). Examining cohort differences and resilience among the aging LGBT community: Implications for education and practice among an expansively diverse population. *Journal of Human Behavior in the Social Environment, 24*(3), 316–328. doi: 10.1080/10911359.2013.831009

DiPrete, T. A., & Buchmann, C. (2013). *The rise of women: The growing gender gap in education and what it means for American schools*. New York: Russell Sage Foundation.

European Commission (2001). *Making a European area of lifelong learning a reality*. Brussels: European Commission. Retrieved from http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52001DC0678&qid=1424849728990&from=EN

Feinstein, L., Sabates R., Anderson, T. M., Sorhaindo, A., & Hammond, C. (2006). What are the effects of education on health? *Measuring the effects of education and civic engagement: Proceedings of the Copenhagen Symposium*. Retrieved from http://www.oecd.org/edu/innovation-education/37425753.pdf

Findsen, B. (2006). Social institutions as sites of learning for older adults: Differential opportunities. *Journal of Transformative Education, 4*, 65–81. doi: 10.1177/1541344605282429

Fry, R. (2012, September 26). *A record one-in-five households now owe student loan debt*. Pew Research Center Social and Demographic Trends. Washington, DC. Retrieved from http://www.pewsocialtrends.org/files/2012/09/09-26-12-Student_Debt.pdf

Fry, R. (2014, October 2). *US high school dropout rate reaches record low, driven by improvements among Hispanics, blacks*. Pew Research Center. Washington, DC. Retrieved from http://www.pewresearch.org/fact-tank/2014/10/02/u-s-high-school-dropout-rate-reaches-record-low-driven-by-improvements-among-hispanics-blacks/

GED Testing Service (2014). *Annual statistical report on the GED test: The close of the 2002 series GED test*. Retrieved from http://www.gedtestingservice.com/uploads/files/5b49fc887db0c075da20a68b17d313cd.pdf

Gitlin, L.N., Winter, L., Dennis, M.P., & Hauck, W.W. (2008). Variation in response to a home intervention to support daily function by age, race, sex, and education. *The Journals of Gerontology, Series A: Medical Sciences*, *63A*(7), 745–750.

Hager, P.J. (2011). Concepts and definitions of lifelong learning. In M. London (Ed.), *The Oxford handbook of lifelong learning* (pp. 12–25). New York: Oxford University Press.

Hiemstra, R. (1998). From whence have we come? The first twenty-five years of educational gerontology. *New Directions for Adult and Continuing Education, 77*, 5–14.

Hill, A., et al. (2011). Evaluation of the sustained effect of inpatient falls prevention education and predictors of falls after hospital discharge—Follow-up to a randomized controlled trial. *The Journals of Gerontology, Series A: Medical Sciences, 66A*(9), 1001–1012. doi: 10.1093/gerona/glr085

Hoynes, H., Miller, D.L., & Schaller, J. (2012). Who suffers during recessions? *The Journal of Economic Perspectives, 26*(3), 27–47.

Huber, L., & Watson, C. (2014). Technology: Education and training needs of older adults. *Educational Gerontology, 40*(1), 16–25. doi: 10.1080/03601277.2013.768064

Jeske, D., & Roßnagel, C.S. (2015). Learning capability and performance in later working life: Towards a contextual view. *Education + Training, 57*(4), 378–391.

Jones, I., & Symon, G. (2001). Lifelong learning as serious leisure: Policy, practice and potential. *Leisure Studies, 20*(4), 269–283. doi: 10.1080/02614360110098676

Jordan, R. (2015, May 13). *A closer look at income and race concentration in public schools. Urban Institute*. Retrieved from http://www.urban.org/features/closer-look-income-and-race-concentration-public-schools

Julian, T. (2012, October). *Work-life earnings by field of degree and occupation for people with a bachelor's degree: 2011* (ACSBR/11-04). American Community Survey Briefs.

Kaiser Family Foundation (2015). *State health facts: Poverty rate by race/ethnicity*. Retrieved from http://kff.org/other/state-indicator/poverty-rate-by-raceethnicity/

Kena, G., Aud, S., Johnson, F., Wang, X., Zhang, J., Rathbun, A., Wilkinson-Flicker, S., & Kristapovich, P. (2014). *The condition of education 2014* (NCES 2014-083). U.S. Department of Education, National Center for Education Statistics. Washington, DC. Retrieved from http://nces.ed.gov/pubsearch

Kim, J., & Joo, M. (2013). Trend in U.S.-born dropouts' GED and postsecondary degree acquisition: Differences by gender and race/ethnicity. *Journal of the Society for Social Work and Research, 4*(3), 171–181.

Klein, R. (2014, September 26). This is how your education level impacts your health. *The Huffington Post*. Retrieved from http://www.huffingtonpost.com/2014/09/26/education-impacts-health-data_n_5871290.html

Kochhar, R., & Fry, R. (2014, December 12). *Wealth inequality has widened along racial, ethnic lines since end of Great Recession*. Pew Research Center. Retrieved from http://www.pewresearch.org/fact-tank/2014/12/12/racial-wealth-gaps-great-recession/

Lane, P., Michelau, D. K., & Palmer, I. (2012). *Going the distance in adult college completion: Lessons from the non-traditional no more project*. Western Interstate Commission for Higher Education. Retrieved from http://www.wiche.edu/pub/15637

Liu, S., Courtenay B. C., & Valentine, T. (2011). Managing older worker training: A literature review and conceptual framework. *Educational Gerontology 37*(12), 1040-1062. doi: 10.1080/03601277.2010.500576

London, M. (2011). *The Oxford handbook of lifelong learning.* New York: Oxford University Press.

Mettler, S. (2014). *Degrees of inequality: How the politics of higher education sabotaged the American Dream*. New York: Basic Books.

Mishel, L., Gould, E., & Bivens, J. (2015.) *Wage stagnation in nine charts*. Policy Institute. Retrieved from http://www.epi.org/publication/charting-wage-stagnation/

Murnane, R. J., Willett, J. B., & Boudett, K. P. (1999). Do male dropouts benefit from obtaining a GED, postsecondary education, and training? *Evaluation Review 23*(5), 475-503.

National Academies Press (2011). *Expanding underrepresented minority participation*. Washington, DC: National Academies Press. Retrieved from https://grants.nih.gov/training/minority_participation.pdf

National Center for Higher Education Management Systems (2015). *Educational attainment by degree level and age group (decennial census)*. Retrieved from http://www.higheredinfo.org/dbrowser/index.php?submeasure=221&year=1990&level=nation&mode=map&state=0

National Science Foundation. (2012, December). *Doctorate recipients from U.S. universities: 2011* (NSF 13-301). National Center for Science and Engineering Statistics Directorate Social, Behavioral and Economic Sciences.

NCES/National Center for Education Statistics (2012). *Degrees conferred by sex and race*. Retrieved from http://nces.ed.gov/FastFacts/display.asp?id=72

NCES/National Center for Education Statistics (2013). *Table 104.20: Percentage of persons 25 to 29 years old with selected levels of educational attainment, by race/ethnicity and sex: Selected years, 1920 through 2013*. Retrieved from https://nces.ed.gov/programs/digest/d13/tables/dt13_104.20.asp

NCES/National Center for Education Statistics (2014a). *Condition of education 2014*. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014083

NCES/National Center for Education Statistics (2014b). *Table 104.20: Percentage of persons 25 to 29 years old with selected levels of educational attainment, by race/ethnicity and sex: Selected years, 1920 through 2014*. Retrieved from https://nces.ed.gov/programs/digest/d14/tables/dt14_104.20.asp

NCES/National Center for Education Statistics (n.d.). *Educational attainment*. Retrieved from https://nces.ed.gov/fastfacts/display.asp?id=27

OECD (2012). *Education at a glance: OECD indicators 2012: United States*. Retrieved from http://www.oecd.org/unitedstates/CN%20-%20United%20States.pdf

OECD (2014). *Education at a glance 2014: Highlights, OECD publishing*. Retrieved from http://dx.doi.org/10.1787/eag_highlights-2014-en

OECD-PISA (2012). *Country note: Programme for International Student Assessment (PISA) Results from PISA 2012: United States*. Retrieved from http://www.oecd.org/unitedstates/PISA-2012-results-US.pdf

Passel, J. S., & Cohn, D. (2008). *U.S. Population projections: 2005–2050*. Retrieved from http://www.pewhispanic.org/2008/02/11/us-population-projections-2005-2050/

Pell Institute (2015). *Indicators of higher education equity in the United States: 45 year trend report*. The Pell Institute for the Study of Opportunity in Higher Education and The University of Pennsylvania Alliance for Higher Education and Democrat (PennAHEAD). Retrieved from http://www.pellinstitute.org/downloads/publications-Indicators_of_Higher_Education_Equity_in_the_US_45_Year_Trend_Report.pdf

Perna, L. W., & Titus, M. A. (2005). The relationship between parental involvement as social capital and college enrollment: An examination of racial/ethnic group differences. *The Journal of Higher Education, 76*(5), 485–518.

Perry, L., et al. (2012). Completion and return of fall diaries varies with participants' level of education, first language, and baseline fall risk. *The Journals of Gerontology, Series A: Medical Sciences, 67A*(2), 210–214. doi: 10.1093/gerona/glr175

Pew Internet and American Life Project (2012). *Older adults and Internet use*. Retrieved from http://pewinternet.org/Reports/2012/Older-adults-and-internet-use.aspx

Pew Research Center (2014a). *There's more to the story of the shrinking pay gap*. Retrieved from http://www.pewsocialtrends.org/2014/01/09/theres-more-to-the-story-of-the-shrinking-pay-gap/

Pew Research Center (2014b). *The rising cost of not going to college*. Retrieved from http://www.pewsocialtrends.org/files/2014/02/SDT-higher-ed-FINAL-02-11-2014.pdf

Pfeffer, F. T., Danzinger, S., & Schoeni, R. F. (2013). *Wealth disparities before and after the great recession*. Retrieved from https://www.russellsage.org/sites/all/files/PfefferDanzigerSchoeni_InterimReport_2013.pdf

Portes, A., & Rumbaut, R. G. (2014). *Immigrant America*. Oakland: University of California Press.

Preece, J. (2009). *Lifelong learning and development: A southern perspective*. London: Continuum.

Ratcliffe, C., & McKernan, S. (2013). *Forever in your debt: Who has student loan debt, and who's worried?* The Urban Institute. Retrieved from http://www.urban.org/research/publication/forever-your-debt-who-has-student-loan-debt-and-whos-worried

Riley, M. W., & Riley, J. W., Jr. (2000). Age integration: Conceptual and historical background. *The Gerontologist, 40*(3), 266–270.

Ross, C. E., & Wu, C. (1995). The links between education and health. *American Sociological Association 60*(5), 719–745.

Russell, H. (2008). Later life: A time to learn. *Educational Gerontology, 34*(3), 206–224. doi: 10.1080/03601270701835981

RWJF/Robert Wood Johnson Foundation (2013). *Why does education matter so much to health?* Health policy snapshot: Public health and prevention, Issue brief, March 2013. Retrieved from http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2012/rwjf403347

Schuetz, J. (1982). Geragogy: Instructional programs for elders. *Communication Education 31*, 339-347.

Stanford Center on Poverty and Inequality (2014). *State of the union: The poverty and inequality report.* Stanford, CA: Center on Poverty and Inequality. Retrieved from http://web.stanford.edu/group/scspi/sotu/SOTU_2014_CPI.pdf

Tam, M. (2014). A distinctive theory of teaching and learning for older learners: Why and why not? *International Journal of Lifelong Education, 33*(6), 811–820, doi: 10.1080/02601370.2014.972998

Thelin, J.R. (2004). *A history of American higher education*. Baltimore, MD: The Johns Hopkins University Press.

Tilak, J.B.G. (2002). Education and poverty. *Journal of Human Development: A Multi-Disciplinary Journal for People-Centered Development, 3*(2), 191–207. doi: 10.1080/14649880220147301

Tyler, J.H. (2002). So you want a GED? *Estimating the impact of the GED on the earnings of dropouts who seek the credential*. Boston, MA: National Center for the Study of Adult Learning and Literacy.

Tyler, J.H. (2005). The general educational development (GED) credential: History, current research, and directions for policy and practice. In *Review of adult learning and literacy* (Vol. 5, pp. 45–84). Retrieved from http://www.ncsall.net/index.html@id=778.html

Tyler, J., & Lofstrom, M. (2010). Is the GED an effective route to postsecondary education for school dropouts? *Economics of Education Review, 29*, 813–825.

Tyler, J. H., Murnane, R. J., & Willett, J. B. (2000). Estimating the labor market signaling value of the GED. *NCSALL*. Retrieved from http://www.ncsall.net/?id=667

U.S. Government Printing Office (2011). *Definitions*. Retrieved from http://www.gpo.gov/fdsys/pkg/USCODE-2011-title20/html/USCODE-2011-title20-chap28-subchapIII-partE-subpart3-sec1067k.htm

Van Gerven, W. M., Paas, F. G. W. C., Van Merrienboer, J. J. G., & Schmidt, H. G. (2000). Cognitive load theory and the acquisition of complex cognitive skills in the elderly: Towards an integrative framework. *Educational Gerontology 26*(6), 503-521. doi: 10.1080/03601270050133874

Verizon Wireless (n.d.). *Workshops*. Retrieved from https://www.verizonwireless.com/vzw/storelocator/workshop/workshop-landing.jsp

Wallenstein, P. (2008). (Ed.). *Higher education and the Civil Rights Movement: White supremacy, black southerners, and college campuses*. Gainesville: University Press of Florida.

Weinstein, L.B. (2004). Lifelong learning benefits older adults. *Activities, Adaptation and Aging, 28*(4), 1–12. doi: 10.1300/J016v28n04_01

Weinstock, R. (1978). *The graying of campus*. New York, NY: Educational Facilities Laboratories.

Zhang, J. (2010). *From GED credential to college: Patterns of participation in postsecondary education programs*. Retrieved from GED Testing Service website http://www.gedtestingservice.com/uploads/files/e28d9ff32e78d2de273b67c09a03d48d.pdf

CHAPTER TWO

Creativity and Wisdom across the Life Course

Monika Ardelt and Carolyn E. Adams-Price[1]

Creativity and wisdom are both considered desirable qualities. Creative people are exceptional due to their ability to create something new, depict reality in a new light, and transcend conceptual boundaries (Mumford, 2003), whereas wise individuals are deemed exceptional, because wisdom represents the apex of human development (Baltes & Staudinger, 2000; Erikson, 1963; Staudinger & Kessler, 2008). In this chapter, we explore the similarities and differences between creativity and wisdom, how they might develop across the life course, and how they might benefit people, particularly during the later years of life.

Definition and Measurement

Creativity and wisdom are concepts that are not easy to define and measure. Hence, before we can discuss how creativity and wisdom develop across the life course and their potential benefits, we first need to determine what creativity and wisdom are and how researchers try to study those elusive concepts.

Definition and Measurement of Creativity

Although the contemporary study of creativity started around 1950 (Hennessey & Amabile, 2010), creativity researchers do not always agree on the proper way to study creativity. Some researchers take an eminent

creators or *Big-C* creativity approach, studying individuals from the past or present who are generally thought to be highly creative. These researchers might analyze creative products or the personality of exceptionally creative renowned individuals (Simonton, 1994). Other researchers study everyday creativity or *little-c* creativity, which consists of creative solutions to everyday problems and less prominent creative achievements (Richards, 2007).

The creativity of products is typically assessed through the Consensual Assessment Technique (Amabile, 1982), which asks independent judges who are familiar with the domain to rate creative products on several dimensions appropriate to the specific domain, such as creativity, novelty, and originality. The Lifetime Creativity Scales can be used to assess everyday creativity of individuals, based on independent ratings of the quantity and quality of individuals' lifetime creativity at work and as part of leisure activities (Richards et al., 1988).

To measure the creativity of individuals, Gough (1979) developed a 30-item Creative Personality Scale based on items from the Adjective Check List (ACL). In addition to creative personality items, this scale includes items that measure cognition, reflection, self-confidence, unconventionality, resilience, humor, self-expression, and egotism. Nassif and Quevillon (2008) selected items from the Minnesota Multiphasic Personality Indicator, 2nd edition (MMPI-2) to create a 31-item creativity (C) scale that assesses creativity as a combination of creative tendencies, caring, and extraversion.

One of the biggest subtopics in creativity research over the past 40 or 50 years is research on cognitive processes that are thought to be involved in creativity, such as the ability to come up with unique and valuable ideas, products, or problem solutions (Hennessey & Amabile, 2010; Mumford, 2003). Much of that research is on divergent thinking, defined as the ability to generate many ideas, including ideas that are unique and those that are useful. The most widely used test in this area is the Torrance Test of Creative Thinking (TTCT), which consists of several subtests, including the Unusual Uses Test that requires participants to invent as many uses as possible for a common object, such as a brick or paper clip, or the Consequences Test that asks participants to think about all possible consequences to impossible events, such as the ability to become invisible (Torrance, 1962). Divergent thinking is relatively easy to test and is typically found to be independent of performance on intelligence tests, which test the ability to generate the *one right answer*. Yet, divergent thinking does not tend to correlate with performance on creative tasks in the arts and sciences, nor does it predict future performance (Zeng, Proctor, & Salvendy, 2011). Thus, it might not be very useful as a measure of creativity.

Other researchers believe that in addition to cognitive abilities, creativity also requires certain personality qualities and an intrinsic motivation to pursue creative activities. For example, Amabile's (1983) componential framework of creativity conceptualizes creativity as a combination of domain-relevant skills, consisting of knowledge, talent, and technical skills, creativity-relevant skills, such as cognitive style, work style, and the ability to generate novel ideas, and intrinsic motivation and attitude. A third group of creativity researchers study the benefits of participating in creative activities, especially in later life and among nonfamous creators. These different approaches make very different judgments about creativity across the life course.

It should also be noted that creative acts occur in a cultural context. Hence, creative acts can be considered a function of the person, the creative materials, and the sociocultural context (Tanggaard, 2013). The materials available and the conventions of their social context play a large role in determining the value of a creative product. Thus, different cultures might value different creative products or value products for different reasons or features.

Kharkhurin (2014) compared typical Western definitions of creativity with Eastern definitions. He found that definitions of creativity from the East tend to incorporate the concepts of esthetics and authenticity. Esthetics is defined as beauty, elegance, and the embodiment of truth or deeper meaning. Authenticity is defined as honest self-expression and the incorporation of personal values into a creative piece. Kharkhurin (2014) suggested that the inclusion of esthetics and authenticity into the definition of creativity, while retaining novelty and utility as components, expands creativity beyond the classic fine arts and sciences.

One type of creative activity that has not been examined much in the literature is the creation of traditional crafts. Crafts are sometimes considered less than creative because they are often not high on novelty. However, they are likely to be high on authenticity and esthetics, especially cultural meaning. Glaveanu (2013) argued strongly that craft products are creative products worthy of study. Like other creative products, high-quality craft products are produced by individuals who have been working a long time to develop their skills and who are well-versed in the conventions of their craft to produce products high in esthetics and authenticity. Moreover, producing traditional crafts might be one of the best ways that people can participate in the continuity of their culture (Glaveanu, 2013).

Definition and Measurement of Wisdom

Contemporary empirical research on wisdom is even newer than creativity research. Starting in the 1980s, several teams of researchers attempted to define wisdom by pursuing either implicit or explicit approaches. The

first approach asks lay persons of different ages to describe or rate characteristics of wisdom or wise persons. Implicit wisdom theories tend to describe wisdom as a combination of cognitive ability, insight, reflective attitude, concern for others, and real-world skills (Bluck & Glück, 2005). Yet, research has also shown that some people perceive wisdom primarily as a cognitive/reflective construct, whereas others hold an integrative view, which gives equal weight to cognitive, reflective, and compassionate characteristics (Glück & Bluck, 2011). Implicit wisdom theories of the East appear to emphasize benevolent and other-centered elements even more than Western implicit theories (Takahashi & Overton, 2005). For example, Yang (2001) found that Taiwanese Chinese adults characterized wisdom as a combination of real-life competencies, knowledge, openness, profundity, modesty, unobtrusiveness, benevolence, and compassion.

In contrast to implicit wisdom theories, explicit wisdom theories were developed by researchers based on a review of the wisdom literature rather than people's conception of wisdom. Some explicit wisdom theories refer to the products of wisdom or the general wisdom of knowledge and texts, similar to the products of creativity, whereas others describe the characteristics of wise individuals. Unlike implicit wisdom theories, explicit wisdom theories show less overlap and range from purely cognitive/reflective conceptions of wisdom to noncognitive wisdom definitions.

The most prominent explicit theory of general wisdom is the Berlin Wisdom Paradigm, which conceptualizes wisdom as expertise and knowledge in the fundamental pragmatics of life, including life planning, life management, and life review, and in the meaning and conduct of life (Baltes & Smith, 2008; Baltes & Staudinger, 2000). General wisdom-related knowledge is assessed by asking participants to address ill-structured hypothetical life problems, such as "A 15-year-old girl wants to get married right away. What should one/she consider and do?" The transcribed responses are then rated by independent judges according to rich factual knowledge and rich procedural knowledge about the fundamental pragmatics of life, lifespan contextualism, consisting of knowledge about the contexts of life and how these change over time, value relativism, which is knowledge that considers the relativism of values and life goals, and the recognition and management of uncertainty (Baltes & Smith, 2008; Baltes & Staudinger, 2000; Smith & Baltes, 1990). Recently, Staudinger and colleagues (Mickler & Staudinger, 2008; Staudinger, Dörner, & Mickler, 2005) developed a measure of personal wisdom, modeled after the Berlin Wisdom Paradigm, that inquires about participants' behavior, strengths, and weaknesses as a friend. The transcribed answers are again rated by independent judges, but the rating criteria concern the wisdom of the self rather than general wisdom. The five criteria are rich self-knowledge, the availability

of heuristics for growth and self-regulation, which includes the expression and regulation of emotions and the development and maintenance of close social relationships, insight into the nature of interdependence and the causes of one's emotions and behavior, self-relativism, consisting of reflection, self-reflection, and the acceptance of self and others, and tolerance of ambiguity and uncertainty.

Brugman (2000) concentrates on the last aspect of the Berlin Wisdom Paradigm by defining wisdom as expertise in conquering the cognitive, emotional, and behavioral aspects of uncertainty and measuring it through the Epistemic Cognition Questionnaire (ECQ15), a 15-item self-report scale with three subscales that assess the acknowledgment of uncertainty, emotional stability despite uncertainty, and the ability to act in the face of uncertainty. By contrast, Kekes (1983) also understands wisdom as knowledge, but a special kind of knowledge that allows the wise person to comprehend the deeper interpretative meaning of generally known descriptive facts, such as "Humans are mortal." Similarly, McKee and Barber (1999) argued that wisdom requires the perception of things as they really are or seeing through the illusion of surface knowledge. Sternberg combines knowledge, values, interests, the environment, and the common good in his view of wisdom. According to Sternberg (1998, p. 347), wisdom is "the application of tacit knowledge as mediated by values toward the achievement of a common good through a balance among multiple (a) intrapersonal, (b) interpersonal, and (c) extrapersonal interests in order to achieve a balance among (a) adaptation to existing environments, (b) shaping of existing environments, and (c) selection of new environments."

Whereas many researchers emphasize the importance of knowledge in wisdom, others define wisdom as the balance between knowing and doubting (Meacham, 1990) or the recognition of the limits of personal knowledge (Kitchener & Brenner, 1990). Kitchener and Brenner's (1990) Reflective Judgment Interview presents ill-structured problems related to dilemmas of knowing in participants. Answers are rated with the wisest responses reflecting an awareness that personal knowledge is limited and, therefore, always includes an element of uncertainty, which leads to humility about one's own judgments.

Yet, other researchers view wisdom more comprehensively by including noncognitive and non-Western elements in their definition and assessment of wisdom. Takahashi and Overton (2002) conceptualize and measure wisdom as a combination of a cognitive analytic mode, consisting of knowledge and abstract reasoning skills assessed by subtests of the Wechsler Adult Intelligence Scale-Revised, and a noncognitive synthetic mode, which is measured by self-report scales of reflective understanding, emotional empathy, and emotional regulation. Moreover, several self-report measures

of noncognitive wisdom have been developed, such as the 40-item Self-Assessed Wisdom Scale (SAWS), which combines critical life experiences, reflectiveness/reminiscence, openness to experience, emotional regulation, and humor (Webster, 2003, 2007), and the 18-item Adult Self-Transcendence Inventory (ASTI), which measures self-transcendent wisdom (Levenson et al., 2005). The ASTI is based on Curnow's (1999) review of the world's philosophical, religious, and psychological wisdom traditions, which concluded that wisdom comprises self-knowledge, detachment, self-integration, and self-transcendence. Personal self-transcendent wisdom was also assessed by ratings of participants' written examples of their own wisdom and its development in a study by Wink and Helson (1997). High wisdom ratings were characterized by insightful responses that transcended the personal and exhibited recognition of the complexity and limitations of knowledge, an integration of thought and emotion, and a concern with philosophical and spiritual issues. In the same study, Wink and Helson (1997) utilized 18 self-descriptive adjectives from the ACL to gauge the cognitive, reflective, and mature aspects of practical wisdom.

In an attempt to capture the cognitive and noncognitive elements of wisdom in a relatively parsimonious model, Ardelt (1997, 2003, 2004) developed the Three-Dimensional Wisdom Model (3D-WS), based on Clayton and Birren's (1980) research on implicit wisdom theories. The model corresponds to the integrative view of implicit wisdom theories (Glück & Bluck, 2011) and conceptualizes wisdom as an integration of cognitive, reflective, and compassionate personality qualities. Those three dimensions are considered necessary but also sufficient to characterize a wise person (Ardelt, 2004). The cognitive wisdom dimension represents a desire to know the truth and a deep and thorough understanding of life, particularly with regard to intrapersonal and interpersonal matters, including knowledge and acceptance of the positive and negative aspects of human nature, of the inherent limits of knowledge, and of life's unpredictability and uncertainty. The reflective wisdom dimension consists of the ability and willingness to see through illusion (McKee & Barber, 1999) by perceiving phenomena, events, and one's own self from multiple perspectives to transcend subjectivity and projections, which is the tendency to blame other people and circumstances for one's own faults and failures (Bradley, 1978; Green & Gross, 1979). Through mindful self-reflection, self-examination, and self-insight, subjectivity and projections can be transcended, which results in decreased self-centeredness, a deeper understanding of the human condition and life in general, and, consequently, greater sympathy and compassion for others, which describes the compassionate wisdom dimension. The 3D-WS has been assessed through personality rating scales, such as cognitive, reflective, and compassionate items

from the California Q-Sort and Haan's Ego Rating Scale (Ardelt, 1997, 2000), and the self-reported 39-item Three-Dimensional Wisdom Scale (3D-WS), which measures cognitive, reflective, and compassionate personality qualities (Ardelt, 2003). Recently an abbreviated 12-item version of the 3D-WS, the 3D-WS-12, was developed (Thomas et al., in press).

Difference between Wisdom and Creativity

Sternberg (1985) conducted a study on implicit theories of wisdom, creativity, and intelligence by asking groups of college professors and laypersons to describe and rate the characteristics of the ideal wise, creative, and intelligent person. Results showed that participants perceived all three constructs as positively related to each other, but wisdom was deemed closer to intelligence than to creativity. The ideal wise person was characterized by sagacity, reasoning ability, the capacity to make expeditious use of information and to learn from ideas and the environment, good judgment skills, and perspicacity. The ideal creative person was described as possessing esthetic taste and imagination, being able and willing to think and act in unorthodox and unconventional ways, to make connections between ideas and things, to recognize similarities and differences, to combine ideas and information in a new way, to question societal norms and assumptions, to make decisions and take a stand but also be flexible if things do not work out, and to possess a certain drive for accomplishments and recognition. Whereas the ideal wise person was perceived as understanding life, willing to learn, and caring, the ideal creative person appeared more to challenge and question life to create something new.

Unfortunately, a uniform definition or *gold standard* to assess creativity and wisdom in products or persons does not exist. Hence, we need to take the different definitions and measurement approaches into account when studying the development, correlates, and effects of creativity and wisdom across the life course.

Development across the Life Course

Age and Creativity

Much of what is known about creativity across the life course is based on the study of eminent creators; that is, those rare individuals that history recalls as famous for their artistic or scientific works. In the 1970s and 1980s, Dean K. Simonton (1997) published several studies on the creative productivity across the lifespan of historically eminent individuals in a wide range of disciplines, ranging from math and science to literature,

music, and painting. Unlike some previous studies, Simonton limited his research to eminent creators who lived at least to the age of 70, so that his estimates of peak productivity would not be biased toward youth by the short lifespan of some famous creators, such as John Keats, who died in his 20s. Simonton's basic finding was the *inverted backwards J*, that is, productivity appears to increase quickly in eminent creators from age 20 to an average peak of age 40 and decline slowly after that. Simonton also found that the peak varied dramatically from one creative domain to another. In abstract domains, such as math and physics, and in the production of short literary works, like lyric poems, creative productivity tends to peak early, at around age 30. In domains that require the integration of huge amounts of knowledge, such as philosophy and historical fiction, creative productivity tends to peak late, at around age 60.

Although Simonton found age differences in creative productivity, he did not discover age differences in the quality of creative products. When controlling for creative output, eminent creators were equally likely to produce high-quality products at any age. He also reported findings suggesting that motivated people can successfully begin participating in most creative domains at any age, although peak productivity will still occur relatively earlier for abstract domains than for knowledge-rich domains.

Simonton's research is positive in that it suggests that creativity is not limited to the early part of life. However, his eminent historical creators approach has a number of weaknesses. First, the vast majority of artists, writers, musicians, and scientists he examined were white males from Western Europe or North America, as most historically eminent creators recognized in Western culture have been white males. The creative domains examined were those usually considered fine arts or sciences by Western Europeans, and excluded Eastern art and traditional crafts. Thus, the research does not have much to say about the life course of creative women or non-Westerners, and it has virtually nothing to say about the value of everyday forms of creativity.

Studying craft participation, for example, is a way of studying little-c everyday creativity (Runco, 2007). Craft products tend to be produced by women, especially older women, in many cultures. This fact in itself might account for their devaluation by the fine arts community (Adams-Price & Steinman, 2007). Craft participation among middle-aged and older women might be motivated by economic need, in the case of third world women crafters (Dhamija, 1981), by the need for recreation, as in the case of middle-class Japanese wives who study painting (Creighton, 1995), or as an activity that can lead to increased social interactions, as in the case of women who attend quilting bees (Maidment & Macfarlane, 2011a, 2011b; Piercy & Cheek, 2004). Participation in craft activities cuts across social class and the sociocultural milieu.

If creativity is measured by divergent thinking, it is likely that it increases with age in tandem with intellectual development. Kleibeuker, De Dreu, and Crone (2013) reported that studies have not consistently found increases in divergent thinking in school children from middle to late childhood. However, they did find increases in fluency and flexibility on creative divergent thinking tasks from early to mid-adolescence, possibly due to the increasing cognitive control and attention associated with adolescence. Divergent thinking is generally found to be lower in late life than at earlier ages (Reese et al., 2001), although this was not necessarily true when older adults were allowed enough time to complete divergent thinking tasks (Foos & Boone, 2008).

Age and Wisdom

As with creativity, it is assumed that the development of wisdom takes time and grows with age (Kekes, 1983). However, it is not clear at what age wisdom might peak, whether it declines with age (Sternberg, 2005), and when the best products of wisdom come forth. Comparable to the study of eminent creators might be the study of eminent wise persons. Yet, most wisdom research to date concerns *little-w* rather than *Big-W* wisdom. When people are asked to nominate a wise person, they tend to nominate older men rather than women or younger individuals (Ardelt, 2008a; Baltes et al., 1995; Denney, Dew, & Kroupa, 1995). However, women are more likely to be nominated if researchers inquire about exemplars of interpersonal wisdom (Denney, Dew, & Kroupa, 1995). Nominees of the wisest person in history are overwhelmingly male religious and political figures, such as Jesus Christ, the Buddha, Muhammad, Jewish Rabbis, Mahatma Gandhi, Martin Luther King Jr., and Abraham Lincoln (Ferrari et al., 2011; Weststrate, Ferrari, & Ardelt, under review). Jesus was about 30 years old when he started to preach (Luke 3:23) and was martyred only a few years later, although the exact date is unknown. At the age of 29, Siddhārtha Gautama renounced the life of a householder to search for liberation from aging, illness, and death. After engaging in diverse and very extreme spiritual exercises that did not bring the desired results, he decided to practice the middle way and discovered the path to enlightenment and ultimate wisdom (Armstrong, 2001). At the age of 35, Siddhārtha Gautama became the Buddha, a fully enlightened being, and he continued to teach and impart wisdom to his followers for 45 years until his death at the age of 80 (Ñanamoli, 2001). Muhammad was 40 when he heard revelations from God. He started to share his prophecies at the age of 42 and taught for 20 years until his death at age 62 (Armstrong, 2006). Mahatma Gandhi conceived his ideas about noncooperation and nonviolence in a book on *Hind Swaraj* (Hindu home rule) that

was published in 1909 when he was 40 years old (King, 2013). He became an important Indian leader at the age of 51 and remained a leader of the nonviolence movement until his assassination at the age of 78 (Gandhi, 2007). Martin Luther King Jr. was influenced by Gandhi and his nonviolence movement. He was 26 years old when he led the Montgomery Bus Boycott for racial equality (Walsh, 2003) and 34 years old when he delivered his famous "I have a dream" speech during the March on Washington (Hansen, 2003). Five years later, he was assassinated at the age of 39 (Lokos, 1968). Abraham Lincoln became president at the age of 52, led the nation during the American Civil War, and delivered the Gettysburg Address about the principles of equal rights, liberty, and democracy at the age of 54. He was assassinated at the age of 56 (Donald, 1995).

Overall, a review of these eminent wise persons reveals that the products of their wisdom became widely known during their early to middle adulthood. They also continued to impart wisdom until their death, with no indication that their wisdom declined with age. It is interesting to note, however, that many eminent wise persons were either condemned to death or assassinated, which hints at the potential revolutionary nature of wisdom.

In studies of little-w wisdom, evidence suggests that similar to the development of divergent thinking, wisdom is likely to increase during adolescence and young adulthood. Wisdom, assessed by the Reflective Judgment Interview, tended to grow from age 16 to age 32 in a longitudinal study, unless the highest score was already attained at age 28 (Kitchener & Brenner, 1990; Kitchener et al., 1989). In cross-sectional research, general wisdom-related knowledge was positively related to age until about 24 years, then remained relatively stable, and finally showed some decline after age 80 (Pasupathi, Staudinger, & Baltes, 2001; Staudinger, 1999). However, for study participants who scored high on moral reasoning, age was weakly positively related to wisdom-related knowledge across the age spectrum (Pasupathi & Staudinger, 2001). Similarly, in a longitudinal study by Wink and Helson (1997), practical wisdom tended to be greater at age 52 than age 27, particularly for individuals who became clinical psychologists, suggesting the potential for lifelong growth in wisdom for individuals who are intrinsically motivated to develop their personality (Staudinger & Kunzmann, 2005).

Wisdom, assessed by the 3D-WS and the SAWS, had a curvilinear relation with age in cross-sectional research, with lower mean level scores in young adulthood and old age and the highest average scores around midlife or later midlife (Bergsma & Ardelt, 2012; Thomas et al., in press; Webster, Westerhof, & Bohlmeijer, 2014). Another study showed that although older adults and young college students had

similar average scores on the 3D-WS, older adults with a college degree tended to outperform current college students on the 3D-WS, whereas due to their lower average score on the cognitive wisdom dimension, the scores of older adults without a college degree tended to be lower than those of younger or older college-educated adults (Ardelt, 2010). As indicated by longitudinal research, early adulthood factors, such as socioeconomic status, the social environment, psychological mindedness, and openness to experience, have long-ranging positive effects on later life wisdom (Ardelt, 1998, 2000; Wink & Dillon, 2003; Wink & Helson, 1997).

Overall, research suggests that the seeds of both creativity and wisdom are planted early in life (Richardson & Pasupathi, 2005) and depend on an enriching and challenging educational and social experience, role models, social support, intrinsic motivation, and certain personality qualities (Edmondson, 2012; Helson & Srivastava, 2002; Hennessey & Amabile, 2010; Jordan, 2005; Richards et al., 1988; Simonton, 2000).

Wisdom, Creativity, and Personality

Both wise and creative people tend to be open to new experiences and interested in understanding their own internal life and that of others (Feist, 1998; Feist & Barron, 2003; Glück et al., 2013; Helson & Srivastava, 2002; Le, 2011; Levenson et al., 2005; Perrine & Brodersen, 2005; Silvia et al., 2014; Staudinger et al., 1998; Webster, Westerhof, & Bohlmeijer, 2014; Wink & Helson, 1997) and, therefore, are likely to transcend social boundaries, structures, and procedures (Simonton, 2000; Staudinger & Kessler, 2008). However, only wise people might have discovered the true *art of living*, that is, to live a life that is good for oneself, others, and society as a whole by transcending the ego-centered self (Ardelt, 2008b; Baltes & Staudinger, 2000; Csikszentmihalyi & Nakamura, 2005; Helson & Srivastava, 2002; Orwoll & Perlmutter, 1990; Sternberg, 1998). For example, wisdom-related knowledge was positively related to the importance of other-enhancing values, such as the well-being of friends, societal engagement, and the protection of the environment, and inversely to the importance of living a pleasurable, hedonistic life (Kunzmann & Baltes, 2003). Helson and Srivastava (2002) showed that relatively wise women were more likely than creative women to be rated as warm, compassionate, benevolent, caring, and accessible. Meaning-making was another salient personality characteristic of wise women compared to the originality and ambition of creative women. Moreover, empathy at age 21 had a positive effect on women's practical and transcendent wisdom at age 52 (Wink & Helson, 1997). The 3D-WS, SAWS, and ASTI have also been found to

be positively associated with empathy and emotional competence (Glück et al., 2013).

In addition, wisdom, measured in a variety of ways, tends to be positively correlated with orientation toward personal growth, self-acceptance, autonomy, positive relations with others, generativity, self-transcendence, and ego development (Ardelt, 2008b, 2011; Glück et al., 2013; Helson & Srivastava, 2002; Le & Levenson, 2005; Staudinger, Lopez, & Baltes, 1997; Webster, 2003, 2007; Wink & Dillon, 2003; Wink & Helson, 1997). The 3D-WS and the SAWS were also positively correlated with forgiveness of self, others, and situations (Ardelt, 2011) and the 3D-WS also with emotional intelligence (Zacher, McKenna, & Rooney, 2013). Among the NEO personality scales, wisdom has been found to be positively associated with agreeableness, conscientiousness, extraversion, and low scores on neuroticism (Levenson et al., 2005; Webster, Westerhof, & Bohlmeijer, 2014).

By contrast, the creative personality appears to be less integrated and more complex than the wise personality, with signs of inner struggle and conflict. Feist's (1998) meta-analysis of 29 studies indicated that compared to nonartists, artists tended to be more open to new experiences, esthetic, creative, curious, imaginative, sensitive, original, self-confident, and self-accepting, but also more driven, ambitious, dominant, hostile, and impulsive and less cautious, conscientious, controlled, rigid, orderly, reliable, socialized, and conventional. In addition, the creative personality is characterized by independence, nonconformity, unconventionality, behavioral and cognitive flexibility, and risk-taking boldness (Simonton, 2000). Yet, a 44-year longitudinal study showed that male graduate students from 14 departments who were rated or scored high at age 27 on tolerance, psychological mindedness, personality integration, self-insight, good judgment, and likeability and low on mania and hostility tended to have greater lifetime creative achievements at age 72 (Feist & Barron, 2003). This latter finding suggests that wisdom and creativity might be more similar for some groups than others.

Wisdom, Creativity, and Demographic Characteristics

Whereas educational attainment and socioeconomic status tend to be positively correlated with wisdom measures that incorporate a cognitive domain (Ardelt, 2003; Ardelt & Edwards, in press; Bergsma & Ardelt, 2012), education is less likely associated with noncognitive assessments of wisdom (Glück et al., 2013; Webster, 2003), although there are exceptions (Webster, Westerhof, & Bohlmeijer, 2014). Even though individuals are more likely to nominate men than women as exemplars of wisdom, no gender differences in wisdom ratings or scores are generally found. For

example, gender tends to be unrelated to general wisdom-related knowledge (Kunzmann & Baltes, 2003; Smith & Baltes, 1990), analytic and synthetic wisdom modes (Takahashi & Overton, 2002), and the 3D-WS, ASTI, and SAWS (Ardelt, 2003; Ardelt & Edwards, in press; Glück et al., 2013; Levenson et al., 2005; Webster, 2007; Webster, Westerhof, & Bohlmeijer, 2014). Findings related to race and ethnic differences in wisdom are more mixed. While there were no significant differences in 3D-WS scores between white and black older Americans (Ardelt, 2003; Ardelt & Edwards, in press) and in ASTI scores between Vietnamese American and European American students, European Americans tended to score significantly higher than Vietnamese Americans on the 3D-WS (Le, 2008) and also significantly higher than Japanese on the analytic and synthetic modes of wisdom (Takahashi & Overton, 2002). The reasons for these cultural differences have not been explored in depth yet.

Not a lot of research exists on the relationship between demographic characteristics and creativity. Most of the research on socioeconomic status and creativity comes from child and adolescent giftedness studies. Because it is well known that children from impoverished environments tend to perform more poorly than children raised in richer environments on standardized tests believed to measure intelligence (Bigelow, 2006; Brooks-Gunn, Klebanov, & Duncan, 1996), a few researchers have looked to see if children from impoverished environments also perform poorly on tests of creativity, such as the TTCT. Some studies indicate that children who attend schools in poor neighborhoods perform more poorly on creativity tests than children who attend schools in richer neighborhoods (Dai et al., 2012; Dudek, Strobel, & Runco, 1993). In fact, school quality was a better predictor of creativity test scores than parental education, but confidence and motivation were important predictors as well (Dai et al., 2012). Dudek, Strobel, & Runco (1993) suggested that lower scores for children from poor neighborhoods on creativity tests might be related to poorer verbal skills, which might also explain why girls tended to outperform boys on the verbal creativity tests. By contrast, race differences that are independent of socioeconomic status are generally not found on the TTCT (Glover, 1976; Torrance, 1971), although one study reported higher average creativity scores for lower socioeconomic status black children than middle-class white children (Kaltsounis, 1974).

Even less is known about the relationship between socioeconomic status and participation in creative activities in adulthood, although it would seem reasonable to expect that impoverished individuals would have less opportunity to engage in creative activities than persons who are not impoverished. However, it is relatively common for women from poor families in developing countries to earn or supplement the family income

by creating and selling handicrafts, which in turn tends to increase their self-efficacy (e.g., Dhamija, 1981; Krishnaraj, 1992). It would be interesting to examine how earning money from crafts affects the well-being of poorer and older North American women.

Benefits in Later Life

Benefits of Creativity

Over the last several years, there has been considerable interest in examining the degree to which creative activities can benefit older adults, including both healthy older adults and older adults with dementia or other illnesses. Inspired by Gene Cohen's call for evidence-based research on the benefits of creative activities for older adults (Cohen, 2002; Cohen et al., 2006; Miller & Cohen, 2010), the National Center for Creative Aging (NCCA) was founded in 2001 under the auspices of the National Endowment for the Arts (NEA) to promote research and programs that encourage older adults to engage in creative activities and the arts. The NCCA tends to promote participation in fine arts activities as opposed to craft activities, which some people associate with simple activities suitable for nursing homes (Larson & Perlstein, 2003). For Cohen (2006), the best arts activities for older adults are those where older adults engage in challenging activities tutored by professional artists over a long period of time.

Cohen (2006) summarized the positive effects of long-term participation in creative activities as follows: creative activities give older adults a sense of control and mastery, opportunities for social engagement, and increased brain plasticity, all of which can lead to better health. Control and mastery come from the feeling of satisfaction gained from doing something new or better than before. Cohen suggested that this sense of control might improve immune system functioning and that social engagement, which comes from sharing the activity with others who are either an audience or cocreators, tends to reduce stress. Finally, participation in the arts tends to provide challenges, which can induce the formation of new synapses and dendrites, thus increasing brain plasticity.

For example, quilt-making had a number of psychological benefits for middle-aged and older women in Appalachian, Mormon, and Amish North American subcultures (Cheek & Piercy, 2004, 2008). Quilting helped older women maintain a sense of identity and self-efficacy, allowed them to feel that they were growing in skills, and connected them to other women with similar interests. Quilting groups might help older women achieve a sense of generativity, because they offer women the opportunity to share their quilt-related knowledge and skills with other women (Cheek & Piercy,

2008). Similarly, middle-aged and older women received several psychological benefits from making jewelry, either as a hobby or as a vocation (Adams-Price & Steinman, 2007). Women reported that jewelry-making increased their well-being and sense of meaning and added recognition from others, a sense of accomplishment/productivity, and a chance to relax and relieve stress. The psychological benefits were linked to the women's agentic generativity, the feeling of leaving one's mark on the world.

Interestingly, the movement toward involving older adults in arts activities seems to be more connected to the art therapy movement than to academic research on creativity (Stuckey & Nobel, 2010). Some proponents of creative aging view creative activities as a means to cope with health problems or other age-related deficits, but others are inspired by the concept of successful aging to look at the potential of older adults (Carr, Wellin, & Reece, 2009; Cohen, 2006; Fisher & Specht, 1999). This dichotomy mirrors the discussion in the aging literature about whether or not late-life gains are actual gains or merely compensation for losses (Flood & Phillips, 2007; Uttal & Perlmutter, 1989).

One benefit of late-life participation in creative activities appears to be the creation of meaning in older adults' lives (Carr, Wellin, & Reece, 2009). Although most creative endeavors contain a component of meaning, story-telling and the writing of poetry are probably the most obvious examples of meaning-making through creative activities. It could also be argued that participation in the traditional crafts of one's culture could be a way to create meaning within a cultural context.

Benefits of Wisdom

If wise individuals know the art of living, they should also know how to age and die well. Yet, some researchers have argued that the greater clarity and insight into the human condition and the aging process that wisdom provides, including the negative aspects of the human existence and growing older, might not necessarily be conducive to experiencing subjective well-being (Mickler & Staudinger, 2008; Staudinger et al., 2005; Staudinger & Glück, 2011). Indeed, the empirical evidence is mixed.

Studies of highly educated middle-aged and older white adults did not find significant correlations between wisdom, measured as practical wisdom, transcendent wisdom, personal wisdom, or expertise in uncertainty, and life satisfaction or the absence of depressive symptoms (Brugman, 2000; Mickler & Staudinger, 2008; Wink & Helson, 1997). Yet, studies of racially, educationally, and/or economically diverse samples of older adults show that wisdom, assessed by the combined ratings of cognitive, reflective, and compassionate personality qualities, the 3D-WS, or

the combined analytic and synthetic wisdom modes, was positively related to life satisfaction, general well-being, or the absence of depressive symptoms (Ardelt, 2003; Le, 2011; Takahashi & Overton, 2002), even after controlling for current life circumstances, such as physical and subjective health, financial situation, socioeconomic status, physical environment, and social involvement (Ardelt, 1997; Ardelt & Edwards, in press). In addition, and similar to creative endeavors in old age, wisdom was associated with greater physical and subjective health, mastery, and purpose in life and less fear of death (Ardelt, 2000, 2003). In fact, feelings of mastery, control, and purpose in life tend to mediate the relation between wisdom and subjective well-being in old age either fully (Etezadi & Pushkar, 2013) or partially (Ardelt & Edwards, in press).

It appears that wise people are not only able to perceive reality as it is, but they can also learn from experiences and have the resources and confidence to master the vicissitudes of life (Glück & Bluck, 2013). For example, when faced by a problem or crisis, older wise exemplars first took a step back to relax and consider the situation. Then they engaged in active coping to rectify the situation to the best of their abilities, taking lessons learned in the past into account. By contrast, older nonwise exemplars avoided reflecting on the situation and were more likely to immediately use passive coping strategies, such as praying or accepting, when confronted by a problem, even if a more active approach would have been more appropriate (Ardelt, 2005).

Overall, the research suggests that creativity and wisdom are particularly beneficial in old age when objective circumstances might threaten subjective well-being, such as poor health or low socioeconomic status. For example, the positive relation between wisdom and subjective well-being was statistically stronger for older hospice patients and nursing home residents than relatively healthy older community residents after controlling for demographics, social involvement, and subjective health. Although well-being tended to be lower for hospice patients and nursing home residents than for community residents, the difference in average well-being scores became smaller with higher wisdom scores (Ardelt & Edwards, in press). Because aging comes with inevitable social, mental, and physical losses, it is conceivable that creative activities and wisdom become more valuable by providing a sense of mastery, control, and purpose in life, when other means to augment subjective well-being, such as traveling, going out, or entertaining, are no longer available.

Discussion

Although creativity and wisdom are held in high esteem, a generally agreed upon definition and assessment of these elusive constructs does

not exist. This might explain some of the differences in the research findings. Yet, we are also able to draw some general conclusions: First, the associations between age and creativity and age and wisdom appear to be nonlinear, with initial increases in adolescence and early adulthood up to a certain point, followed by either a plateau or a later decline. The height of the summit and when it is reached depend on the individual, the domain of creative activity, and whether the quantity or quality of products or personality qualities of creativity and wisdom are studied. Second, both creativity and wisdom have been viewed as products, independent of the individuals who produced them. Yet, the more interesting question is how wise and creative individuals excel at living. Creative people are exceptional, because they create something that did not exist before, such as a painting, a sculpture, a poem, a novel, an invention, or a new way of solving a problem. Wise people do not necessarily create something new, but they are exceptional, because they understand the deeper meaning of old truths, such as "Love thy neighbor" or "Humans are mortal," and they act accordingly (Kekes, 1983) to create a life that is good for them, others, and the whole society. Wise individuals creatively apply their wisdom to deal with the challenges of life, provide advice, guidance, and help to others, and to the best of their ability, behave in ways that benefits rather than harms society. Their outstanding characteristic is their other-centeredness, which includes the ability to see phenomena and events from different points of view to gain a deeper understanding of the issues as well as deep compassion and concern for others. Creative individuals, by contrast, appear to be more complex and to have a less integrated and self-transcended personality than wise people. Yet, an intrinsic motivation to either create something new or to grow in wisdom seems to be essential for the manifestation of both creativity and wisdom. Finally, creativity and wisdom seem to be particularly beneficial during the later years of life by providing a sense of control, mastery, and life purpose that enhance subjective well-being in old age.

Although research on creativity and wisdom has proliferated during the past decades, we still do not know enough about the conditions that foster creativity and wisdom. More longitudinal studies are needed that trace the development of creativity and wisdom across the life course and explore childhood and adolescent predictors of later life creativity and wisdom. For example, it is possible that the emergence of creativity and wisdom depends on role models and a social support system. Other questions are whether creativity and wisdom can be learned in schools and universities (Hennessey & Amabile, 2010; Reams, 2015; Sternberg, 2001; Sternberg, Jarvin, & Grigorenko, 2009) and what might be the long-term benefits for students and society. Another interesting research area is the study of creativity and wisdom in organizations, particularly those that serve older

adults, such as assisted living facilities and nursing homes (Geller, 2013; McBee, 2008). One promising approach is the TimeSlips creative storytelling program (Basting, 2003), which engages older adults with dementia and their caregivers in creative storytelling that does not rely on memory but brings meaning and enhanced well-being to the older adults' lives and more profound interactions with their caregivers (Fritsch et al., 2009; George & Houser, 2014; Phillips, Reid-Arndt, & Pak, 2010). A promising approach for wisdom development is the introduction of mindfulness training in assisted living facilities and nursing homes (Moss et al., 2015). Creativity and wisdom are clearly valuable throughout the life course but are especially beneficial in old age to enhance subjective well-being, particularly when circumstances are less than optimal.

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References

Adams-Price, C. E., & Steinman, B. A. (2007). Crafts and generative expression: A qualitative study of the meaning of creativity in women who make jewelry in midlife. *The International Journal of Aging & Human Development, 65*(4), 315–333. doi: 10.2190/AG.65.4.c

Amabile, T. M. (1982). Social psychology of creativity: A consensual assessment technique. *Journal of Personality and Social Psychology, 43*(5), 997–1013. doi: 10.1037/0022-3514.43.5.997

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology, 45*(2), 357–376. doi: 10.1037/0022-3514.45.2.357

Ardelt, M. (1997). Wisdom and life satisfaction in old age. *The Journals of Gerontology, Series B: Psychological Sciences, 52B*(1), P15–P27. doi: 10.1093/geronb/52B.1.P15

Ardelt, M. (1998). Social crisis and individual growth: The long-term effects of the Great Depression. *Journal of Aging Studies, 12*(3), 291–314. doi: 10.1016/S0890-4065(98)90005-6

Ardelt, M. (2000). Antecedents and effects of wisdom in old age: A longitudinal perspective on aging well. *Research on Aging, 22*(4), 360–394. doi: 10.1177/0164027500224003

Ardelt, M. (2003). Empirical assessment of a three-dimensional wisdom scale. *Research on Aging, 25*(3), 275–324. doi: 10.1177/0164027503025003004

Ardelt, M. (2004). Wisdom as expert knowledge system: A critical review of a contemporary operationalization of an ancient concept. *Human Development, 47*(5), 257–285. doi: 10.1159/000079154

Ardelt, M. (2005). How wise people cope with crises and obstacles in life. *ReVision: A Journal of Consciousness and Transformation, 28*(1), 7–19. doi: 10.3200/REVN.28.1.7-19

Ardelt, M. (2008a). Being wise at any age. In S. J. Lopez (Ed.), *Positive psychology: exploring the best in people* (Vol. 1: Discovering Human Strengths, pp. 81–108). Westport, CT: Praeger.

Ardelt, M. (2008b). Self-development through selflessness: The paradoxical process of growing wiser. In H. A. Wayment & J. J. Bauer (Eds.), *Transcending self-interest: Psychological explorations of the quiet ego* (pp. 221–233). Washington, DC: American Psychological Association.

Ardelt, M. (2010). Are older adults wiser than college students? A comparison of two age cohorts. *Journal of Adult Development, 17*(4), 193–207. doi: 10.1007/s10804-009-9088-5

Ardelt, M. (2011). The measurement of wisdom: A commentary on Taylor, Bates, and Webster's comparison of the SAWS and 3D-WS. *Experimental Aging Research, 37*(2), 241–255. doi: 10.1080/0361073X.2011.554509

Ardelt, M., & Edwards, C. A. (in press). Wisdom at the end of life: An analysis of mediating and moderating relations between wisdom and subjective well-being. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*. doi: 10.1093/geronb/gbv051

Armstrong, K. (2001). *Buddha*. New York: Penguin Group.

Armstrong, K. (2006). *Muhammad. A prophet for our time*. New York, NY: HarperCollins.

Baltes, P. B., & Smith, J. (2008). The fascination of wisdom: Its nature, ontogeny, and function. *Perspectives on Psychological Science, 3*(1), 56–64. doi: 10.1111/j.1745-6916.2008.00062.x

Baltes, P. B., & Staudinger, U. M. (2000). Wisdom: A metaheuristic (pragmatic) to orchestrate mind and virtue toward excellence. *American Psychologist, 55*(1), 122–136. doi: 10.1037/0003-066X.55.1.122

Baltes, P. B., Staudinger, U. M., Maercker, A., & Smith, J. (1995). People nominated as wise: A comparative study of wisdom-related knowledge. *Psychology and Aging, 10*(2), 155–166. doi: 10.1037/0882-7974.10.2.155

Basting, A. D. (2003). Exploring the creative potential of people with Alzheimer's disease and related dementia: Dare to imagine. In J. L. Ronch & J. A. Goldfield (Eds.), *Mental wellness in aging: Strengths-based approaches.* (pp. 353–367, xxvii, 386). Baltimore, MD: Health Professions Press.

Bergsma, A., & Ardelt, M. (2012). Self-reported wisdom and happiness: An empirical investigation. *Journal of Happiness Studies, 13*(3), 481–499. doi: 10.1007/s10902-011-9275-5

Bigelow, B. J. (2006). There's an elephant in the room: The impact of early poverty and neglect on intelligence and common learning disorders in children, adolescents, and their parents. *Developmental Disabilities Bulletin, 34*(1–2), 177–215.

Bluck, S., & Glück, J. (2005). From the inside out: People's implicit theories of wisdom. In R. J. Sternberg & J. Jordan (Eds.), *A handbook of wisdom. Psychological perspectives* (pp. 84–109). New York: Cambridge University Press.

Bradley, G. W. (1978). Self-serving biases in the attribution process: A reexamination of the fact or fiction question. *Journal of Personality and Social Psychology, 36*(1), 56–71. doi: 10.1037/0022-3514.36.1.56

Brooks-Gunn, J., Klebanov, P. K., & Duncan, G. J. (1996). Ethnic differences in children's intelligence test scores: Role of economic deprivation, home environment, and maternal characteristics. *Child Development, 67*(2), 396–408. doi: 10.2307/1131822

Brugman, G. M. (2000). *Wisdom: Source of narrative coherence and eudaimonia*. Delft, The Netherlands: Eburon.

Carr, D., Wellin, C., & Reece, H. (2009). A review of arts and aging research: Revealing an elusive but promising direction for the era of the Third Age. *Journal of Aging, Humanities, and the Arts, 3*(3), 199–221. doi: 10.1080/19325610903134496

Cheek, C., & Piercy, K. W. (2004). Quilting as age identity expression in traditional women. *The International Journal of Aging & Human Development, 59*(4), 321–337. doi: 10.2190/t1r0-d8tw-ml6y-vyyl

Cheek, C., & Piercy, K. W. (2008). Quilting as a tool in resolving Erikson's adult stage of human development. *Journal of Adult Development, 15*(1), 13–24. doi: 10.1007/s10804-007-9022-7

Clayton, V. P., & Birren, J. E. (1980). The development of wisdom across the life-span: A reexamination of an ancient topic. In P. B. Baltes & O. G. Brim Jr. (Eds.), *Life-span development and behavior* (Vol. 3, pp. 103–135). New York: Academic Press.

Cohen, G. D. (2002). *The creative age: Awakening human potential in the second half of life*. New York, NY: William Morrow.

Cohen, G. D. (2006). Research on creativity and aging: The positive impact of the arts on health and illness. *Generations, 30*(1), 7–15.

Cohen, G. D., Perlstein, S., Chapline, J., Kelly, J., Firth, K. M., & Simmens, S. (2006). The impact of professionally conducted cultural programs on the physical health, mental health, and social functioning of older adults. *The Gerontologist, 46*(6), 726–734. doi: 10.1093/geront/46.6.726

Creighton, M. R. (1995). Japanese craft tourism: Liberating the crane wife. *Annals of Tourism Research, 22*(2), 463–478. doi: 10.1016/0160-7383(94)00086-7

Csikszentmihalyi, M., & Nakamura, J. (2005). The role of emotions in the development of wisdom. In R. J. Sternberg & J. Jordan (Eds.), *A handbook of wisdom. Psychological perspectives* (pp. 220–242). New York: Cambridge University Press.

Curnow, T. (1999). *Wisdom, intuition, and ethics*. Brookfield, VT: Ashgate.

Dai, D. Y., Tan, X., Marathe, D., Valtcheva, A., Pruzek, R. M., & Shen, J. (2012). Influences of social and educational environments on creativity during adolescence: Does SES matter? *Creativity Research Journal, 24*(2–3), 191–199. doi: 10.1080/10400419.2012.677338

Denney, N. W., Dew, J. R., & Kroupa, S. L. (1995). Perceptions of wisdom: What is it and who has it? *Journal of Adult Development, 2*(1), 37–47. doi: 10.1007/BF02261740

Dhamija, J. (1981). Women and handicrafts: Myth and reality. *Seeds, 4*, 1–16.
Donald, D. H. (1995). *Lincoln*. New York, NY: Simon & Schuster.
Dudek, S. Z., Strobel, M. G., & Runco, M. A. (1993). Cumulative and proximal influences on the social environment and children's creative potential. *The Journal of Genetic Psychology: Research and Theory on Human Development, 154*(4), 487–499.
Edmondson, R. (2012). Intergenerational relations in the west of Ireland and sociocultural approaches to wisdom. *Journal of Family Issues, 33*(1), 76–98. doi: 10.1177/0192513x11420959
Erikson, E. H. (1963). *Childhood and society*. New York: Norton.
Etezadi, S., & Pushkar, D. (2013). Why are wise people happier? An explanatory model of wisdom and emotional well-being in older adults. *Journal of Happiness Studies, 14*(3), 929–950. doi: 10.1007/s10902-012-9362-2
Feist, G. J. (1998). A meta-analysis of personality in scientific and artistic creativity. *Personality and Social Psychology Review, 2*(4), 290–309. doi: 10.1207/s15327957pspr0204_5
Feist, G. J., & Barron, F. X. (2003). Predicting creativity from early to late adulthood: Intellect, potential, and personality. *Journal of Research in Personality, 37*(2), 62–88. doi: 10.1016/S0092-6566(02)00536-6
Ferrari, M., Kahn, A., Benayon, M., & Nero, J. (2011). Phronesis, sophia, and hochma: Developing wisdom in Islam and Judaism. *Research in Human Development, 8*(2), 128–148. doi: 10.1080/15427609.2011.568869
Fisher, B. J., & Specht, D. K. (1999). Successful aging and creativity in later life. *Journal of Aging Studies, 13*(4), 457–472. doi: 10.1016/S0890-4065(99)00021-3
Flood, M., & Phillips, K. D. (2007). Creativity in older adults: A plethora of possibilities. *Issues in Mental Health Nursing, 28*(4), 389–411. doi: 10.1080/01612840701252956
Foos, P. W., & Boone, D. (2008). Adult age differences in divergent thinking: It's just a matter of time. *Educational Gerontology, 34*(7), 587–594. doi: 10.1080/03601270801949393
Fritsch, T., Kwak, J., Grant, S., Lang, J., Montgomery, R. R., & Basting, A. D. (2009). Impact of TimeSlips, a creative expression intervention program, on nursing home residents with dementia and their caregivers. *The Gerontologist, 49*(1), 117–127. doi: 10.1093/geront/gnp008
Gandhi, T. A. (2007). *"Let's kill Gandhi!": A chronicle of his last days, the conspiracy, murder, investigation, and trial*. New Delhi, India: Rupa & Co.
Geller, S. (2013). Sparking the creative in older adults. *Psychological Perspectives, 56*(2), 200–211.
George, D. R., & Houser, W. S. (2014). "I'm a storyteller!": Exploring the benefits of TimeSlips creative expression program at a nursing home. *American Journal of Alzheimer's Disease and Other Dementias, 29*(8), 678–684. doi: 10.1177/1533317514539725
Glaveanu, V. P. (2013). Creativity and folk art: A study of creative action in traditional craft. *Psychology of Aesthetics, Creativity, and the Arts, 7*(2), 140–154. doi: 10.1037/a0029318

Glover, J. A. (1976). Comparative levels of creative ability among elementary school children. *The Journal of Genetic Psychology: Research and Theory on Human Development, 129*(1), 131–135.

Glück, J., & Bluck, S. (2011). Laypeople's conceptions of wisdom and its development: Cognitive and integrative views. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 66B*(3), 321–324. doi: 10.1093/geronb/gbr011

Glück, J., & Bluck, S. (2013). The MORE life experience model: A theory of the development of wisdom. In M. Ferrari & N. Weststrate (Eds.), *The scientific study of personal wisdom: From contemplative traditions to neuroscience* (pp. 75–97). New York: Springer.

Glück, J., König, S., Naschenweng, K., Redzanowski, U., Dorner-Hörig, L., Strasser, I., et al. (2013). How to measure wisdom: Content, reliability, and validity of five measures. *Frontiers in Psychology, 4: 405*, 1–13. doi: 10.3389/fpsyg.2013.00405

Gough, H. G. (1979). A creative personality scale for the Adjective Check List. *Journal of Personality and Social Psychology, 37*(8), 1398–1405. doi: 10.1037/0022–3514.37.8.1398

Green, S. K., & Gross, A. E. (1979). Self-serving biases in implicit evaluations. *Personality and Social Psychology Bulletin, 5*(2), 214–217. doi: 10.1177/014616727900500219

Hansen, D. D. (2003). *The dream: Martin Luther King, Jr., and the speech that inspired a nation*. New York, NY: Ecco.

Helson, R., & Srivastava, S. (2002). Creative and wise people: Similarities, differences and how they develop. *Personality and Social Psychology Bulletin, 28*(10), 1430–1440. doi: 10.1177/014616702236874

Hennessey, B. A., & Amabile, T. M. (2010). Creativity. *Annual Review of Psychology, 61*, 569–598. doi: 10.1146/annurev.psych.093008.100416

Jordan, J. (2005). The quest for wisdom in adulthood: A psychological perspective. In R. J. Sternberg & J. Jordan (Eds.), *A handbook of wisdom. Psychological perspectives* (pp. 160–188). New York: Cambridge University Press.

Kaltsounis, B. (1974). Race, socioeconomic status and creativity. *Psychological Reports, 35*(1, Pt 1), 164–166. doi: 10.2466/pr0.1974.35.1.164

Kekes, J. (1983). Wisdom. *American Philosophical Quarterly, 20*(3), 277–286.

Kharkhurin, A. V. (2014). Creativity.4in1: Four-criterion construct of creativity. *Creativity Research Journal, 26*(3), 338–352. doi: 10.1080/10400419.2014.929424

King, M. E. (2013). Mohandas K. Gandhi and Martin Luther King, Jr.'s bequest: Nonviolent civil resistance in a globalized world. In L. V. Baldwin, P. R. Dekar, & V. L. Crawford (Eds.), *"In an inescapable network of mutuality": Martin Luther King, Jr. and the globalization of an ethical ideal* (pp. 152–216). Eugene, OR: Cascade Books.

Kitchener, K. S., & Brenner, H. G. (1990). Wisdom and reflective judgment: Knowing in the face of uncertainty. In R. J. Sternberg (Ed.), *Wisdom: Its nature, origins, and development* (pp. 212–229). New York: Cambridge University Press.

Kitchener, K. S., King, P. M., Wood, P. K., & Davison, M. L. (1989). Sequentiality and consistency in the development of reflective judgment: A six-year

longitudinal study. *Journal of Applied Developmental Psychology, 10*(1), 73–95. doi: 10.1016/0193-3973(89)90015-4

Kleibeuker, S. W., De Dreu, C. K. W., & Crone, E. A. (2013). The development of creative cognition across adolescence: Distinct trajectories for insight and divergent thinking. *Developmental Science, 16*(1), 2–12. doi: 10.1111/j.1467-7687.2012.01176.x

Krishnaraj, M. (1992). Women craft workers as security for family subsistence. *Economic and Political Weekly, 27*(17), WS7–WS17.

Kunzmann, U., & Baltes, P. B. (2003). Wisdom-related knowledge: Affective, motivational, and interpersonal correlates. *Personality and Social Psychology Bulletin, 29*(9), 1104–1119. doi: 10.1177/0146167203254506

Larson, R. T. H., & Perlstein, S. (2003). Creative aging: A new field for the 21st century. *Teaching Artist Journal, 1*(3), 144–151. doi: 10.1207/S1541180XTAJ0103_04

Le, T. N. (2008). Age differences in spirituality, mystical experiences and wisdom. *Ageing & Society 28*, 383–411. doi: 10.1017/S0144686X0700685X

Le, T. N. (2011). Life satisfaction, openness value, self-transcendence, and wisdom. *Journal of Happiness Studies, 12*(2), 171–182. doi: 10.1007/s10902-010-9182-1

Le, T. N., & Levenson, M. R. (2005). Wisdom as self-transcendence: What's love (& individualism) got to do with it? *Journal of Research in Personality, 39*(4), 443–457. doi: 10.1016/j.jrp.2004.05.003

Levenson, M. R., Jennings, P. A., Aldwin, C. M., & Shiraishi, R. W. (2005). Self-transcendence: Conceptualization and measurement. *International Journal of Aging & Human Development, 60*(2), 127–143. doi: 10.2190/XRXM-FYRA-7U0X-GRC0

Lokos, L. (1968). *House divided: The life and legacy of Martin Luther King*. New Rochelle, NY: Arlington House.

Maidment, J., & Macfarlane, S. (2011a). Crafting communities: Promoting inclusion, empowerment, and learning between older women. *Australian Social Work, 64*(3), 283–298. doi: 10.1080/0312407x.2010.520087

Maidment, J., & Macfarlane, S. (2011b). Older women and craft: Extending educational horizons in considering wellbeing. *Social Work Education, 30*(6), 700–711. doi: 10.1080/02615479.2011.586568

McBee, L. (2008). *Mindfulness-based elder care: A CAM model for frail elders and their caregivers*. New York, NY: Springer.

McKee, P., & Barber, C. (1999). On defining wisdom. *International Journal of Aging and Human Development, 49*(2), 149–164. doi: 10.2190/8G32-BNV0-NVP9-7V6G

Meacham, J. A. (1990). The loss of wisdom. In R. J. Sternberg (Ed.), *Wisdom: Its nature, origins, and development* (pp. 181–211). New York: Cambridge University Press.

Mickler, C., & Staudinger, U. M. (2008). Personal wisdom: Validation and age-related differences of a performance measure. *Psychology and Aging, 23*(4), 787–799. doi: 10.1037/a0013928

Miller, W., & Cohen, G. D. (2010). On creativity, illness, and aging. *Journal of Aging, Humanities, and the Arts, 4*(4), 302–311. doi: 10.1080/19325614.2010.529397

Moss, A. S., Reibel, D. K., Greeson, J. M., Thapar, A., Bubb, R., Salmon, J., et al. (2015). An adapted mindfulness-based stress reduction program for elders in

a continuing care retirement community: Quantitative and qualitative results from a pilot randomized controlled trial. *Journal of Applied Gerontology, 34*(4), 518–538. doi: 10.1177/0733464814559411

Mumford, M. D. (2003). Where have we been, where are we going? Taking stock in creativity research. *Creativity Research Journal, 15*(2–3), 107–120. doi: 10.1207/s15326934crj152&3_01

Ñanamoli, B. (2001). *The life of the Buddha. According to the Pali Canon*. Seattle, WA: BPS Pariyatti Editions.

Nassif, C., & Quevillon, R. (2008). The development of a preliminary creativity scale for the MMPI-2: The C scale. *Creativity Research Journal, 20*(1), 13–20. doi: 10.1080/10400410701839918

Orwoll, L., & Perlmutter, M. (1990). The study of wise persons: Integrating a personality perspective. In R. J. Sternberg (Ed.), *Wisdom: Its nature, origins, and development* (pp. 160–177). New York: Cambridge University Press.

Pasupathi, M., & Staudinger, U. M. (2001). Do advanced moral reasoners also show wisdom? Linking moral reasoning and wisdom-related knowledge and judgement. *International Journal of Behavioral Development, 25*(5), 401–415. doi: 10.1080/016502501316934833

Pasupathi, M., Staudinger, U. M., & Baltes, P. B. (2001). Seeds of wisdom: Adolescents' knowledge and judgment about difficult life problems. *Developmental Psychology, 37*(3), 351–361. doi: 10.1037//0012-1649.37.3.351

Perrine, N. E., & Brodersen, R. M. (2005). Artistic and scientific creative behavior: Openness and the mediating role of interests. *Journal of Creative Behavior, 39*(4), 217–236.

Phillips, L. J., Reid-Arndt, S. A., & Pak, Y. (2010). Effects of a creative expression intervention on emotions, communication, and quality of life in persons with dementia. *Nursing Research, 59*(6), 417–425. doi: 10.1097/NNR.0b013e3181faff52

Piercy, K. W., & Cheek, C. (2004). Tending and befriending: The intertwined relationships of quilters. *Journal of Women & Aging, 16*(1–2), 17–33. doi: 10.1300/J074v16n01_03

Reams, J. (2015). The cultivation of wisdom in the classroom. *Integral Review, 11*(2), 103–134.

Reese, H. W., Lee, L.-J., Cohen, S. H., & Puckett, J. M., Jr. (2001). Effects of intellectual variables, age, and gender on divergent thinking in adulthood. *International Journal of Behavioral Development, 25*(6), 491–500. doi: 10.1080/01650250042000483

Richards, R. (2007). Everyday creativity: Our hidden potential. In R. Richards (Ed.), *Everyday creativity and new views of human nature: Psychological, social, and spiritual perspectives.* (pp. 25–53). Washington, DC: American Psychological Association.

Richards, R., Kinney, D. K., Benet, M., & Merzel, A. P. (1988). Assessing everyday creativity: Characteristics of the Lifetime Creativity Scales and validation with three large samples. *Journal of Personality and Social Psychology, 54*(3), 476–485. doi: 10.1037/0022-3514.54.3.476

Richardson, M.J., & Pasupathi, M. (2005). Young and growing wiser: Wisdom during adolescence and young adulthood. In R.J. Sternberg & J. Jordan (Eds.), *A handbook of wisdom. Psychological perspectives* (pp. 139–159). New York: Cambridge University Press.

Runco, M.A. (2007). To understand is to create: An epistemological perspective on human nature and personal creativity. In R. Richards (Ed.), *Everyday creativity and new views of human nature: Psychological, social, and spiritual perspectives.* (pp. 91–107, xiii, 349). Washington, DC: American Psychological Association.

Silvia, P.J., Beaty, R.E., Nusbaum, E.C., Eddington, K.M., Levin-Aspenson, H., & Kwapil, T.R. (2014). Everyday creativity in daily life: An experience-sampling study of 'little c' creativity. *Psychology of Aesthetics, Creativity, and the Arts, 8*(2), 183–188. doi: 10.1037/a0035722

Simonton, D.K. (1994). *Greatness: Who makes history and why*. New York, NY: Guilford Press.

Simonton, D.K. (1997). Creative productivity: A predictive and explanatory model of career trajectories and landmarks. *Psychological Review, 104*(1), 66–89. doi: 10.1037/0033-295x.104.1.66

Simonton, D.K. (2000). Creativity: Cognitive, personal, developmental, and social aspects. *American Psychologist, 55*(1), 151–158. doi: 10.1037/0003-066x.55.1.151

Smith, J., & Baltes, P.B. (1990). Wisdom-related knowledge: Age/cohort differences in response to life-planning problems. *Developmental Psychology, 26*(3), 494–505. doi: 10.1037/0012-1649.26.3.494

Staudinger, U.M. (1999). Older and wiser? Integrating results on the relationship between age and wisdom-related performance. *International Journal of Behavioral Development, 23*(3), 641–664. doi: 10.1080/016502599383739

Staudinger, U.M., Dörner, J., & Mickler, C. (2005). Wisdom and personality. In R.J. Sternberg & J. Jordan (Eds.), *A handbook of wisdom. Psychological perspectives* (pp. 191–219). New York: Cambridge University Press.

Staudinger, U.M., & Glück, J. (2011). Psychological wisdom research: Commonalities and differences in a growing field. *Annual Review of Psychology, 62*(1), 215–241. doi: 10.1146/annurev.psych.121208.131659

Staudinger, U.M., & Kessler, E.-M. (2008). Adjustment and growth. Two trajectories of positive personality development across adulthood. In M.C. Smith (Ed.), *Handbook of research on adult learning and development* (pp. 239–268). New York: Routledge.

Staudinger, U.M., & Kunzmann, U. (2005). Positive adult personality development: Adjustment and/or growth? *European Psychologist, 10*(4), 320–329. doi: 10.1027/1016-9040.10.4.320

Staudinger, U.M., Lopez, D.F., & Baltes, P.B. (1997). The psychometric location of wisdom-related performance: Intelligence, personality, and more? *Personality and Social Psychology Bulletin, 23*(11), 1200–1214. doi: 10.1177/01461672972311007

Staudinger, U.M., Maciel, A.G., Smith, J., & Baltes, P.B. (1998). What predicts wisdom-related performance? A first look at personality, intelligence, and facilitative

experiential contexts. *European Journal of Personality, 12*(1), 1–17. doi: 10.1002/(SICI)1099-0984(199801/02)12:1%3C1::AID-PER285%3E3.0.CO;2-9

Sternberg, R.J. (1985). Implicit theories of intelligence, creativity, and wisdom. *Journal of Personality and Social Psychology, 49*(3), 607–627. doi: 10.1037/0022-3514.49.3.607

Sternberg, R.J. (1998). A balance theory of wisdom. *Review of General Psychology, 2*(4), 347–365. doi: 10.1037/1089-2680.2.4.347

Sternberg, R.J. (2001). Why schools should teach for wisdom: The balance theory of wisdom in educational settings. *Educational Psychologist, 36*(4), 227–245.

Sternberg, R.J. (2005). Older but not wiser? The relationship between age and wisdom. *Ageing International, 30*(1), 5–26. doi: 10.1007/BF02681005

Sternberg, R.J., Jarvin, L., & Grigorenko, E.L. (2009). *Teaching for wisdom, intelligence, creativity, and success*. Thousand Oaks, CA: Corwin Press.

Stuckey, H.L., & Nobel, J. (2010). The connection between art, healing, and public health: A review of current literature. *American Journal of Public Health, 100*(2), 254–263. doi: 10.2105/ajph.2008.156497

Takahashi, M., & Overton, W.F. (2002). Wisdom: A culturally inclusive developmental perspective. *International Journal of Behavioral Development, 26*(3), 269–277. doi: 10.1080/01650250143000139

Takahashi, M., & Overton, W.F. (2005). Cultural foundations of wisdom: An integrated developmental approach. In R.J. Sternberg & J. Jordan (Eds.), *A handbook of wisdom. Psychological perspectives* (pp. 32–60). New York: Cambridge University Press.

Tanggaard, L. (2013). The sociomateriality of creativity in everyday life. *Culture & Psychology, 19*(1), 20–32. doi: 10.1177/1354067x12464987

Thomas, M. L., Bangen, K. J., Ardelt, M., & Jeste, D. V. (in press). Development of a 12-item abbreviated Three-Dimensional Wisdom Scale (3D-WS-12): Item selection and psychometric properties. *Assessment*. doi: 10.1177/1073191115595714

Torrance, E.P. (1962). *Guiding creative talent*. Englewood Cliffs, NJ: Prentice-Hall.

Torrance, E.P. (1971). Are the Torrance tests of creative thinking biased against or in favor of "disadvantaged" groups? *Gifted Child Quarterly, 15*(2), 75–80. doi: 10.1177/001698627101500201

Uttal, D.H., & Perlmutter, M. (1989). Toward a broader conceptualization of development: The role of gains and losses across the life span. *Developmental Review, 9*(2), 101–132. doi: 10.1016/0273-2297(89)90025-7

Walsh, F. (2003). *The Montgomery bus boycott*. Milwaukee, WI: World Almanac Library.

Webster, J.D. (2003). An exploratory analysis of a self-assessed wisdom scale. *Journal of Adult Development, 10*(1), 13–22. doi: 10.1023/A:1020782619051

Webster, J.D. (2007). Measuring the character strength of wisdom. *International Journal of Aging & Human Development, 65*(2), 163–183. doi: 10.2190/AG.65.2.d

Webster, J.D., Westerhof, G.J., & Bohlmeijer, E.T. (2014). Wisdom and mental health across the lifespan. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 69*(2), 209–218. doi: 10.1093/geronb/gbs121

Weststrate, N. M., Ferrari, M., & Ardelt, M. (under review). Investigating implicit theories of wisdom through exemplars and prototypes.

Wink, P., & Dillon, M. (2003). Religiousness, spirituality, and psychosocial functioning in late adulthood: Findings from a longitudinal study. *Psychology and Aging, 18*(4), 916–924. doi: 10.1037/0882-7974.18.4.916

Wink, P., & Helson, R. (1997). Practical and transcendent wisdom: Their nature and some longitudinal findings. *Journal of Adult Development, 4*(1), 1–15. doi: 10.1007/BF02511845

Yang, S.-Y. (2001). Conceptions of wisdom among Taiwanese Chinese. *Journal of Cross-Cultural Psychology, 32*(6), 662–680. doi: 10.1177/002202210103 2006002

Zacher, H., McKenna, B., & Rooney, D. (2013). Effects of self-reported wisdom on happiness: Not much more than emotional intelligence? *Journal of Happiness Studies, 14*(6), 1697–1716. doi: 10.1007/s10902-012-9404-9

Zeng, L., Proctor, R. W., & Salvendy, G. (2011). Can traditional divergent thinking tests be trusted in measuring and predicting real-world creativity? *Creativity Research Journal, 23*(1), 24–37. doi: 10.1080/10400419.2011.545713

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CHAPTER THREE

Religion and Volunteering across the Life Course

Fengyan Tang

Volunteerism has traditionally been associated with religion in the United States. The high prevalence of volunteering in the United States is probably attributed to the importance of religion in life. With the strength of religious institutions, practices, and beliefs, the United States has resisted the trend toward secularity and is regarded as one of the most religious nations worldwide (Wald & Calhoun-Brown, 2014). A majority of Americans identify with some branch of the Christian faith, and about half of them have altered their religious affiliations at least once during their lifetime (Wald & Calhoun-Brown, 2014). The social context and power of religion has played a significant part in promoting volunteer engagement throughout the life course (Taniguchi & Leonard, 2011; Wilson, 2012), as the significance of prosocial behavior or helping others is a common tenet in many religious traditions (Wuthnow, 1991). Religious beliefs and values are a fertile source of volunteer motivations (Wilson, 2012). Early exposure to religion and youth religious involvement help to sustain and expand volunteer engagement in adulthood and later life (Caputo, 2009; Park & Smith, 2000). For older adults, religious social networks are particularly important for them to get involved in volunteering due to the role loss in other aspects of social life. This may explain why the main organization to which the volunteers devoted the most hours was a religious one; specifically, older adults were more likely than other aged Americans to volunteer for religious organizations (U.S. Bureau of Labor Statistics,

2014). Churches are probably the most important voluntary organizations for Americans (Wald & Calhoun-Brown, 2014).

With the growth of the aging population and the increase in life expectancy, an increasing number of older adults have engaged in various forms of volunteer work in order to continue a meaningful life into the extended years after retirement. Despite gender, race, and socioeconomic differences in volunteer engagement, a major issue is how to maximize positive outcomes of volunteering across population segments. As documented in an extensive body of literature, volunteer engagement has protective effects on health, especially in the older population (e.g., Li & Ferraro, 2006; Morrow-Howell et al., 2003). In particular, a public form of religiosity magnifies the salubrious effects of volunteering on middle- and older-aged adults' well-being (McDougle et al., 2014). Therefore, it is important to improve our understanding of the relationships between volunteering and various domains in religion across the life course.

The purpose of this chapter is to overview current knowledge about the relationship between formal volunteering and religion with its four dimensions, namely, religiosity, religious identity, religious socialization, and religious social networks. Following the definition of volunteering, the chapter presents recent statistics of volunteering prevalence and time commitment by age groups, and reviews the factors associated with volunteering across the life course. With the focus on the influences on volunteering, this chapter reviews typology in religion, operationalization of religion domains, and how the domains are related to volunteering. The chapter concludes that religious institutions are in a key position to facilitate individuals, especially older adults in volunteer engagement.

Formal Volunteering

The term volunteering or volunteerism is defined vaguely but used broadly, referring to a wide range of prosocial behaviors, that is, voluntary behaviors intended to benefit others, such as formal volunteer activities, informal helping behaviors, or voluntary association activities (Cnaan, Handy, & Wadsworth, 1996; Wilson, 2000). This chapter mainly addresses formal volunteering, as done in most of current literature. Formal volunteering has been finely defined by Snyder and Omoto (2008) as freely chosen, long-term, and deliberate helping activities that are engaged in without remuneration, often through formal organizations, and on behalf of causes or individuals who desire assistance. Nonetheless, the definition is still imprecise, because in the real world how to define an act as volunteering is really a matter of degree (see Cnaan, Handy, & Wadsworth, 1996; Wilson, 2012). Further, the linkage of volunteer work to formal originations

is problematic, suggesting that communities and countries with poorly developed infrastructure in nonprofit organizations will have fewer volunteers, according to the definition provided above (Wilson, 2012).

In the United States, however, volunteering is indeed characterized by involvement with various types of organizations—religious and secular, governmental and nongovernmental, state and local, profit and nonprofit sectors (Tang, 2010). Particularly, religious organizations have long been the main organizations in which volunteers are actively involved (Boraas, 2003; U.S. Bureau of Labor Statistics, 2014). Besides, this definition contains four dimensions, namely, free choice, no or little remuneration, organizational structure, and intended beneficiaries, which are often used in defining volunteerism (e.g., Cnaan, Handy, & Wadsworth, 1996). Variations in these dimensions reflect the different ways of how to define a volunteer, from a broad to a narrow spectrum. For example, an individual decides to volunteer from his/her free will, receives no remuneration at all, and volunteers in a formal organization for the purpose of benefiting others, especially strangers. In this case, volunteer is defined in the purist way, that is, an individual whose volunteering activity incurs a high net-cost is more likely to be publicly perceived as a "purer" volunteer than a volunteer activity with a low net-cost (Cnaan, Handy, & Wadsworth, 1996).

Based on various definitions and operations of volunteering in the existing literature, an intermediate definition is suggested; that is, volunteers refer to those who choose to engage of their free will, receive no or little stipend, and work in a formal organization either for the benefit of others or for self-interest (Cnaan, Handy, & Wadsworth, 1996). Material rewards and intentions for volunteering are open for debates (Wilson, 2000). The intention for volunteering may not necessarily be fully delineated in the definition of volunteering; what is more important is that volunteering produces goods and services that definitely have market values (Wilson, 2000). Volunteering is a productive and worthwhile effort by citizens of all ages and backgrounds; the benefits of volunteering usually accrue to the individuals being helped and the community and society at large as well as to volunteers themselves.

Volunteering across the Life Course

Volunteering behavior varies over the life course, and the resources needed for and the factors linked to volunteering are different across the life stages. A variety of factors in terms of contextual, social background, personality, attitudinal, and situational variables are related to volunteering (Smith, 1994). Individual resources, including human, social, and cultural capital

are essential for volunteer engagement (Tang, 2006; Wilson & Musick, 1997). Despite the plurality and diversity in these factors, Cnaan and Cascio (1999) conclude that three sets of key factors affect volunteer engagement and performance: demographic characteristics, personality traits and attitudes, and situational variables that include economics, culture, climates, urban and rural residence, and organizational characteristics (Herzog & Morgan, 1993; Smith, 1994). Although religion plays a vital role in volunteering, secular factors such as socioeconomic resources, personality traits, and attributes of the environment often have influential impacts on individual volunteer behavior, explaining why nonreligious people also volunteer and/or devote as much time to volunteering as religious people do. This section starts with the introduction of volunteering rates and amounts by age groups, followed by the description of age, cohort, and period effects on volunteering. Also introduced are race, gender, and socioeconomic differences in volunteering and the factors associated with volunteering across the early, middle, and late life stages.

Volunteering Rates and Hours by Age Groups

In every year since 2000, more than one quarter of the adult population aged 16 and over in the United States have been involved in various volunteer activities, reaching annual peaks of about 29 percent in 2003 to 2005, then falling slightly over years thereafter and to 25 percent in 2013 (Caputo, 2009; U.S. Bureau of Labor Statistics, 2014). These statistics indicate that volunteering is a significant social activity for millions of Americans. By age group, people aged 35 to 44 years were most likely to volunteer with a volunteer rate of 31 percent, followed by those aged 45 to 54 years (28%), 55 to 64 years (26%), 65 years and over (24%), and youth aged 16 to 24 years were least likely to volunteer (22%) based on the 2013 statistics (U.S. Bureau of Labor Statistics, 2014). The volunteer rates generally taper off as age increases for persons 35 years and older. The volunteer work patterns by age groups are considerably stable since 2000, as indicated from yearly statistics (Caputo, 2009; U.S. Bureau of Labor Statistics, 2014). Early years literature review for the period 1975–1992 also indicates that volunteering participation peaks in middle age, in the range of 35 to 55 years (Smith, 1994).

During the past 40 years, although the overall adult volunteer rates declined from 1974 to 1989, the volunteer rates for older adults aged 65 and older actually increased during the same period. In fact, older adults have been increasing their volunteer engagement through the last four decades, going from 14 percent in 1974 to 24 percent in 2013 (Corporation for National and Community Service, 2007; U.S. Bureau of Labor

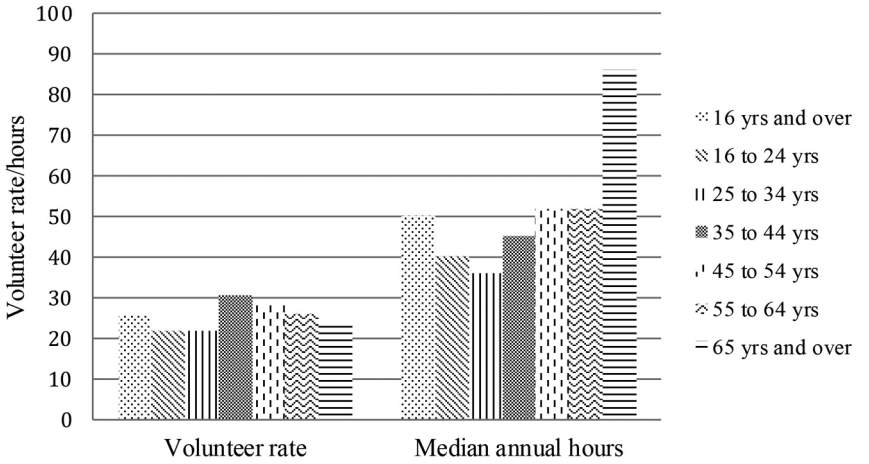


Figure 3.1 Volunteer rates and hours by age groups in 2013. (Note: For volunteer rate, *y*-axis represents percentage of volunteers across age groups; and for median annual hours, *y*-axis represents the number of hours volunteered during the past 12 months. *Source*: U.S. Bureau of Labor Statistics. (2014). Volunteering in the United States—2013. Retrieved from http://www.bls.gov/news.release/volun.nr0.htm)

Statistics, 2014). Although older adults are relatively fewer in number than younger people engaging in volunteer activities, older adult volunteers devote more hours to volunteer work than younger adults (Gallagher, 1994; Van Willigen, 2000). Some previous literature indicates that volunteer commitment by older adults was modest (Caro & Bass, 1995; Fisher & Schaffer, 1993). However, the Current Population Survey in September 2013 shows that volunteers aged 65 and over contributed the most hours to volunteer activities with a median of 86 hours, in contrast to younger people aged 35 to 44 years, who volunteered at a median of 45 hours (U.S. Bureau of Labor Statistics, 2014). Recent surveys also demonstrate that older adults are more likely than ever to contribute more time to volunteering once getting involved. The rapid and consistent increase in volunteering by older adults is probably attributed to the increasing size of the older population, the improved health status, and the prolonged life expectancy (Tang, 2010). Figure 3.1 shows volunteer rates and annual hours volunteered by age groups in 2013.

Age, Cohort, and Period Effects on Volunteering

Age differences in volunteering are confounded by cohort and period effects. A cohort effect refers to differences between generations that can

be attributed to the unique experiences of each generation; a period effect refers to a change across a population that is essentially due to a historical event (Rosenberg & Letrero, 2006). Most scholars have agreed that the long civic generation born between 1910 and 1929 generally scored higher on most measures of social capital than later generations, including the silent generation born 1930–1945 and the baby boomer generation born 1946–1960 (Prisuta, 2003; Putnam, 2000). Social capital measures include participation in social clubs and voluntary associations, informal socializing, religious services attendance, and trust (Prisuta, 2003; Putnam, 2000). Despite the decreases in some social capital measures that correlate with volunteering, volunteer engagement among the older population has increased from cohort to cohort since the 1990s, and it is predicted that boomers would volunteer in larger numbers than members of previous cohorts during or after retirement (Einolf, 2009).

A period effect suggests that historical events, for example, the Great Depression of the 1930s, World Wars, the passage of Older American Act in 1965, shape current conditions and have an impact on volunteering (Rosenberg & Letrero, 2006). Although few studies are available to investigate the period effect of historical events, Penner (2005) documented that there was a dramatic increase in the number of volunteers following September 11, 2001 and that increases occurred for all kinds of charities and service organizations during a short period. Both natural and human-made disasters have effects on individual helping behavior, partly because of the influences of common external threats on people's sense of community and partly due to the exposure to the mass media that model altruistic public actions (Penner, 2005). Age, cohort, and period effects are interrelated to account for the changes in volunteering over time.

Race, Gender, and Socioeconomic Status (SES) Differences in Volunteering

Sociodemographics such as age, gender, race, marital status, health, education, income, and employment are related to volunteering. Particularly, gender, race, and social class are important indicators of human resources that enable people to volunteer or condition their interest in volunteer work (Wilson, 2012).

Gender. Gender differences in volunteering are confounded with the effects of employment and family characteristics (Taniguchi, 2006). Traditionally, a majority of women volunteers were not employed, whereas most men volunteers had full-time jobs and helped others in their spare time (Taniguchi, 2006). This gender pattern in volunteering has changed over the past several decades due to the rapid entry of women into the labor force and the major role played by women in family life and caregiving

(England, 2000; Taniguchi, 2006). Using a national sample of adults aged 25 to 74, Taniguchi (2006) found that whether men work full time or part time makes no difference in their volunteering efforts, whereas part-time employment promotes volunteering for women and that women but not men spend more time caring for the elderly and are likely to volunteer less. In late life, especially after retirement, volunteering might become a choice for both men and women, who are not different in volunteer engagement and amount (Cnaan & Cascio, 1999; Herzog & Morgan, 1993; Musick, Herzog, & House, 1999; Warburton, Le Broque, & Rosenmen, 1998). However, discrepancies exist in the literature; for example, a recent study found that older women are more likely than older men to volunteer and that gender rather than religiosity is a significant predictor of volunteering in later life (Manning, 2010). Also gender difference in types of volunteer work is observed. Women are more likely to engage in volunteer activity characterized as more caring, person-to-person tasks, while men tend to volunteer in political or public leadership positions (Rotolo & Wilson, 2007). In addition, women are more likely to volunteer in groups to support and complement their social and personal relationships, whereas men are more likely to individually engage in volunteer work that is complementary to their paid work (Wilson, 2000).

Race. Probably due to lower socioeconomic status (SES) and lack of resources, African Americans and Hispanics are not actively involved in formal volunteering (Smith, 1994). However, studies with different samples and analysis procedures yield mixed results. Some studies using bivariate analysis showed that non-Hispanic whites volunteered more, whereas multivariate results indicated that nonwhites, especially African Americans volunteered more after controlling for SES (Smith, 1994). Racial difference also exists in participation in types of formal voluntary organizations by birth cohorts (Miner & Tolnay, 1998). That is, in younger cohorts of African Americans and non-Hispanic whites have similar rates of voluntary organization participation, but older African Americans have lower rates of membership than their white counterparts in social service and job-related organizations (Miner & Tolnay, 1998). Racial differences in volunteering are more evident in the older generations than younger cohorts, probably because the discrimination and segregation experienced by older African Americans has resulted in restricted access to certain types of voluntary organizations among this elderly group (Miner & Tolnay, 1998). Further, evidence shows that African Americans are most likely to volunteer for neighborhood organizations and church groups that have historically been open to them (Miner & Tolnay, 1998). In addition, the African American church plays a more prominent role in its community, and church attendance has more influential impact on volunteering in African

Americans than in white Americans (Musick, Wilson, & Bynum, 2000). Church attendance has a negative effect on secular volunteering for whites only (Musick, Wilson, & Bynum, 2000). Thus we can see that religiosity, or church attendance in particular, affects volunteer engagement and types of voluntary organizations in which racial/ethnic groups are involved.

SES. SES is one of the most significant factors associated with volunteering. Education is associated with occupational status and income, and these variables constitute socioeconomic status (Warburton, Le Broque, & Rosenmen, 1998). The most salient factor is education which generates a higher standard of living and free time available for volunteering (Fisher, Mueller, & Cooper, 1991). Educated people usually have more resources, capabilities, and social networks than the less-educated to volunteer across lifespans. Household income is also positively related to volunteer engagement (Fisher, Mueller, & Cooper, 1991; Fisher & Schaffer, 1993; Gallagher, 1994). But the findings are mixed regarding the income effect on volunteer time. In addition, income makes little difference in voluntary organization involvement by older adults (Tang, 2008). Among various occupational categories, private sector blue-collar workers are least likely to volunteer, whereas professionals, managers, sales, and clerical employees participate in more volunteer work (Wilson & Musick, 1997b). Although little information is available regarding the interaction effects between religion and SES on volunteering, studies show that both factors are significantly predictive of volunteering efforts in terms of hours volunteered and the number of organizational types involved for volunteering (Tang, 2006). Religiosity may crosscut social class differences by providing compensating social resources and mobilizing beliefs (Musick, Wilson, & Bynum, 2000).

Factors Related to Volunteering across Life Stages

As we can observe, in general, volunteering rises from a lower participation rate at teenage years through early adulthood, peaks in middle age, and then declines in old age (Selbee & Reed, 2001). In addition to gender, race, SES, and other demographic characteristics, various factors are predictive of volunteer engagement and these factors vary in relation to volunteering across life stages. In early-life stages, family background and educational environment and activities play important roles in volunteering (Wilson, 2012). Children whose parents engage in volunteering and encourage them to do so are likely to volunteer, because parents likely pass civic engagement proclivities to their children (Caputo, 2009). On the other hand, disadvantages in childhood, including living in poverty, family instability, lack of parental supervision or warmth, weak

parent-child attachment, and the absence of volunteer parental role models are associated with the reduced likelihood of volunteering in adulthood (Brown & Lichter, 2007). Years of schooling have a positive effect on volunteering; also students who attended private schools and catholic schools are more likely to volunteer after graduation than those from public schools (Wilson, 2012). The positive attitudes or feelings toward the school and the teachers as well as close relations with peers affect volunteering in young adulthood (Duke et al., 2009). In addition, participation in school-based extracurricular activities promotes volunteering in young adults (McFarland & Thomas, 2006). It can be seen that volunteering and other helping behaviors are rooted and cultivated in family and educational backgrounds.

Life events such as marriage, having a child, and employment have influences on the age-related pattern of volunteering (Li & Ferraro, 2006; Selbee & Reed, 2001). In early adulthood and middle age, married individuals, adults with school-aged children, and part-time workers are more likely to volunteer and to devote more hours than their counterparts, that is, those not married, those without children, and full-time workers or nonworkers (Selbee & Reed, 2001). As part of the socialization of school-aged children, parents are often involved in volunteering with schools, sports and religious organizations, because athletic, religious, and recreational organizations often rely on parents to run programs and fulfill organizational missions (Li & Ferraro, 2006). Other voluntary originations also provide a wide range of volunteer opportunities for social connection, civic participation, and other purposes. In middle age, people have settled into adult roles and built up the stakes in the community (Flanagan & Levine, 2010); therefore, they are likely to engage in volunteer activities that have connections with their family, community, and work roles. The need for volunteers in many aspects of social and civic life is cumulative in middle age, making it a peak time of volunteering (Li & Ferraro, 2006).

In later life, especially after retirement, it seems that older adults have more free time for volunteering than in earlier life stages. Two opposing theories have been proposed and applied in examining the relationships between volunteering and work/retirement behaviors: activity substitution theory and activity complement theory. Based on the activity substitution theory, older adults may take up formal volunteer work to compensate for age-related role loss, such as retirement, death of a spouse, and reduced family roles, as formal volunteering has compensatory effects on older adults' well-being (Mutchler, Burr, & Caro, 2003; Pavlova & Silbereisen, 2012). Previous research indicates that retirees and nonworkers, especially those who have volunteered before are likely to volunteer more extensively than those in the labor force (see Mutchler, Burr, & Caro,

2003). Contrastingly, the activity complement theory posits that volunteer activity and paid work are positively correlated and that retirement is associated with a decline in volunteering (Mutchler, Burr, & Caro, 2003). Older workers engage in volunteering through social networks embedded in the workforce and thus are able to make more time commitment to volunteering (Klumb & Baltes, 1999). Leaving the workforce leads to a decrease in social networks whereby retirees are less likely than those in the workforce to be asked or recruited for volunteering. Evidence from Denmark, Germany, Greece, and the Unites States shows that volunteer time decreased from age 50 to 74 when transition to retirement likely occurred (Komp, van Tilburg, & van Groenou, 2011). Both theories have been supported with empirical evidence to some extent, with indications that social networks and previous volunteer experience are significant predictors of volunteering in later life.

Obviously, the greatest threat to sustained volunteering in later life is health declines and functional impairment that make volunteering difficult (Li & Ferraro, 2006). It seems plausible that health is a significant predictor of volunteer engagement among older adults, whereas work and family responsibilities are more predictive of volunteering in middle age (Li & Ferraro, 2006). In addition, research indicates that reciprocal relationships exist between volunteering and health in older adults. Volunteering boosts personal well-being, including physical health, mental health, and life satisfaction; while older adults in good health are more likely to participate and spend more time in volunteering, which in turn enhances their well-being (Thoits & Hewitt, 2001).

To sum up, volunteering behavior in earlier life stages may affect the motivation for and incidence of volunteering in later life. It is very likely that adolescents with volunteer experience will volunteer in adulthood due to their access to pertinent resources and acquired skills for volunteering (Osterle, Johnson, & Mortimer, 2004). Those in early life who have internalized volunteering as a value, who have developed necessary skills, and who have made effective contributions as volunteers are more likely to volunteer in later life than those who have not had such experience (Bass & Caro, 2001), though the meaning of volunteering and resources needed for volunteer engagement differ across birth cohorts (Tang, 2006). Demographic changes, potential benefits from volunteering, personal values and attitudes, and changes in social structures give rise to volunteering by older Americans. Through volunteer work, older people can find a sense of fulfillment, maintain or improve their self-esteem and life satisfaction, and have more access to social support and resources than their nonvolunteering peers (Van Willigen, 2000). Therefore, volunteering is deemed as a way of health promotion in old age, as extensively evidenced

with theoretical and empirical findings that older adults would benefit from volunteer engagement through maintaining or improving their social, physical, mental, and cognitive functioning.

Religion and Volunteering

In the 21st century, despite the secularization and modernization process in the industrial Western countries, the United States is viewed as one of the most religious nations (Ellison & MaFarland, 2013), having resisted the pressure toward secularity with its strength of religious institutions, practices, and beliefs (Wald & Calhoun-Brown, 2014). The overwhelming majority of Americans identify with some branch of the Christian faith, though some are not actually involved in the practice of that faith (Ellison & MaFarland, 2013). It is estimated that at least 80 percent of U.S. adults maintain a religious identity, preference, or affinity with some religious tradition and that between 50 and 60 percent are actual members of a religious congregation (see Ellison & MaFarland, 2013). Despite all the talk about decline in religiosity, the proportion of church members among persons aged 15 and over is almost the same today as it was in the 1950s; and churches are probably the most important voluntary organization that emphasizes joining-up and mobilization (Wald & Calhoun-Brown, 2014). In addition, recent decades have witnessed the heightened religious mobility, that is, an estimated 40 to 50 percent of Americans have altered their religious affiliations at least once during their lifetime, and many persons may change their religious allegiance multiple times (Wald & Calhoun-Brown, 2014). The social context and power of religion provide fertile sources for volunteer engagement in Americans, and the mobility in religion may affect religious and/or secular volunteering.

Resources, skills, and opportunities are not sufficient to involve people in volunteering; more importantly, altruistic values and moral/ethical orientations embedded in religion beliefs could provide strong motivations for volunteering and for engagement in other forms of civic service (Oesterle, Johnson, & Mortimer, 2004). Religion in all its forms has played a significant role in promoting volunteerism, most influentially in the United States (Taniguchi & Leonard, 2011; Wilson, 2012). Religious organizations are the main channel through which people are engaged in volunteering. Specifically, older adults, African Americans, people with less than a high school diploma, those not in the labor force, as well as married people with spouses present are more likely to volunteer for religious organizations than their counterparts (U.S. Bureau of Labor Statistics, 2014). It is commonly observed that Americans become more religious as they age

(Weeden & Kurzban, 2013), which may partly explain the steady increase in volunteering in older Americans. All major religions teach their members to care for others and help people in need (Wuthnow, 1991). As a form of cultural capital, religion is regarded as a valued resource embedded in social relations with productive and exchange capacities (Becker & Dhingra, 2001). Cultural capital refers to value or ethical resources, and membership in a religious organization has been used as a proxy for cultural capital (Wilson & Musick, 1997). Volunteers act out altruistic value or the desire to help others (Herzog & Morgan, 1993), which is in line with the central tenet of most religions.

Religious beliefs, attitudes, and sentiments are important sources of volunteer motivations (Wilson, 2012). Four types of cultural/religious capital are believed to promote volunteering: religiosity, namely, individual behaviors and attitudes toward religion; religious identity, namely, the sense or identification of belonging to a particular religious tradition or movement; religious socialization, namely, being exposed and influenced by religious values and behaviors during one's formative years; and religious social networks, namely, the access to and connection with churchgoers and/or other religious adherents of similar or like-minded religiosity (Caputo, 2009; Park & Smith, 2000). Religious beliefs and belonging, or conviction and community are highlighted as the mechanisms that link religion to volunteering (Lim & MacGregor, 2012). This section follows Park and Smith's (2000) typology of religious capital in discussion of its relation with volunteer engagement. Table 3.1 summarizes the definitions, measures, and the effects on volunteering.

Religiosity

Religiosity, as a form of cultural capital, refers to religious attitudes and behaviors obtained through religious practice or observation (Iannaccone, 1990; Park & Smith, 2000). It has been well known that religiosity promotes volunteering in the United States and other Western countries (Taniguchi & Thomas, 2011), due to the influences of Christianity (Johnson, 2013). In general, religious individuals are more active in volunteering and community participation than their secular counterparts, as documented in a large number of studies (see Lim & MacGregor, 2012). Indeed, Americans aged 40 and over who are actively involved in religious organizations and who attend religious services on a regular basis are most likely to volunteer (Wilson & Janoski, 1995). Volunteering for religious organizations can provide a great sense of meaning and purpose for middle- and older-aged adults (e.g., McDougle et al., 2014; Morrow-Howell et al., 2003; Piliavin & Siegl, 2007; Thoits & Hewitt, 2001).

Religious belief is strongly associated with individual motivation for volunteering, especially among Christians, as charity, service, and helping others are the central tenets of Christian denominations in the United States (Johnson, 2013). The strength and content of religious beliefs not only motivate volunteer behavior (Becker & Dhingra, 2001), but also influence the meaning of volunteering (Wuthnow, 1991; Wilson, 2000). Previous studies demonstrated mixed findings regarding the relationship between individual religious beliefs and motivations of volunteering for religious institutions (see Johnson, 2013). Some studies showed that motivation for religious institution volunteering increased along with the strength of individual religious beliefs (Hoge et al., 1998; Ladd, 1999), whereas other studies found no relationship between them (e.g., Park & Smith 2000; Wilson & Janoski, 1995).

Religious beliefs may also promote motivations for nonreligious institution volunteering as well (Wuthnow, 1991), probably because individuals with strong religious beliefs can find common grounds with nonreligious organizations that aim at voluntary activism and giving back (Johnson, 2013). Again, the results are mixed in the literature with some studies finding that religiosity increased secular helping and others finding no such relationship (e.g., Jackson et al., 1995). These studies suggest that personal religious beliefs may not be sufficient to serve as the mechanism through which religion promotes volunteering and that the measures of religiosity are neither valid nor reliable. Indeed, religiosity is most frequently studied in relation with volunteering in previous research; however, its operationalization has varied greatly, which contributes to the inconsistent findings across studies (Park & Smith, 2000). Among the various indicators, church attendance has been used as one of the major indicators of religiosity; others include church membership, prayer, the relative importance of faith, religious attitude toward giving one's time and money, and participation in church activities (see Park & Smith, 2000). Future research is needed to validate the operationalization of religiosity and test its association with volunteerism along with measures in other domains of religion.

Religious Identity or Affiliation

According to Park and Smith (2000), identification with personal religious labels is a sign of belonging to religious movements or traditions. Individuals with strong religious identity tend to align with values that are central to religious congregational volunteering (Ammerman, 2005; Johnson, 2013; Unruh & Sider, 2005). Although church members are more likely than nonmembers to engage in volunteer activities, not all members are equally engaged (Ruiter & De Graaf, 2006). There are denominational

Table 3.1 Four Dimensions in Religion and Effects on Volunteering

Dimension	Definition	Measures	Effects on Volunteering	References
Religiosity	Individual behaviors and attitudes toward religion	◦ Church attendance ◦ Church membership ◦ Prayer ◦ Importance of faith ◦ Attitude to giving one's time/money ◦ Participation in church activities	◦ Religious people are more active in volunteering than the nonreligious ◦ Mixed findings exist regarding the relationships between religious beliefs and motivations for or behaviors of volunteering	Becker & Dhingra, 2001 Jackson et al., 1995 Hoge et al., 1998 Ladd, 1999 Park & Smith, 2000 Wilson & Janoski, 1995 Wilson, 2000 Wuthnow, 1991
Religious Identity/ affiliation	Sense or identification of belonging to a particular religious tradition or movement	◦ Church affiliations ◦ Types within an affiliation ◦ Religion types (e.g., Protestants, Buddhists, Christians, etc.)	◦ Protestants volunteer more than Catholics ◦ Mainline Protestants are more likely to volunteer than Evangelicals and black Protestants ◦ Religion in forms other than Christianity also fosters volunteerism	Curtis, Baer, & Grabb, 2001 Driskell, Lyon, & Embry, 2008 Lam, 2002 Lim & MacGregor, 2012 Ruiter & De Graaf, 2006 Wilson & Janoski, 1995 Wuthnow, 1999

Religious socialization	Exposure to religious values and behaviors during one's formative years	◦ Family's importance of faith ◦ Influence of parents' religious identity ◦ Attendance at a religious high school/ college	◦ Parents' affiliation is related to children's volunteer engagement ◦ Family's importance of faith is related to volunteering through a secular organization among churchgoing Protestants	Caputo, 2009 Park & Smith, 2000 Perks & Haan, 2011
Religious social networks	Access to and connection with churchgoers and/ or other religious adherents of similar or like-minded religiosity	◦ Church attendance ◦ Christian family, friends ◦ Having a child in a Christian school ◦ Confide in congregation members ◦ Church member in network	◦ The number of Christian family and friends increases the odds of church-related volunteering ◦ Those having congregation members as close friends are more likely to volunteer ◦ Those who confide in fellow members are more likely to volunteer for congregational activities	Becker & Dhingra, 2001 Jackson et al., 1995 Lim & MacGregor, 2012 Musick, Wilson, & Bynum, 2000 Park & Smith, 2000 Ruiter & De Graaf, 2006

differences, in particular, the liberal and conservative divide, which shape the meaning of volunteer work and how church members devote their efforts to volunteering (Becker & Dhingra, 2001). Most congregations encourage informal help behaviors; however, they vary considerably in the degree to which they attach the importance to formal volunteering and other forms of civic engagement within and across denominations (Becker & Dehingra, 2001). In general, Protestants volunteer more than Catholics (e.g., Curtis, Baer, & Grabb, 2001; Lam, 2002; Ruiter & De Graaf, 2006; Wuthnow, 1991). This is probably because the Protestant church is less hierarchically structured than the Catholic Church and that smaller parishes are further divided in the Protestant Church (Suanet, van Groenou, & Braam, 2009). The less hierarchical structure and the smaller subdivisions would offer more possibilities for common church members to be involved in their congregations and volunteering activities (Ruiter & De Graaf, 2006; Suanet, van Groenou, & Braam, 2009). In addition, Protestants are not encouraged to pursue self-interests and thus likely have a sense of social responsibility (Lam, 2002). Social responsibility embedded in religious beliefs and values is important to foster volunteering for both religious and secular sectors.

Further, even within the same affiliation, there are differences in volunteer engagement; for example, some conservative Protestant denominations support only church volunteering but discourage secular volunteering, whereas liberal Protestant denominations encourage civic engagement and volunteering in the larger secular community (Wilson & Janoski, 1995; Wuthnow, 1999). It is noted that mainline Protestant churches are able to unite people from different regions, and demographics and their members usually have higher rates of secular volunteering and civic engagement (Driskell, Lyon, & Embry, 2008; Wuthnow, 1999). By contrast, Evangelical Protestants and black Protestants are less likely to be engaged in civic activities, including volunteering, than other denominations (Driskell, Lyon, & Embry, 2008).

Based on their analyses of data from 53 countries, Ruiter and De Graaf (2006) found that non-Christians were equally engaged in volunteer work as were Protestants, that is, people living in non-Christian countries volunteered to the same extent as did people in Christian countries (Ruiter & De Graaf, 2006). The study findings indicate that religion in forms other than Christianity or in countries other than the United States also fosters volunteerism. Using the Gallup World Poll data from 138 countries, Lim and MacGregor (2012) documented that compared with Catholics, respondents who identified themselves as Protestants, Buddhists, Christians, or other religion believers were more likely to volunteer, whereas Orthodox believers and atheists were less likely to engage in volunteering.

At the country level, when compared with Protestant religious culture, the Orthodox and Muslim religious cultures reduced the likelihood of individual volunteering (Lim & MacGregor, 2012). This study suggests that national religious contexts really matter in individual volunteering behaviors and that both individual religious identity and religious culture in a country account for the variance in individual volunteering behaviors.

Religious Socialization

Religious socialization refers to how one is raised in a religious background (Park & Smith, 2000). Exposure to religious values and behaviors in formative years could provide a powerful source of social capital that has an impact on one's proclivity to volunteer, because the practice of service to one's community usually starts from learning and adopting religious beliefs and behaviors from one's parents and family (Park & Smith, 2000). The measures of religious socialization include the influence of parents' religious identity, attendance at religious grade schools or high schools, and attendance at a Christian college (Caputo, 2009; Park & Smith, 2000). Religious socialization is linked to parents' religiosity and religious identity, indicating the "intergenerational transmission of religious proclivities and volunteer activities from parents to their adolescent children" (Caputo, 2009, p. 984). Further, exposure to religion and volunteering in formative years have an influence on religious involvement and civic engagement in adulthood. Through participation in religious organizations and educational institutions, children and youth can acquire an important form of cultural capital, that is, altruistic values and prosocial orientations that motivate volunteer work. Caputo (2009) found that parents' religious affiliation and fundamentalism (i.e., religious belief) were strongly predictive of youth's involvement in volunteering. Churches and religious organizations have traditionally served as an institutional and philosophical base for volunteering (Putnam, 2000), providing an important form of cultural capital that can be transferred across generations.

In an overview of volunteerism research, Wilson (2012) summarizes the relationship between religious socialization and volunteering across the life course: "early religious experiences socialize people into adult volunteer roles" (p. 182). Involvement in a religious organization as a youth positively predicts adult community participation, including volunteer engagement; in addition, the effect of youth religious involvement is not supplanted by adult religious involvement and other youth activities (Perks & Haan, 2011). In fact, youth religious involvement is a consistently stronger predictor of community participation than other factors such as gender, marital status, and nativity (Perks & Haan, 2011).

Religious Social Network

Religious social networks are "the relationships and connections between similar or like-minded religious individuals" (Park & Smith, 2000, p. 276). Religious networks usually occur within a religious organization. Churches and congregations are the main channels through which individual members can learn about volunteer opportunities and voluntary organizations recruit volunteers and plan helping activities. Congregations provide an organizational context that encourages and mobilizes volunteering behaviors (Wuthnow, 1991). Religious beliefs are primarily fostered in the context of religious community, and beliefs would hold no power if they are not ratified by a community of fellow believers (Stark & Bainbridge, 1996; Wuthnow, 1991). Therefore, most research has relied on religious attendance as a key indicator of social network. Other measures include the number of Christian family and friends, having a child in a Christian school (Park & Smith, 2000), trust in congregation members, being a church member in network (Becker & Dhingra, 2001), and having a churchgoing friend (Lim & MacGregor, 2012).

Church attendance is not only a main indicator of religiosity, but also a measure of the extent of involvement in church activities and one's connection with other members. Church members often meet in congregations, and religious attendance increases the likelihood of learning about volunteering opportunities or being asked to volunteer (Musick, Wilson, & Bynum, 2000; Ruiter & De Graaf, 2006). Although religion is a matter of individual faith, a person cannot become actively involved in volunteering and other forms of civic engagement without attending religious services or joining some kind of organized religious community. That is to say, a religious community is vital in encouraging volunteerism, building an environment that mobilizes its members to improve community services through volunteering and charitable behavior (Jackson et al., 1995). Church attendance has a significant influence on volunteering for both religious and nonreligious institutions through the formation of social networks and a sense of community (Park & Smith, 2000).

Social networks built in the congregations may serve as the mechanism through which religion fosters volunteerism and other prosocial behaviors. Congregations draw members into volunteering through their social networks and the fit between the congregation's identity and mission and individual members' beliefs and values (Becker & Dhingra, 2001). Social networks are related to both instrumental and emotional motives for volunteering (Becker & Dhingra, 2001). Instrumental motives are rational choices in weighing the costs and benefits of volunteering for a particular organization (Herzog, House, & Morgan, 1991); emotional motives

pertain to one's sense of self and attachment to others (Hart, Atkins, & Ford 1996; Rochon, 1998; Schervish & Havens 1997; Teske, 1997). Through religious social networks, congregation members could increase their trust in and knowledge about a specific volunteer organization, and develop a sense of social responsibility to the organization for which their friends have volunteered; as a result, they are likely to be involved in the voluntary organization (McAdam & Paulsen, 1993; Wilson & Musick, 1997; Wilson, 2000). Becker and Dhingra (2001) found that church effect on volunteering actually operated through social networks rather than through religious beliefs and that the social networks formed within congregations made congregation members more likely to volunteer.

Religious social networks have spillover effects, that is, religious effect on volunteering may spread to nonreligious individuals through personal connections between the religious and the nonreligious (Lim & MacGregor, 2012). Social networks built within and out of the church can be relied on to motivate and recruit church members as well as their friends to volunteer for religious and/or secular organizations (Becker & Dhingra, 2001; Ruiter & De Graaf, 2006). A notable observation of networks in promoting volunteering is that "most formal volunteers are persuaded to volunteer by family members, coworkers, or fellow worshippers" (Wilson & Musick, 1997, p. 700).

In summary, the four dimensions in religion, namely, religiosity, religious identity, religious socialization, and religious social networks are closely intertwined to exert influences on volunteerism across the life course. Religiosity in terms of values, beliefs, attitudes, and behaviors is central to altruism and charity, providing a fertile source for volunteering motivation. Religious socialization, or the influence of parents' religiosity and identity, has an impact on youth religious involvement, which further predicts adult involvement in volunteering and the community. Social networks through a church provide opportunities for continuing volunteer engagement into late-life stages, which become more important for older adults to engage in volunteer work; churches and religious-related institutions are the main organizations for which older adults would like to volunteer.

Discussion

A variety of factors are associated with volunteering across the life course, including human, social, and cultural capitals. A human capital perspective posits that education, income, and health constitute one's stock of human capital that makes volunteering possible (Wilson, 2000). A social capital perspective argues that extensive social connections provide and

increase volunteering opportunities (Oesterle, Johnson, & Mortimer, 2004; Wilson, 2000; Wilson & Musick, 1997). A cultural capital perspective posits that religiosity provides ethical resources and a philosophical base for volunteerism (Putnam, 2000). As members of one of the most religious countries in the world, Americans engage in a wide range of religious behaviors, including churchgoing, public and private devotional acts, and prosocial behaviors as well, including volunteerism and civic service. In the United States, religion has historically been linked to volunteerism, providing important resources of both cultural and social capitals. Volunteers live the altruistic or prosocial values in accordance with the main tenets of many religious affiliations. Social networks through religious involvement provide information, opportunity, pooled labor, and trust as important channels to volunteering (Wilson & Musick, 1997). Religious heritage and volunteering tradition can be passed down from generation to generation within the family. Altogether, religious values and behaviors, parental religious affiliation and fundamentalism, and social networks through churches promote volunteerism and other types of civic engagement. The social context and power of religion may have the most potent influence on volunteerism in Americans.

Volunteering is a lifelong behavior but with age-related patterns. People from teenagers to elders are eligible for volunteer work when they meet the qualification requirements with regard to capability, characteristics, and skills. However, variations exist in the antecedence, experience, and consequence stages among volunteers in different age groups. Life-course studies (e.g., Oesterle, Johnson, & Mortimer, 2004; Tang, 2006) indicate that the meaning and motivation of volunteering vary, and different resources are needed for volunteer engagement across life stages. Youth and younger adults draw upon more spiritual and social support to expand volunteering, whereas older adults increase the scope of voluntary organizations to which they are committed through church attendance or religious social networks (Tang, 2006).

The significance of religion in volunteering throughout the life course has been well established in the literature (Johnson, 2013). Yet knowledge is limited regarding how the four components in religion, that is, religiosity, religious identity, religious socialization, and religious social network are interrelated to each other and impact volunteer engagement throughout the life course. Also little is known about whether and how individuals change volunteer behavior tied to the influence of religion over the life course. All these investigations, of course, need to be based on better measurement of religion as a multidimensional concept, which may go beyond the four dimensions as documented here. Furthermore, research needs

to focus more on contextual effects, especially the role of social networks in promoting volunteerism (Lim & MacGregor, 2012; Wilson, 2012). Religious social networks at individual, local, and national levels may serve as different mechanisms that link volunteerism, and may operate differently across age cohorts and over one's life course. Finally, researchers need pay attention to changing forms of volunteer work, such as online volunteering, informal volunteering, and some episodic and self-oriented behaviors (Wilson, 2012), which may have different associations with religion.

It is a recent trend that Americans, especially older adults, are likely to engage in and expand volunteer engagement. With the increasing size of the older population, the improved health status, and the prolonged life expectancy, how to make use of the time after retirement has become an important topic for older people themselves and gerontologists as well as society as a whole. Volunteering, as a form of productive activity, may lead older adults to successful aging and healthy aging. A variety of factors from individual attributes to social and historical contexts affect volunteering decision, experience, and consequence. Through volunteer work, older adults can create new meanings of old age and improve life satisfaction, thus enhancing their capability and status in social life. During the volunteer process, the importance of religion can never be overlooked. Religious institutions are in a key position to provide resources and support that encourage and sustain volunteer engagement by people of all ages, especially older adults.

References

Ammerman, N. T. (2005). Religious narratives, community service, and everyday public life. In M. Jo Bane, B. Coffin, & R. Higgins (Ed.), *Taking faith seriously* (pp. 146–174). Cambridge, MA: Harvard University.

Bass, S. A., & Caro, F. G. (2001). Productive aging: A conceptual framework. In N. Morrow-Howell, J. Hinterlong & M. Sherraden (Eds.), *Productive aging: Concepts and challenges* (pp. 37–78). Baltimore: The Johns Hopkins University.

Becker, P. E., & Dhingra, P. H. (2001). Religious involvement and volunteering: Implications for civil society. *Sociology of Religion, 62*, 315–335.

Boraas, S. (2003). Volunteerism in the United States. *Monthly Labor Review, 126*, 3–11.

Brown, J., & Lichter, D. (2007). Childhood disadvantage, adolescent development, and prosocial behavior in early adulthood. *Advances in Life Course Research, 11*, 149–170.

Caputo, R. (2009). Religious capital and intergenerational transmission of volunteering as correlates of civic engagement. *Nonprofit and Voluntary Sector Quarterly, 38*, 983–1002.

Caro, F. G., & Bass, S. A. (1995). Increasing volunteering among older people. In S. A. Bass (Ed.), *Older and active: How Americans over 55 are contributing to society* (pp. 71–96). New Haven, CT: Yale University.

Cnaan, R., & Cascio, T. (1999). Performance and commitment: Issues in management of volunteers in human service organizations. *Journal of Social Service Research, 24*(3/4), 1–37.

Cnaan, R. A., Handy, F., & Wadsworth, M. (1996). Defining who is a volunteer: Conceptual and empirical considerations. *Nonprofit and Voluntary Quarterly, 25*, 364–368.

Corporation for National and Community Service, Office of Research and Policy Development. (2007). *Volunteering in America: 2007 state trends and rankings in civic life*. Washington, DC: Author.

Curtis, J. E., Baer, D. E., & Grabb, E. G. (2001). Nations of joiners: Explaining voluntary association membership in democratic societies. *American Sociological Review, 66*, 783–805.

Driskell, R. L., Lyon, L., & Embry, E. (2008). Civic engagement and religious activities: Examining the influence of religious tradition and participation. *Sociological Spectrum, 28*, 578–601. doi: 10.1080/02732170802206229

Duke, N., Skay, C., Pettingell, S., & Borowsky, I. (2009). From adolescent connections to social capital: Predictors of civic engagement in young adulthood. *Journal of Adolescent Health, 44*, 161–168.

Einolf, C. (2009). Will the boomers volunteer during retirement? Comparing the baby boom, silent, and long civic cohorts. *Nonprofit and Voluntary Sector Quarterly, 38*, 181–199.

Ellison, C. G., & MaFarland, M. J. (2013). The social context of religion and spirituality in the United States. In K. I. Pargament (Ed.), *APA handbook of psychology, religion, and spirituality* (Vol. 1: Context, theory, and research, pp. 21–50). Washington, DC: American Psychology Association.

England, P. (2000). Marriage, the costs of children, and gender inequality. In L. J. Waite, C. Bachrach, M. Hindin, E. Thomson, & A. Thornton (Eds.), *The times that bind: Perspectives on marriage and cohabitation* (pp. 320–342). New York: Aldine de Gruyter.

Fisher, L. R., Mueller, D. P., & Cooper, P. W. (1991). Older volunteers: A discussion of the Minnesota Senior Study. *The Gerontologist, 31*, 183–194.

Fisher, L. R., & Schaffer, K. B. (1993). *Older volunteers: A guide to research and practice*. Newbury Park, NJ: Sage.

Flanagan, C., & Levine, P. (2010). Civic engagement and the transition to adulthood. *Future of Children, 20*, 159–179.

Gallagher, S. K. (1994). Doing their share: Comparing patterns of help given by older and younger adults. *Journal of Marriage and the Family, 56*, 567–578.

Hart, D., Atkins, R., & Ford, D. (1996). Urban America as a context for the development of moral identity in adolescence. *Journal of Social Issues, 54*, 513–530.

Herzog, A. R., & Morgan, J. N. (1993). Formal volunteer work among older Americans. In F. G. C. S. A. Bass & Y. Chen (Ed.), *Achieving a productive aging society* (pp. 119–142). Westport, CT: Auburn.

Herzog, A. R., House, J., & Morgan, J. (1991). Relation of work and retirement to health and well*being. Psychology of Aging, 6*, 202–211.

Hoge, D. R., Zech, Z., McNamara, P., & Donahue, M. J. (1998). The value of volunteers as resources for congregations. *Journal for the Scientific Study of Religion, 37*, 470–480.

Iannaccone, L. R. (1990). Religious practice: A human capital approach. *Journal for the Scientific Study of Religion, 29*, 297–314.

Jackson, E. F., Bachmeier, M. D., Wood, J. R., & Craft, E. A. (1995). Volunteering and charitable giving: Do religious and associational ties promote helping behavior? *Nonprofit and Voluntary Sector Quarterly, 24*, 59–78. doi: 10.1177/089976409502400108

Johnson, J. B. (2013). Religion and volunteering over the adult life course. *Journal for the Scientific Study of Religion, 52*, 733–752.

Klumb, P. L., & Baltes, M. M. (1999). Time use of old and very old Berliners: Productive and consumptive activities as functions of resources. *The Journals of Gerontology, Series B: Social Sciences, 54B*, S271–S278.

Komp, K., van Tilburg, T., & van Groenou, M. (2011). Age, retirement and health as factors in volunteering in later life. *Nonprofit and Voluntary Sector Quarterly, 40*, 1–20. doi: 10.1177/0899764011402697

Ladd, G. W. (1999). Peer relationships and social competence during early and middle childhood. *Annual Review of Psychology, 50*, 333–359.

Lam, P. (2002). As the flocks gather: How religion affects voluntary association participation. *Journal for the Scientific Study of Religion, 41*, 405–422.

Li, Y., & Ferraro, K. F. (2006). Volunteering in middle and later life: Is health a benefit, barriers or both? *Social Forces, 85*, 497–519.

Lim, C., & MacGregor, C. A. (2012). Religion and volunteering in context: Disentangling the contextual effects of religion on voluntary behavior. *American Sociological Review, 77*, 747–780. doi: 10.1177/0003122412457875

Manning, L. K. (2010). Gender and religious differences associated with volunteering in later life. *Journal of Women & Aging, 22*, 125–135. doi: 10.1080/08952841003719224

McAdam, D., & Paulsen, R. (1993). Specifying the relationship between social ties and activism. *American Journal of Sociology, 99*, 640–667.

McDougle, L., Handy, F., Konrath, S., & Walk, M. (2014). Health outcomes and volunteering: The moderating role of religiosity. *Social Indicator Research, 117*, 337–351.

McFarland, D., & Thomas, R. (2006). Bowling young: How youth voluntary associations influence adult political participation. *American Sociological Review, 71*, 401–425.

Miner, S., & Tolnay, S. (1998). Barriers to voluntary organization membership: An examination of race and cohort differences. *The Journals of Gerontology, Series B: Social Sciences, 53B*, S241–S248.

Morrow-Howell, N., Hinterlong, J., Rozario, P., & Tang, F. (2003). Effects of volunteering on the well-being of older adults. *The Journals of Gerontology, Series B: Social Sciences, 58B*, S137–S145.

Musick, M. A., Herzog, A. R., & House, J. S. (1999). Volunteering and mortality among older adults: Findings from a national sample. *The Journals of Gerontology, Series B: Social Sciences, 54B*, S173–S180.

Musick, M., Wilson, J., & Bynum, W. B., Jr. (2000). Race and formal volunteering: The differential effects of class and religion. *Social Force, 78*, 1539–1571.

Mutchler, J. E., Burr, J. A., & Caro, F. G. (2003). From paid worker to volunteer: Leaving the paid workforce and volunteering in later life. *Social Forces, 8*, 1267–1293. doi: 10.1353/sof.2003.0067

Oesterle, S., Johnson, M. K., & Mortimer, J. T. (2004). Volunteerism during the transition to adulthood: A life course perspective. *Social Forces, 82*, 1123–1149.

Park, J. Z., & Smith, C. (2000). "To whom much has been given . . .": Religion capital and community voluntarism among churchgoing Protestants. *Journal for the Scientific Study of Religion, 39*, 272–286.

Pavlova, M. K., & Silbereisen, R. K. (2012). Participation in voluntary organizations and volunteer work as a compensation for the absence of work or partnership? Evidence from two German samples of younger and older adults. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 167*, 514–524. doi: 10.1093/geronb/gbs051

Penner, L., Brannick, M. T., Webb, S., & Connell, P. (2005). Effects of volunteering of the September 11, 2001 attacks: An archival analysis. *Journal of Applied Social Psychology, 35*, 1333–1360.

Perks, T., & Haan, M. (2011). Youth religious involvement and adult community participation: Do levels of youth religious involvement matter? *Nonprofit and Voluntary Sector Quarterly, 40*, 107–129.

Piliavin, J. A., & Siegl, E. (2007). Health benefits of volunteering in the Wisconsin Longitudinal Study. *Journal of Health and Social Behavior, 48*, 450–464.

Prisuta, R. (2003). *Enhancing volunteerism among aging boomers*. Paper presented at the conference on Baby Boomers and Retirement: Impact on Civic Engagement. Available http://www.civicengagement.org/agingsociety/links/aarpboomers.pdf

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.

Rochon, T. R. (1998). *Culture moves: Ideas, activism and changing values*. Princeton, NJ: Princeton University.

Rosenberg, E., & Letrero, I. L. (2006). Using age, cohort, and period to study elderly volunteerism. *Educational Gerontology, 32*, 313–334. doi: 10.1080/03601270600564088

Rotolo, T., & Wilson, J. (2007). Sex-segregation in volunteer work. *The Sociological Quarterly, 48*, 559–585.

Ruiter, S., & De Graaf, N. (2008). Socio-economic payoffs of voluntary association involvement: A Dutch life course study. *European Sociological Review, 25*, 425–442.

Schervish, P. G., & Havens, J. J. (1997). Social participation and charitable giving: A multivariate analysis. *Voluntas, 8*, 235–260.

Selbee, L. K., & Reed, P. B. (2001). Pattern of volunteering over the life circle. *Canadian Social Trends*, Statistics Canada—Catalogue No. 11-008, 1–5.

Smith, D. V. (1994). Determinants of voluntary association participation and volunteering: A literature review. *Nonprofit and Voluntary Sector, 23*, 243–263.

Snyder, M., & Omoto, A. (2008). Volunteerism: Social issues, perspectives and social policy implications. *Social Issues and Policy Review, 2*, 1–36.

Stark, R., & Bainbridge, W. S. (1996). *Religion, deviance, and social control*. New York: Routledge.

Suanet, B., van Groenou, M., & Braam, A. (2009). Changes in volunteering among young old in the Netherlands between 1992 and 2002: The impact of religion, age-norms, and intergenerational transmission. *European Journal of Ageing, 6*, 157–165.

Tang, F. (2006). What resources are needed for volunteerism? A life course perspective. *Journal of Applied Gerontology, 25*, 375–390.

Tang, F. (2008). Socioeconomic disparities in voluntary organization involvement among older adults. *Nonprofit & Voluntary Sector Quarterly, 37*, 57–75.

Tang, F. (2010). Volunteering by older adults in the Unites States. *The Journal of China Social Work, 3*, 289–300.

Taniguchi, H. (2006). Men and women's volunteering: Gender differences in the effects of employment and family characteristics. *Nonprofit and Voluntary Sector Quarterly, 35*, 83–101. doi: 10.1177/0899764005282481

Taniguchi, H. (2011). The determinants of formal and informal volunteering: Evidence from the American Time Use Survey. *Voluntas*. Advance online publication. doi: 10.1007/s11266-011-9236-y

Taniguchi, H., & Thomas, L. D. (2011). The influences of religious attitudes on volunteering. *Voluntas, 22*, 335–355. doi: 10.1007/s11266-010-9158-0

Teske, N. (1997). *Political activists in America: The identity construction model of political participation*. Cambridge: Cambridge University Press.

Thoits, P. A., & Hewitt, L. N. (2001). Volunteer work and well-being. *Journal of Health and Social Work, 42*, 115–131.

Unruh, H. R., & Sider, R. J. (2005). *Saving souls, serving society: Understanding the faith factor in church-based social ministry*. New York: Oxford University Press.

U.S. Bureau of Labor Statistics. (2014). *Volunteering in the United States—2013*. Retrieved from http://www.bls.gov/news.release/volun.nr0.htm

Van Willigen, M. (2000). Differential benefits of volunteering across the life course. *The Journals of Gerontology, Series B: Social Sciences, 55B*, S308–S318.

Wald, K. D., & Calhoun-Brown, A. (2014). *Religion and politics in the United States* (7th ed.). Lanham, MD: Rowman & Littlefield.

Warburton, J., Le Broque, R., & Rosenman, L. (1998). Older people—The reserve army of volunteers? An analysis of volunteerism among older Australians. *International Journal of Aging and Human Development, 46*, 229–245.

Weeden, J., & Kurzban, R. (2013). What predicts religiosity? A multinational analysis of reproductive and cooperative morals. *Evolution and Human Behavior, 34*, 440–445.

Wilson, J. (2000). Volunteering. *Annual Review of Sociology, 26*, 215–240.

Wilson, J. (2012). Volunteerism research: A review essay. *Nonprofit and Voluntary Sector Quarterly, 41*, 176–212. doi: 10.1177/0899764011434558

Wilson, J., & Janoski, T. (1995). The contribution of religion to volunteer work. *Sociology of Religion, 56*, 137–152.

Wilson, J., & Musick, M.A. (1997a). Who cares? Toward an integrated theory of volunteer work. *American Sociology Review, 62*, 694–713.

Wilson, J., & Musick, M.A. (1997b). Work and volunteering: The long arm of the job. *Social Force, 76*, 251–272.

Wuthnow, R. (1991). *Acts of compassion: Caring for others and helping ourselves*. Princeton, NJ: Princeton University Press.

Wuthnow, R. (1999). Mobilizing civic engagement: The changing impact of religious involvement. In T. Skocpol & M.P. Fiorina (Ed.), *Civic engagement in American democracy* (pp. 331–363). Washington, DC: Brookings Institution Press and Russell Sage Foundation.

CHAPTER FOUR

Biology and Aging: A Primer

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The biology of aging—also referred to as *biogerontology* or *geroscience*—is a diverse field that includes an array of subdisciplines all focused very generally on basic biological aging processes (Holmes & Cohen, 2014; McDonald, 2014; Lithgow, 2013; Kennedy et al., 2014) (Table 4.1). Biologists generally define *aging* or *organismal senescence* as "a progressive, irreversible decline in physiological function, resilience and health associated with increasing chronological age" (Holmes & Cohen, 2014). The field as a whole seeks to understand aging in humans in broader biological perspective, and in comparison with aging in other groups of organisms, including wild animals in nature, as well as the laboratory species used most often as aging research models.

In humans and other homoeothermic (warm-blooded) vertebrate animals (mammals and birds), aging is generally associated with certain clinical syndromes, including: loss of fertility, declines in strength and mobility, frailty, sensory impairment (blindness, deafness, etc.), and changes in cognition and memory. Aging also is associated with an increased age-specific prevalence of particular diseases, including osteoarthritis, cardiovascular disease (CVD), cancers, diabetes, and dementias, including Alzheimer's disease—all of which contribute to increased probability of illness, functional disability, or death. These syndromes and diseases are sometimes referred to as *canonical aging syndromes* (Finch, 1990).

Table 4.1 demonstrates the enormous variation in methodologies and intellectual perspectives applied by biologists who specialize in aging. These include: evolutionary, comparative, and population-level approaches, some of which compare aging in different groups or populations of

Table 4.1 Disciplines Represented in the Biology of Aging

The biology of aging (*biogerontology* or *geroscience*) is a diverse field, characterized by scientists using a range of model organisms, approaches, and levels of analysis.

Population level

- Demography, population biology, and epidemiology
- Population genetics, for example:
  - exploring variability in specific molecular genetic markers of longevity and disease risk
- Evolutionary and comparative biology, for example:
  - comparing differences in lifespan and aging patterns in organisms in nature or the laboratory
  - including approaches like artificial selection experiments or laboratory breeding to isolate key aging phenotypes and genes

Organism level

- Physiological, for example:
  - nutritional interventions, drug administration, and the use of model laboratory organisms ranging from yeast, worms, and flies to mice, rats, and dogs
  - identifying mechanisms of organ- and system-level disease and dysfunction
  - identifying metabolic and cell-signaling pathways implicated in aging and disease

Cellular level

  - employing cell lines in laboratory culture and establishing key metabolic or cellular processes that determine cell viability
  - examining cells in vivo, in living organisms, to track aging-related changes in cell processes that are associated with disease and mortality risk

Molecular and genetic

  - detecting molecules and pathways involved in aging-related changes and disease risk
  - identifying key genes linked to disease, aging and lifespan

Sources: Finch, 1990, 2007; Rose, 1991; Carey, 1999; Austad & Holmes, 1999; Kirkwood & Austad, 2000; Conn, 2006; Masoro & Austad, 2005; Guarente, Partridge, & Wallace, 2008; Austad & Masoro, 2011.

organisms, or over evolutionary time frames; whole-organism or physiological approaches, as in experimental nutrition or drug intervention studies; and biochemical, molecular, or genetic studies examining the effects on aging of specific genes, molecules, or metabolic pathways (see, e.g.,

Finch, 1990, 2007; Conn, 2006; Pearson et al., 2008; Miller et al., 2011). While social and cultural variables often are not an explicitly stated or primary focus of biological aging studies, these factors nonetheless come into play in a variety of ways. For example, researchers who focus on the epidemiology and demography of aging consider historical, cultural, ethnic, and gender-related variables as major forces underlying patterns of human aging, mortality, longevity, and disease prevalence.

Aging, Lifespan, and the Global Population

A dramatic shift in the human lifespan has occurred across the globe over the past three centuries. Life expectancies (LEs) have increased dramatically since the industrial revolution (Olshansky & Ault, 1986; Olshansky et al., 1997; Vaupel, 2010). In the United States in 1850, the average LE at birth was only 35–40 years; by 1900 the average was still under 50 years. But by 2000, the LE at birth in the United States and many other countries had reached over 75 years. Average LE at birth now exceeds that in some countries, including Japan and Scandinavia. LE at older ages has risen considerably during this time period as well: a 65-year-old American man can now expect to live an additional 16 years; a woman, 20 years more, compared with only 13–15 years in 1940, as shown in Table 4.2 (reviewed in Olshansky et al., 1997; Crews, 2003; Vaupel, 2010).

This profound modern shift in human longevity is attributable almost entirely to cultural change, including advances in medicine, nutrition,

Table 4.2 Additional Years of Life Expectancy Remaining at Age 65 in the United States from 1950 to 2010 for Men and Women

	Additional Years of Life Remaining at Age 65 (Averages)	
Year	Males	Females
1950	12.8	15.0
1960	12.8	17.8
1970	13.1	17.0
1980	14.1	18.3
1990	15.1	18.9
2000	16.0	19.0
2010	17.7	20.3

Data represent averages for all races combined.

Source: National Center for Vital and Health Statistics.

sanitation, public safety, and other aspects of public health, rather than any alteration in the way humans age on a basic biological level. Recent changes in LE have depended a great deal on declines in infant and child mortality, as well as fewer deaths from infectious disease and improvements in public health and safety that affect people of all ages.

The increase in lifespan in most countries across the world is associated with an equally dramatic shift in the most prevalent causes of disease and death. In comparatively wealthy, industrialized cultures like the United States, we are much more likely than our recent ancestors to die of aging-related diseases like CVD, cancers, or dementias, or to be chronically disabled by conditions like respiratory disease, osteoarthritis, blindness, or hearing impairment. Obviously, these demographic and epidemiological shifts have a huge impact on the economic, medical, and social structures needed to support the health and well-being of older people and their caregivers. For these reasons, an integrative, interdisciplinary focus on the biology of aging has never been more critical for global public health.

Why Do We Age?

Evolutionary biology provides a robust theoretical framework to explain why aging occurs in humans and many other animal species, as well as why lifespans vary among species (Rose, 1991; Kirkwood & Austad, 2000; Cohen & Holmes, 2014). There is a persistent and commonly held idea among laypeople and nonspecialists that aging evolved to "make way for the young," or "for the good of the group"—in other words, the idea that older, less functional individuals sacrifice additional, more functional years to free up resources for the young. Although this idea has an unselfish appeal, it has long been discredited as an explanation for the existence of aging. In fact, evolutionary biologists generally do not view aging (organismal senescence) as the direct result of any adaptive physiological or developmental program.

In evolutionary terms, aging is most easily explained in sexually reproducing organisms like humans, which are incapable of reproducing via asexual means (such as budding or cloning). In these organisms, there is a clear genetic distinction between somatic (body or nonreproductive) and reproductive tissues and cells. *In genetic terms, reproduction is the only real measure of biological success, and only the reproductive segment of the lifespan is subject to the force of natural selection.* Physiological health and organismal integrity are actively promoted by selection only during reproductive lifespan of the individual, and not thereafter. As shown graphically in Figure 4.1, selection becomes weaker as reproduction becomes less likely.

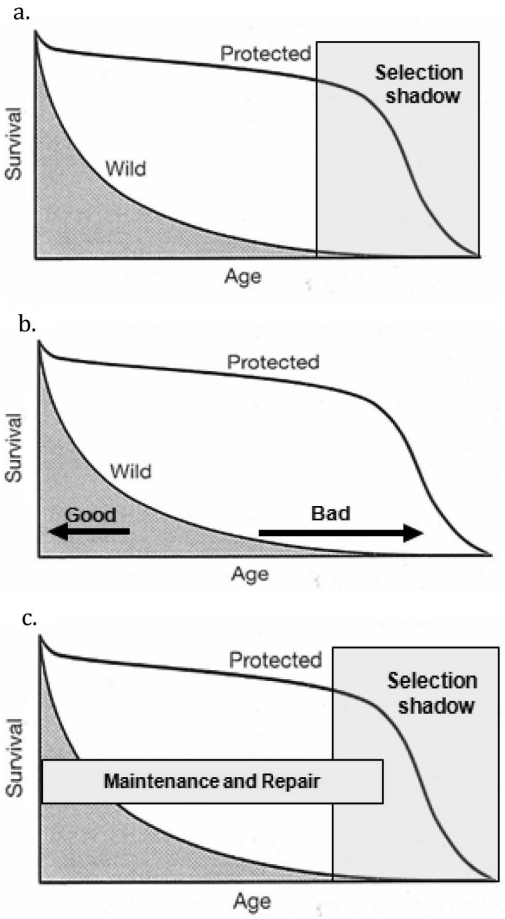


Figure 4.1 Evolutionary aging theory. Population- and species-level variation in the trajectory of aging and variation in longevity patterns result from natural selection for favorable *trade-offs between survival and reproduction*, driven by the force of mortality in a particular environment. (a) In the wild, most animals die of external causes before they show signs of aging, but captive animals protected against disease and death live more often into old age, beyond the force of natural selection in the wild (denoted by the "selection shadow"); (b) The *antagonistic pleiotropy theory* of aging predicts that pleiotropic genes (genes with multiple effects) beneficial early in life can cause or contribute to aging-related disease later on. In modern human and other populations protected against ancestral causes of mortality, harmful mutations that would otherwise be eliminated by natural selection can accumulate, contributing to aging (*mutation accumulation*). (c) According to *disposable soma* theory, organisms invest in effective maintenance and repair of somatic tissues only as long as they would be likely to survive and reproduce in the wild. (Adapted from Kirkwood, T. B.L., & Austad, S. N. [2000]. Why do we age? *Nature, 408*(6809), 233–238. doi: 10.1038/35041682 with permission from Nature; reprinted from Cohen and Holmes 2014 with permission from Elsevier Press.)

Seen in this way, aging is not programmed or adaptively optimized, but occurs as a by-product of selection to maximize the reproductive potential of organisms in a given population, given the average probability of dying in a given set of environmental conditions. Aging is expected to evolve when it is to an organism's genetic advantage to forgo longevity for its own successful reproduction in the short run.

This theoretical framework helps to explain why the risks of some diseases and disabilities associated with aging (e.g., cancers, CVD, osteoporosis, etc.) increase at older ages. The multisystem physiological failure that characterizes aging is the result of a *failure of natural selection* to promote continued investment in protection against disease, regulation of homeostasis, and repair of accumulated metabolic damage. Modern humans are well into the aging process by their 40th year, when fertility is waning in both men and women. By this time of life, most of our ancestors had fulfilled their reproductive potential. Relatively few humans in traditional, preindustrialized cultures have ever lived much over three decades (Crews, 2003; Finch, 2007). In short, the human body was not "designed" by natural selection to function optimally after the probability of successful reproduction has declined.

Human Lifespan in Comparative Perspective

Human aging can also be examined from the perspective of comparative biology, alongside the lifespans and aging patterns of other mammals, including other primate species. Modern humans are longer-lived and age considerably more slowly than either our closest primate cousins, the chimps and gorillas, or other mammals of similar body size (Ingram et al., 2006; Sonntag et al., 2012). The longest reliably documented human lifespan to date was attained by a French woman who lived to 122 years and died in 1997 (Allard et al., 1998).

In contrast, many other life forms, including fungi, plants, and some invertebrates, age much more slowly than we do, if they age at all. Galapagos tortoises and some deep-sea fishes, for example, have reliably documented lifespans of over 150 years. Some deep-sea clams, as well other wild invertebrates, plants, and fungi can live for up to several centuries. Some of these exceptionally slowly aging organisms are of great interest to biologists, since they may eventually yield some clues as to how intervene successfully in human aging.

Basic Approaches in the Biology of Aging

Many biologists approach their research using animal model systems developed specifically for laboratory studies. In most cases, these are species

that have been domesticated and inbred for many generations, and are well suited for addressing particular biological questions in a laboratory setting. These include some organisms only distantly related to humans, like brewer's yeast, soil roundworms, and fruit flies, or laboratory rats and mice. Some aging biologists, on the other hand, utilize more closely related nonhuman primate species, like rhesus monkeys. Others study natural aging patterns in the field, focusing on wild animal populations.

A central aim of basic aging research is to identify key biological processes or laboratory interventions with the potential to be translational—that is, to lead to preventive or therapeutic innovations that promote human health and well-being. A sampling of basic aging processes currently under study is listed in Table 4.3. There is an intense focus on identifying and understanding basic mechanisms—genes or cell-signaling pathways, for example—that underlie variation in aging and longevity, as well as on why and how aging occurs in the first place.

Basic aging research tends to focus on aging of the whole organism, rather than on disparate diseases or physiological systems. While some of these studies (such as those using roundworms or flies, for example) may not seem relevant to humans, there is a clear emphasis on identifying common mechanisms for aging-related disease and mortality that are generalizable to a wide range of organisms, including humans. A basic tenet of the developing interdisciplinary *geroscience* approach to aging research is that identifying fundamental processes important in aging (e.g., inflammation, oxidative damage, protein instability, or physiological or cell-cycle dysregulation) will eventually reveal causative factors underlying multiple aging-related diseases and disabilities (e.g., cancers, diabetes, CVD, and Alzheimer's disease) (Lithgow, 2013; Kennedy et al., 2014).

Biologists focus on varying levels of causation in their approaches to aging research. Some processes and major questions currently under study are listed in Tables 4.1 and 4.3. Some researchers focus primarily on proximate causes and mechanisms of aging; that is, the physiological, cellular, and molecular processes underlying variation in lifespan and aging. Others concentrate on ultimate, evolutionary or population-level forces that give rise to aging patterns in the first place — for example, analyzing how natural selection acts to shape patterns of reproduction and survivorship and, as a result, variation in lifespan and aging trajectories, as discussed above (see, e.g., Kirkwood & Austad, 2000; Cohen & Holmes, 2014).

Aging in a given population of organisms can be quantified using *vital rate statistics*—preferably, in the form of continuously distributed age-specific rates of survival, death, or functional loss, as illustrated in Figure 4.2. Ideally, these statistics are generated using reliably documented ages at birth

Table 4.3 Seven Major Questions or Issues That Currently Represent a Major Research Focus of the Biology of Aging

1. Can safe, reliable interventions be developed for extending lifespan or healthspan in model animal systems and humans? Possible interventions:
   - Lifestyle-related
     - *Examples*: exercise and activity; stress reduction; improvements in safety
   - Nutritional
     - *Examples*: restricted calorie intake, specific supplements; neutraceuticals
   - Medical
     - Primary prevention, screenings
     - Medication, surgery, other pharmaceuticals, etc.
   - Genetic
     - Identification of key disease or aging genes
     - Direct genetic modification of lifespan or disease

     (genetic engineering can now significantly increase healthy lifespan in laboratory animals)
2. What "proximate" aging (or longevity) mechanisms and pathways can be identified that are shared across a broad range of organisms?
   - Genetic, biochemical, or physiological

     Examples: oxidative stress and damage; mitochondrial dysfunction; key cell-signaling and metabolic pathways; genetic damage; failure of cellular repair; disintegration of regulatory networks
3. What are the "ultimate" or evolutionary causes of aging and variation in lifespan?
   - How do lifespans and aging patterns compare between major groups of organisms and across the tree of life?
   - How is variation in lifespan within and between species shaped by natural selection and other evolutionary forces?
4. Which animal model systems are most useful for studies of basic aging mechanisms that could translate to humans?
   - Inbred, domesticated organisms are used for experimental manipulation of genes, cellular or physiological aging processes
   - Genetic manipulations can target key aging genes through creation of mutant or "knockout" laboratory animal strains

     Examples: Standard laboratory models: brewer's yeast (*Saccharomyces*), laboratory roundworms (*C. elegans*), fruit flies (*Drosophila*), and laboratory rats and mice

5. Which key molecules (genes or other aging "biomarkers") be used to predict lifespan, disease or mortality risk?
6. What are the major historical and demographic trends in longevity, aging, and disease risk in humans?
   - Demographic and epidemiological approaches used to examine historical changes using public health records
   - Comparison of populations, cultures, ethnic groups, and gender differences
7. What basic aging mechanisms can be identified that are specifically responsible for human disease ("translational" research)
   - *Examples*: medical issues, diseases or clinical syndromes associated with aging, and the underlying mechanisms for diseases, including CVD, cancers, frailty syndromes, dementia, etc.

Sources: Finch, 1990, 2007; Kirkwood & Austad, 2000; Masoro & Austad, 2005; Guarente, Partridge, & Wallace, 2008; Austad & Masoro, 2011; Holmes & Cohen, 2014; Kennedy et al., 2014.

and death. In basic demographic or statistical terms, aging can be detected in a population when there is a steady increase in age-specific death rates after sexual maturity. When age-specific survival or death rates are unavailable, other, cruder measures of aging or lifespan potential are often used. These include species-specific LEs or *maximum lifespan potentials*. These measures, however, can be biased by very large or small sample sizes, since the more the individuals surveyed, the greater the chance of finding very old individuals, even if they actually occur very rarely.

The most commonly used metric for longevity in human populations is *LE* at a particular age, equal to the average years of life remaining at that age in a given population or historical cohort. LE can be calculated from birth, at reproductive maturity, or at any stage later in life (for reviews, see Finch, 1990; Preston, Heuvelein, & Guillot, 2001). Table 4.2, for example, shows recent increases in LE at age 65 in the U.S. LE at birth is often used in the context of lifespan and aging. While this variable is certainly relevant for measuring historical changes in public health, it should be noted that LE at birth is very sensitive to mortality in infancy and childhood, and hence not the best measure of the probability of surviving to old age. The best metrics for aging rates and probability of death include slopes and other regression parameters derived from calculating mortality rates for many individuals, along with percentiles for age at death at various ages. In terms of best practice, appropriate statistical methods are chosen to fit the particular research question being addressed (see, e.g., Finch, 1990; Carey, 1999).

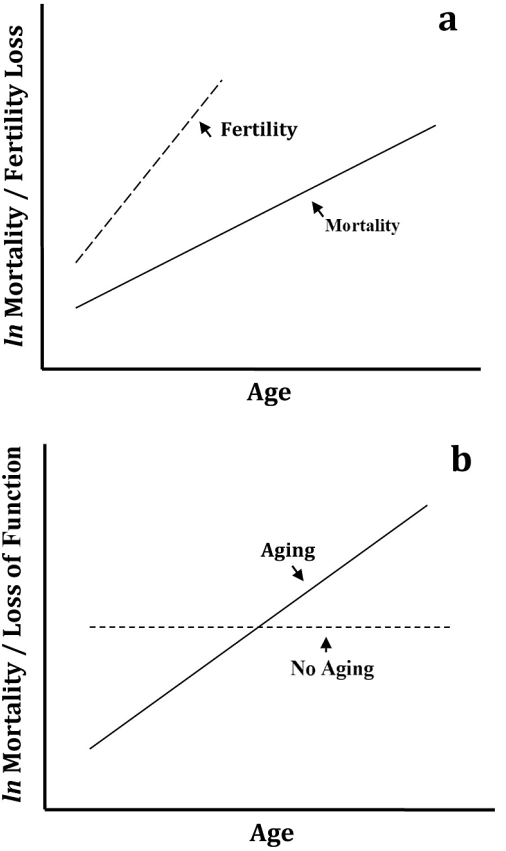


Figure 4.2 Aging can be quantified in a population by graphing linearized age-specific rates of mortality or loss of function. Death rates (a) or loss of reproductive function (b) are log-transformed and plotted against chronological age; the slopes of these functions represent aging rates. (No slope denotes no aging; steeper slopes denote faster aging rates.) Functional loss can occur at different rates for different physiological systems or capacities (e.g., reproduction, cardiovascular capacity, immune function). Evolutionary theory generally posits that aging results from the failure of natural selection to promote longer reproductive fitness, organismal maintenance, and survival. Natural selection acts via age-specific mortality pressure on a given population, which in turn shapes heritable patterns of aging in subsequent generations. As selection for successful reproduction wanes, aging-related defects accumulate, and rates of mortality increase. (Sources: Finch, 1990; Carey, 1999; Kirkwood & Austad, 2000. Reprinted from Cohen & Holmes, 2014 with permission from Elsevier Press.)

Aging is a complex process involving multiple, interactive physiological systems. *Chronological age* does not always reliably correlate with *biological age*, which ideally would predict the risk of dying of aging-related causes in the future. There are few physiological or molecular *biomarkers* of aging that can predict reliably how long an individual organism with particular phenotypic traits will live, or what will be the ultimate cause of death for a given individual. Individual humans vary a great deal in terms of their risk of death or disease at a particular chronological age. This holds true for individual laboratory animals, as well.

Biologists have nonetheless used a wide variety of parameters as aging biomarkers, including biochemical, cellular, and physiological variables, such as markers of oxidative or other metabolic damage to DNA and cell membranes, telomere shortening, disruption of homeostasis, insulin resistance, and inflammatory markers. Other, more function-based aging biomarkers are also used, including measures of physical agility, strength, and cognitive ability. For human aging studies, aging biomarkers have included measures from standard blood lab panels, like lipid profiles, markers of diabetes, and measures of infection and inflammation. Additional clinical tools often used currently in studies of human health and aging include assessment of cognitive performance, hand grip strength, gait, balance, and fall risk, and other measures of mobility and frailty, as well as the ability to independently perform activities of daily life such as bathing, preparing food, paying bills, and housework.

Attempts to derive one or a few reliable aging biomarkers have met with mixed or limited success (Ingram et al., 2001; Butler et al., 2004; Miller et al., 2001). Benchmarked aging biomarkers can be invasive, expensive, or difficult to obtain, and they can vary a great deal between species, making direct translation from animal models to humans difficult. Even within human populations, clinical markers are fairly crude predictors of the actual cause or probability of death. Nonetheless, basic geriatric assessments are generally useful for obtaining a picture of health, mobility, cognitive status, and independence in older adults (Ham et al., 2014).

Theories and Basic Mechanisms of Aging

While biologists can now successfully manipulate key genes or physiological processes in laboratory animals to alter the basic trajectory of aging, no one has yet successfully slowed the aging process in humans at a basic cellular level or molecular level. But there are robust working theories about how particular proximate physiological and cellular mechanisms

are involved in determining lifespan and aging rates, as well as about the ultimate, or evolutionary, processes that are also at work, as described in Table 4.4. At least some, if not most, of these mechanisms are likely to be important in human aging, as well. A synopsis of current ideas about some promising key processes is provided below. Note that, in particular, aging researchers currently are focusing intensely on such phenomena as oxidative mitochondrial metabolism, cell-replication and signaling processes (such as those involved in cancer), and aspects of nutrient and metabolic signaling. There is also a great deal of interest in various forms of metabolic damage, including oxidative damage resulting from normal cellular processes.

Table 4.4 Basic Aging Mechanisms (Basic Biological Processes Currently under Study as Causative Mechanisms in the Biology of Aging)

Ultimate mechanisms:

- Evolution
  - *Natural selection; sexual selection; fitness trade-offs between reproduction and survival, etc., operating at the population level*

Proximate mechanisms:

- Developmental processes and physiological trade-offs
- Nutrition, energy metabolism, and growth, for example:
  - *Calorie restriction (CR) and CR mimics*
  - *Insulin and IGF-1 signaling (IIS)*
  - *Growth hormone (GH)*
  - *Sirtuins*
- Metabolic and oxidative damage
- Mitochondrial dysfunction and pathophysiology
- DNA damage and repair
- Cell replication and senescence
  - *Telomeres and telomerase*
- Inflammation
- Physiological dysregulation

Note that these include ultimate (evolutionary) as well as proximate (molecular, cellular, and physiological) mechanisms. These levels of explanations are not mutually exclusive, but complementary.

Sources: Rose, 1991; Finch, 2007; Kirkwood & Austad, 2000; Masoro & Austad, 2005; Guarente, Partridge, & Wallace, 2008; Austad & Masoro, 2011; Cohen & Holmes, 2014; Holmes & Cohen, 2014; Kennedy et al., 2014.

Evolution and Development

As discussed above, evolutionary or ultimate-level analysis focuses on changes in lifespan and aging in populations, and examines the force of natural selection in shaping age-specific mortality rates (and hence longevity and aging rates). In evolutionary terms, nonreproductive tissues are disposable, and are actively maintained only long enough to ensure successful reproduction. Aging is posited to result from *adaptive fitness trade-offs* between the probability of successful reproduction and the cost of long-term survival, maintenance, and repair. Natural selection has been shown in a large body of studies to shape trade-offs between reproduction, survival and lifespan in many sexually reproducing organisms (Rose, 1991; Kirkwood & Austad, 2000; Partridge, Gems, & Withers, 2005).

Developmental theories of aging also are closely tied to the concept of evolutionary fitness trade-offs. Traits that are beneficial early in life or contribute to successful maturation and reproduction in younger individuals can be harmful to older ones and increase susceptibility of aging-related disease (de Magalhaes & Church, 2005; Partridge, Gems, & Withers, 2005). For example, the growth and development of young organisms depends on the capacity of cells to replicate and proliferate rapidly. The same growth factors and hormones (e.g., estrogen and testosterone; growth hormone (GH); IGF-1) that integrate the growth and development of reproductive tissues can also trigger unregulated cell growth and cancers in older individuals.

Healthy, young, developing or reproducing animals exhibit *phenotypic plasticity*, the ability to respond flexibly to environmental demands, such as a scarcity or abundance of food, and to alter their physiology in an adaptive fashion accordingly (Gilbert & Epel, 2008; Stearns & Koella, 2008). Many animals, including humans, also exhibit *critical developmental periods* in which developing individuals are exquisitely sensitive to environmental cues. During these periods, environmental variation can not only alter early development, but also influence health and the trajectory of aging in adulthood (Ellison, 2005; Gluckman et al., 2009). For example, human infants born with abnormally low birth weights are at higher risk as adults for metabolic syndrome, which is associated with obesity, type 2 diabetes, and CVD risk, as well as a shortened lifespan from other causes (Hales & Barker, 1992). On the other hand, babies born to obese or diabetic mothers also are at higher risk of metabolic disease. In both humans and animal models, it is increasingly clear, moreover, that other nongenetic environmental factors, such as parental age and health, stress, endocrine disruptors, and environmental toxins, can alter early development and affect mortality rates and prevalences of aging-related disease over

the adult life course (reviewed in Finch, 2007). For humans living well beyond our ancestral lifespans in a rapidly changing, industrialized modern setting, environmental variation can be so extreme as to make adaptive developmental responses physiologically impossible, as in the case of maternal and childhood obesity.

Nutrition, Energy Metabolism, and Growth

Nutrition, caloric intake, and the metabolic pathways employed in the body's use of fuel are known to play a key role in aging, disease susceptibility, and LE in laboratory animal models. Several of the most promising or influential research avenues and findings in this area are summarized below. While these lines of research have not yet resulted in the development of direct aging interventions, like medications, they are already helping to clarify why certain lifestyle interventions, like avoiding obesity and engaging in regular exercise, can help to extend healthy lifespan in humans.

Calorie restriction. Diets that are nutritionally complete but severely calorie-restricted (CR) have been shown in a great many studies to slow aging and extend lifespan in a wide range of species — from yeast and worms to laboratory mice and monkeys (reviewed in Weindruch & Walford, 1988; Anderson & Weindruch, 2012). The taxonomic breadth of the response to CR suggests that the underlying biological mechanisms are evolutionarily conserved. The metabolic pathways and genes implicated to date in the effects of CR include GH, insulin, and IGF-1, plus other proteins that regulate cell replication and stress resistance, like the sirtuins and mTOR (Haigis & Sinclair, 2011). Some of these like the mTOR signaling pathway, also play a role in aging-related diseases like Alzheimer's.

Some gene mutations, including those affecting levels of GH or IGF-1, can slow aging and extend lifespan in a way very similar to the effects of CR. Some exogenous compounds, including resveratrol from wine grapes and medications like rapamycin, a drug that suppresses the immune-rejection response to tissue transplants, have also been shown in some studies to mimic the effects of CR, or even to counteract the life-shortening effects of obesity in mice (Pearson et al., 2008; Haigis & Sinclair, 2011; Miller et al., 2011). CR mimics may act by triggering beneficial segments of the metabolic pathways involved in normal responses to CR.

Insulin, IGF-1 signaling, and growth hormone. Insulin and insulin-like growth factors, including IGF-1, are molecular regulators of energy metabolism, development, growth, and stress resistance. Insulin and insulin-like signaling pathways are seen in organisms as distantly related and dissimilar as yeast, worms, flies, mice and humans, and their functions

include the modulation of lifespan and aging rate (Tatar, Bartke, & Antebi, 2003; Kopchick, Bartke, & Berryman, 2008). Mutations in genes controlling these processes have been found to cause major alterations in longevity and aging, including the receptor tyrosine kinase, DAF-2, which in turn regulates the forkhead transcription factor, DAF-16, in model organisms from diverse lineages. These cell regulatory pathways are likely to be important in human aging as well. Developmental disruptions of these pathways, as in obesity or fetal malnutrition, are likely to set the stage for aging-related diseases later in life.

GH regulates growth and metabolism in humans and other mammals and plays a major role in glucose metabolism and the determination of lifespan and aging rate (Brown-Borg, 2011, 2014). GH and IGF-1 pathways are highly interrelated, and both have prominent effects on growth rates, adult body size, metabolism, reproduction, and stress resistance. GH deficiencies and gene mutations have been strongly implicated in lifespan extension and slowed aging. Dwarf mouse mutants (Ames and Snell) genetically deficient in GH live much longer than normal lab mice. An artificially engineered transgenic GH-resistant mouse strain, GHR KO (Laron), is significantly smaller and lives up to 55 percent longer than wild-type mice. Interestingly, small body size in general is strongly associated with longer lifespan in a number of species, including mice, dogs, horses, and humans, supporting the idea that lower levels of GH, as well as IGF-1, may slow aging. By the same token, excess GH is associated with a variety of negative health outcomes, including CVD and cancer, as well as shortened life. Lifespan can be severely reduced in humans and mice with high levels of GH. GH therapy is currently being marketed as an antiaging therapy, as evidenced by ads in the popular media, but GH supplementation has never been shown in clinical trials to be beneficial, nor has it been approved by federal regulatory agencies.

TOR pathways. TOR, or target of rapamycin, is a metabolic enzyme that regulates many cell processes including growth, proliferation, motility, and protein synthesis. TOR activity is associated with aging in brewer's yeast, worms, and fruit flies in the laboratory (Kapahi & Kockel, 2011). In laboratory mice, rapamycin (an immunosuppressant drug that inhibits the mammalian counterpart of TOR, mTOR), has been shown reliably to extend lifespan. CR may exert its effects by decreasing TOR activity. Mammalian mTOR signaling has been implicated in the formation of amyloid and tau plaques associated with neuropathology in Alzheimer's disease. Naturally occurring compounds in foods, including resveratrol from wine grapes, curcumin, and caffeine, have been shown to inhibit mTOR in cells in vitro. But so far, no reliable antiaging effect has clearly been established for any nutritional supplement or compound affecting TOR pathways.

Sirtuins. Sirtuins, also known as Sir2 proteins, regulate multiple pathways in a wide taxonomic range of organisms, from bacteria to mammals. They regulate transcription, programmed cell death (apoptosis), and stress responses; they are also involved in mitochondrial energy production (Haigis & Sinclair, 2011). These proteins have been implicated in various aging processes and degenerative diseases, including Alzheimer's, cancer, and CVD. Transgenic lab mice that overexpress the sirtuin SIRT6 have been shown to live longer than controls (Kanfi et al., 2012). Resveratrol, a molecule with the potential to activate SIRT1, occurs naturally in red wine grapes. In some studies with laboratory mice, resveratrol drug mimics have extended lifespan; hence, resveratrol or similar compounds may eventually prove useful for intervening in aging in humans (Ingram et al., 2006; Pearson et al., 2008).

Metabolic Damage and Inflammation

The generation of metabolic energy for life occurs in the mitochondria of cells. During oxidative metabolism, the mitochondria generate unstable free radical molecules and reactive oxygen species (ROS). ROS production is influenced experimentally by calorie intake and other nutritional variables, as well as energetic and environmental demands (Wallace, 2008). ROS function normally in cells as signaling molecules, as well as playing an important role in regulating cell metabolism. They also have the potential to cause oxidative damage to the lipids, proteins, and DNA that make up the vital components of healthy cells, including the mitochondria. One long-standing idea about the origins of aging-related damage comes from research demonstrating that oxidative by-products of normal metabolism cause the types of cellular stress and damage that is associated with the degenerative diseases and functional losses that characterize aging (Harman, 1956; Van Remmen & Richardson, 2001; Muller et al., 2007).

CR has been shown to dampen ROS production and induce defenses against oxidative damage that may protect against cancers and other aging-related diseases. Additional support for the *free radical* and *oxidative damage hypotheses of aging* is provided by findings from mutant lab animal models showing associations between variation in levels of certain antioxidant enzymes, oxidative damage, and key genes that extend lifespan and slow aging (Van Remmen et al., 2004). These relationships, however, have not always been consistent with the prediction that cumulative oxidative damage is a primary cause of aging (see, e.g., Buffenstein et al., 2008).

Mutations in mitochondrial genes can accumulate in various tissues over the life course, causing aging-related declines in energy production, as well as damage and loss of cells, disease and pathophysiology (Allsopp

et al., 1995; Kujoth et al., 2005). *The mitochondrial aging hypothesis* is conceptually linked with the free radical and oxidative theories of aging. It proposes that that mitochondrial function deteriorates over the lifespan because of oxidative damage to mitochondrial genes and membranes. Mitochondrial mutations are implicated in many diseases associated with aging, including cancers, Alzheimer's disease, diabetes, ocular cataracts and retinopathy.

Damage to DNA takes place spontaneously in cells of many animal tissues over time. According to the *DNA damage theory of aging*, aging is a consequence of the accumulation of unrepaired damage to nuclear or mitochrondrial DNA (Bohr et al., 2008). Such damage can affect normal cell replicative function, altering apoptosis (adaptive, programmed cell death), or resulting in cell loss, impaired cellular function, or transformation to cancerous cells. Oxidative damage is a proven cause of DNA damage. In humans and lab rodents, moreover, DNA oxidative damage products and breaks have been shown to accumulate with age and to correlate with aging-related memory loss and dementias, among other conditions.

Inflammation, a normal immune response to infection or injury, is another mechanism implicated in aging (Finch, 2007). Inflammatory processes, along with certain types of infections, are associated with many aging-related diseases. Inflammation is implicated in the formation of arterial plaque responsible for atherosclerosis ("hardening of the arteries"), a major component of CVD associated with heart attack and stroke. Obesity is also associated with enhanced levels of inflammation, ROS and reactive nitrogen species, and other primary aging processes (Chung et al., 2009).

Cell Replication and Senescence

Healthy, noncancerous cells maintained in culture, such as human fibroblasts (undifferentiated connective tissue cells), undergo a finite number of replications before reaching the *Hayflick limit*; after this, the cells "senesce" and stop replicating. (Note that this process is distinct from whole-organism aging or senescence.) In some aging-related diseases, like cancer, cells override the normal limits on replication and transform to undergo unregulated proliferation. Healthy cell replication is to a large extent controlled by telomeres and telomerase, as discussed below (Herbig et al., 2004). Certain other key cell-signaling genes, like tumor suppressors, also block the growth of precancerous cells.

Telomeres and telomerase. In vertebrate animals like humans, the ends of chromosomes are capped like the ends of shoelaces with repetitive DNA sequences called telomeres, which aid the cell in the copying of the

terminal sequences of linear chromosomes. Small segments of telomeres are used up every time the cell replicates, until a point is reached where replication is no longer possible without serious errors. In healthy cell lines, the loss of telomere length triggers the Hayflick limit on replication and induces cell death. Telomere damage and shortening can be caused by oxidative stress, and some diseases of aging have been linked to changes in telomere length (Effros, 2003).

The enzyme telomerase maintains telomeres, prevents shortening, and sustains replicative potential. Longer, healthy telomeres have been suggested to protect against cancer and other aging-related diseases. Since the dysfunctional proliferation of cells can lead to cancer, and telomerase dysregulation likely plays a role in this, telomerase function has considerable potential as a target for chemotherapy. Some researchers have claimed that telomere length correlates with lifespan variation within populations of organisms or between species, or that it can predict the occurrence of aging-related disease and death. This idea remains controversial, however, and telomere shortening remains to be clearly shown to be a reliable biomarker of aging in any organism (von Zglinicki, Saretsky, & Passos, 2014).

Dysregulation of Physiology and Homeostasis

There is growing consensus that many of the mechanisms described here play some role in aging at least some of the time—others, on the other hand, may apply only in certain species under certain conditions. Oxidative damage, for example, may be important only when healthy regulatory control is lost. Inflammation may be a major cause of aging in modern humans, but is irrelevant in species lacking an inflammatory response. To accommodate the observed species differences in basic aging processes, some researchers have proposed theories of aging that fall under the heading of *complex systems theory*. According to this view, no individual molecule or mechanism plays an exclusive role in aging-related decline. Rather, aging is a higher-order phenomenon arising from failures of complex regulatory systems to maintain healthy organismal functioning, or homeostasis. This theory falls under a rubric that has been given different names, including allostatic load, homeostenosis, and physiological dysregulation (see, e.g., McEwen, 2002; Cohen et al., 2012).

Lifestyle, Health, and Aging

The probability of living a long and healthy life is determined to a significant extent by the genes we inherit from our parents. But the probability of enjoying a long *healthspan* or healthy, functional lifespan is influenced

to an even greater extent by social and behavioral factors, including socioeconomic status, educational attainment, the complexity of positive social networks, and lifestyle and self-care patterns. Aging and death are inevitable for humans for the time being, but there is compelling clinical evidence that healthy activity levels, diet and other lifestyle choices, plus good preventive medical care, outweigh genetics in ensuring the likelihood of a long, active, and independent life (Huan et al., 2009).

Smoking and other tobacco use. Cigarette smoking and tobacco use are the number one risk factor for a shortened life. All over the world, smokers have much higher rates of lung cancer and chronic obstructive pulmonary disease (COPD) than nonsmokers. Public health agencies estimate that smoking shortens life by a decade or more, but that stopping smoking—even in middle age—adds healthy years.

Cardiovascular health. Heart attack, stroke, and other forms of CVD are the most common causes of death in older people. Men are at greater risk at all ages than women of dying of heart attack or stroke, but after menopause the risk of CVD in women increases to levels comparable to those in men of similar age. The risk of CVD can be significantly ameliorated by exercise, proper diet, and other healthy lifestyle choices. *Cigarette smoking is the number one risk factor for CVD worldwide, with obesity, poor nutrition, and lack of regular exercise coming in a close second*. Diabetes is also associated with CVD. Regular medical screenings, avoiding high blood pressure and unhealthy levels of blood lipids, as well as certain medications, like blood pressure–reducing drugs and statins, also can substantially reduce the risk of CVD.

Cancer screenings. Early cancer screenings are a proven tool for preventing cancer-related deaths, including screenings for breast, cervical, and colorectal cancers. Appropriately timed clinical screenings save hundreds of thousands of lives. No single, specific food or supplement has been identified that will prevent cancer altogether, but maintaining a healthy body weight and eating a healthy diet rich in fruits, vegetables, and whole grains, along with lean meats, nuts, and fish, undoubtedly helps to minimize cancer risk.

Diabetes prevention and management. Diabetes mellitus is a metabolic disease that involves dysregulated carbohydrate metabolism and abnormally high levels of glucose in blood and other tissues. Diabetes is associated with a number of other diseases of aging, including CVD, peripheral neuropathies, and blindness. Aging and obesity both increase the risk of type 2 (sometimes called "adult onset") diabetes. Early diagnosis and management through weight loss, diet, or medication can markedly decrease the risk of diabetes-related complications in older adults.

Nutrition, body weight, and physical activity. Healthy body weight, good nutrition, and regular physical activity all work together to extend both

human lifespan and healthspan. Current dietary recommendations for sustaining health over the lifespan include avoiding excessive consumption of alcohol, good nutrition, regular exercise, and avoiding overnutrition. In half of the states in the United States, the majority of the population is now obese, based on measurement of body mass index. *Obesity is a major risk factor for a number of aging-related diseases, including CVD, cancer, and diabetes.* Regular physical exercise has been shown to be correlated with lower rates of dementias, cancer, and CVD; regular exercise may be even more important than avoiding becoming overweight.

Protection against infection. A hallmark of aging in humans and other mammals is a decline in the ability of the immune system to fight infections, and older adults are at a much greater risk of dying of such diseases as influenza, shingles, and pneumonia. Immunizations against these illnesses are widely available, and they protect older individuals effectively against infections. Hospital-borne, antibiotic-resistant strains of bacteria can be particularly risky to the health of older people.

Accident and frailty prevention. Loss of muscle mass, strength and agility, as well as loss of bone density, can contribute to generalized physiological *frailty syndromes* in older people. Falls and accidents can have especially serious emotional, social, and medical consequences for older adults. People generally fare better at older ages if they stay physically active and engage in activities designed to promote core body stability to prevent falls and other accidents.

Education, social networks, and mental health. There is growing evidence that older people who maintain a variety of family and other social connections are healthier and live longer than those who are isolated and have fewer social connections. The biological basis for this effect is not clear. Older people can be disproportionately prone to anxiety, depression, and negative stressors. Loss of a spouse or social support, isolation, relocation or other changes in living conditions, falls or other medical challenges all can adversely affect mental and physical health. Strategies for preventing, diagnosing, and treating mental illness are essential for sustaining health in older people.

For reasons not completely understood, formal education tends to promote health and longevity. Regular exercise, as well as social and cognitive enrichment, including regular engagement in activities involving memory and learning skills, could play a role in preventing or delaying normal cognitive aging and dementias, including Alzheimer's disease.

Social Variables and the Biology of Aging

The biology of aging may not at first appear to be concerned with social phenomena, nor linked directly to the social sciences. But a deeper look

can reveal important, if underemphasized, interdisciplinary connections. Demographers, for example, focus on how human lifespan, mortality patterns, and rates of aging-related disease have changed over the course of history, as well as predicting future demographic change. They relate these changes, in turn, to changes in technology, safety, nutrition, and medicine, for example—that clearly impact human lifespan, disease rates, and other causes of death. Using similar approaches, epidemiologists calculate rates—either observed or projected—of aging-related disease, disability, and death, often contrasting groups within or between populations according to sex and gender influences, race/ethnicity, or socioeconomic and educational status. Gerontologists focusing on long-term demographic, clinical or genetic studies of aging, and or on health and lifespan in human populations identified to be unusually long-lived, often examine relationships among social factors and health—including education levels, familial and other social connections, and so on (Riley et al., 2000; Snowdon et al., 2003; Atzmon et al., 2006; Perls and Sebastiani, 2008; Avery et al., 2014). There is also a relatively recent, emerging focus on gender and sex differences in health, lifespan, and specific aging-related diseases, particularly sex differences in CVD that can lead to heart attack and stroke, as well as the chronic disease and disability that can be caused by disabling conditions like osteoarthritis and osteoporosis (for reviews, see Holmes, 2014; Goldman & Hatch, 1999; Goldman et al., 2013a).

Sex Differences in Aging

All over the world, women not only live longer, but die at lower rates than men of similar ages. This difference in LE is generally on the order of only a few years (reviewed in Austad, 2006; Austad, 2011; United Nations, 2011), but varies among geographical regions of the world. The longest average LEs on record are 86.4 and 79.6 years for Japanese women and men, respectively. The largest sex difference in median lifespans, eight years longer for women, is in the European region as a whole (World Health Organization, 2011). The widest gender gap in mean and median LEs at birth and older ages as a rule is seen in industrialized countries, where women have median LEs at birth up to 7–8 years longer and lifespans for both sexes are extended. In developing societies, where LEs for both sexes are shorter, the female longevity advantage tends to be narrower. The shortest lifespans and smallest female longevity advantages occur in developing, severely economically stressed or politically unstable regions. In Malawi, Africa in the 1990s, for example, mean LE at birth for women was 46.8 years, vs. 43.5 years for men; there were similar sex differences there for LEs at ages 50 and older.

Although death rates converge in men and women in their 60s and 70s, the female longevity advantage persists even at very old ages. The longest absolute lifespans have been recorded for women, as well as the longest averages, and more women than men are now living to reliably documented lifespans 100 years or more. (Note that, as mentioned previously, the world longevity record currently is 122 years. This extreme age was achieved by a Frenchwoman, Jeanne Calment.) This disparity is due in part to the fact that more women remain alive at older ages, increasing the probability of extremes in the data. Lifespans may continue to increase for both sexes, but there is debate currently regarding the upper biological limits to human lifespan (Vaupel, 2010; Olshansky, 2005).

Improvements in public health in industrialized countries have contributed immeasurably to increases in lifespan for both sexes since the mid-1800s. Much—but not all—of these increases can be attributed to lower rates of infant mortality and higher LEs at birth. But LEs at older ages have also increased a great deal. Over the past 100 years or so, as average longevity has increased and the risk of dying at all ages has dropped in industrialized countries, the differential in death rates between males and females has also shifted (Hoyert, 2012). From 1935 to 2010, the overall age-adjusted risk of dying for both sexes in the United States dropped by 60 percent (from 1,860.1 to 746.2 per 100,000 people). During this time, the female survival advantage, expressed as the female/male ratio of annual death rates, increased from 1.2 to 1.7 and then declined to 1.4 in 2010. This shift has been attributed in part to changes in rates of cigarette smoking by women and the associated risks of death and disease.

The persistent sex differential in LEs prompts the question of whether women actually age more slowly than men on a biological level. As noted earlier, aging in a particular population or subpopulation can be detected either as steady declines in survivorship with chronological age or increasing age-specific rates of mortality, as shown in Figure 4.2. To address this question, Austad (2011) compared sex differences in age-specific mortality data from Russian and Japan, two countries with considerably different female longevity advantages. This analysis, featured in Figure 4.3, reveals that the shapes of the mortality curves are quite similar for both sexes in both countries. Hence there is no indication that male and female aging rates differ in either case, suggesting that death rates for males simply start out higher early and remain higher throughout life.

Sex differences in longevity clearly are not unique to humans (see, e.g., Clutton-Brock & Isvaran, 2007). In some other primates, including the chimpanzee, the sex difference in lifespan is even more pronounced, with females also longer-lived (Austad, 2006). Sex differences in aging and LEs can be explained as a by-product of sex-specific evolutionary pressures

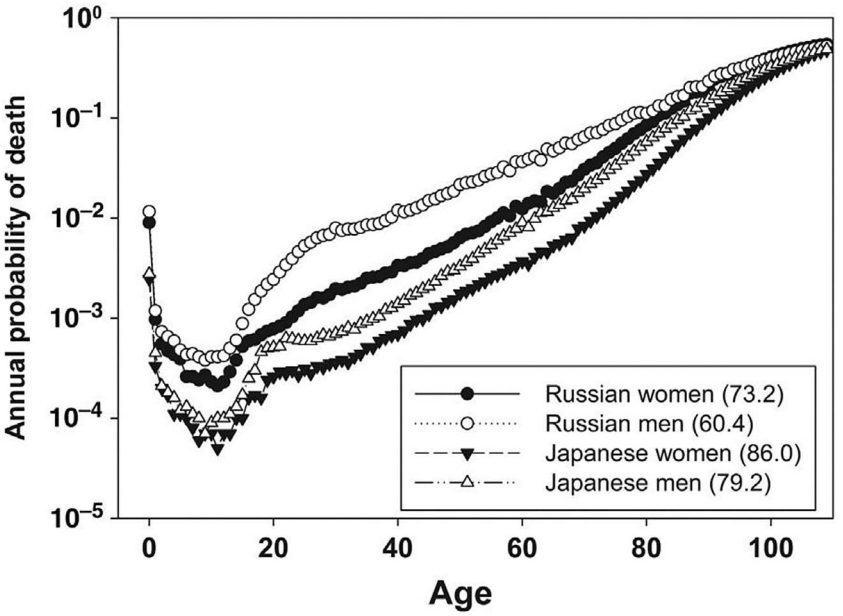


Figure 4.3 Comparison of age-specific mortality rates in men and women in Japan (a long-lived country) and Russia (a short-lived country). Mortality rates are expressed on a logarithmic scale as the annual probability of death. While mortality rates are lower for women than throughout the lifespan in both countries, the slopes of the mortality plots for men and women are similar, indicating that all four groups aged at similar rates. Note also the higher rates of mortality for younger males (especially Russian males). Numbers in parentheses in the legend represent life expectancies at birth. (Reprinted from Austad [2011] with permission. *Data source*: Human Mortality Database. www. mortality.org.)

(reviewed in Austad, 2006; Kruger & Nesse, 2006). Females and males are expected to evolve different strategies for investing in reproduction, and to make different genetic and physiological trade-offs between survival and reproduction to optimize reproductive success, and hence evolutionary fitness, over the entire lifespan (Promislow et al., 1992; Promislow, 2003; reviewed in Bonduriansky et al., 2008). Certain obvious physiological differences that can contribute to aging-related diseases like CVD and some cancers, including levels of hormones and growth factors, likely account at least in part for the lifespan differences seen.

Hormones as Factors in Sex Differences in Aging and Disease

Sex steroid hormones, including estrogen, progesterone, and testosterone, as well as stress hormones and growth factors like IGF-1 and GH,

regulate healthy development and reproductive functions, and hence are essential for success in evolutionary terms. But these compounds also are clearly implicated as risk factors for some diseases in older animals and humans, particularly after the peak fertile years. Certain forms of breast cancer, for example, are fueled by estrogen, which promotes the proliferation of healthy cells and tissues, as well. Prostate cancer, a leading cause of death in older men, is promoted by the action of testosterone, a hormone essential for reproduction in the male.

The risks to health and longevity inherent in the hormonal regulation of development and reproduction are complicated, as is inherent in complex biological trade-offs. Under certain physiological circumstances, and at some points in the life cycle, estrogen, for example, has the capacity to protect the cardiovascular system (Moolman, 2006). After menopause, when estrogen production by the ovaries wanes, rates of increased risk for breast and other reproductive cancers for women drop overall, while the risk of death from heart attack and stroke continue to rise. Figures 4.4 and 4.5 show the differences between women and men in rates of aging-related diseases including the top killer, CVD. Men on average develop CVD about 10 years earlier, at around age 45, and are more likely to die of

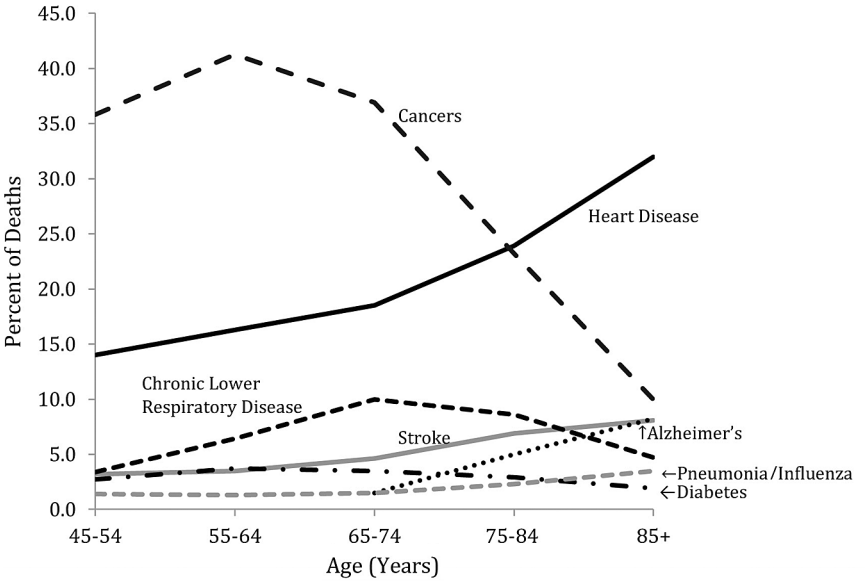


Figure 4.4 Percentage of deaths (prevalence) in women of seven leading causes of death in the United States (all races combined) in 2008. (Note increasing rates of CVD [heart disease and stroke] at older ages. Heron, M. [2012]. Deaths: Leading causes for 2008. *National Vital Statistics Reports, 60*(6): 1–94.)

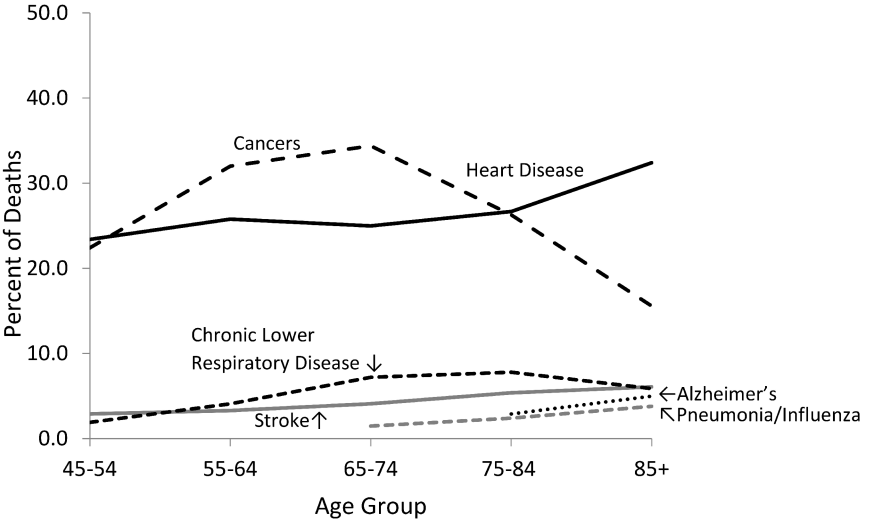


Figure 4.5 Percentage of deaths (prevalence) in men of seven leading causes of death in the United States (all races combined) in 2008. (Note increasing rates of CVD [heart disease and stroke] at older ages. Heron, M. [2012]. Deaths: Leading causes for 2008. *National Vital Statistics Reports, 60*(6): 1–94.)

a heart attack or stroke at all ages combined (Goldman & Hatch, 1999a; Heron, 2012). After menopause, however, women have a greater likelihood of dying from a heart attack, even after receiving similar medical treatment. Additional support for the cardioprotective effects of estrogen comes from the well-documented increased risk of death from CVD in women who undergo an early menopause following either surgical removal of the ovaries or spontaneous early menopause (Mendelsohn & Karas, 2005; Rocca et al., 2006; Stuenkel, 2012; Wellons et al., 2012). Conversely, the higher rates of CVD for adult men of all ages may be attributable, at least in part, to the lack of cardioprotection afforded by estrogen (but see Meilahn, 2000).

There is a large body of evidence suggesting that estrogen and progesterone can be neuroprotective, as well as cardioprotective (Brinton & Nilsen, 2003; Chen et al., 2006; L'Hermite et al., 2008). Estrogen and some progestins have been shown to protect against stroke and damage following traumatic brain injury. Lower levels of endogenous estrogen after menopause have been implicated in some studies in changes in memory and mood, as well as the risk of dementia (Mayeux & Gandy, 1999; Brinton & Nilsen, 2003; Maki & Henderson, 2012). Estrogens can modulate inflammation arising from the tissue damage associated with CVD or dementia, including the formation of atherosclerotic plaque and the brain proteins amyloid

and tau that are associated with Alzheimer's disease and other dementias (Mikkola & Clarkson, 2002; Moolman, 2006; Nilsen et al., 2007).

Chromosomes and Sex Differences in Lifespan

An additional explanation suggested to be responsible for the higher vulnerability to mortality in human males is based on the human chromosomal system of sex determination and sex chromosome structure (Trivers, 1985; Bonduriansky et al., 2008). Humans have XY chromosomal sex determination, such that individuals with X and Y sex chromosomes become biological males. In humans, moreover, the X chromosome is much larger than the Y, and carries many more genes. From conception onward, human females (the XX sex) have an advantage over males, since any harmful gene variants on one X chromosome can be compensated for by a normal allele on the second X. Males, in contrast, have no such protection against deleterious gene alleles (Bull, 1983; Marshall Graves, 2008). This system has been invoked to explain, at least in part, males' greater vulnerability to death at all stages of the life cycle, as well as some sex-linked diseases. From a comparative standpoint, however, the relationships between sex determination mechanisms and sex differences in animal lifespans generally are not thoroughly understood, nor do they provide a complete explanation for sex differences in aging, LE, or health in humans.

While the exact biological and social reasons for the longevity advantage in women remain an open question, biologists continue to explore genetic, evolutionary, and physiological factors to explain sex differences in lifespan (reviewed in Austad, 2006, 2011; Holmes & Cohen, 2014). Public health scientists and some sociologists have focused on identifying environmental and cultural factors—including lifestyle and culturally imposed gender roles—that could be contributing to sex differences in health and longevity. No single approach — biological, behavioral, or social — has yet proven satisfactory for explaining these differences. A nuanced combination of some of these, as well as other standpoints, is used by public health scientists and epidemiologists to estimate sex- and gender-related risk factors for specific diseases.

Sex-Based Differences in Disease and Disability Rates

Older people in general show an increased prevalence of aging-related diseases, including CVD, the number one cause of death overall, as well as respiratory disease, cancers, diabetes, dementias, osteoarthritis and sensory deficits, including loss of vision and hearing. Human aging is also

associated with loss of reproductive capacity, albeit more gradual in men than in women. The sexes diverge in interesting ways, however, in terms of the age-specific prevalence of, and mortality from, these conditions, as depicted in Figures 4.6 and 4.7 (Kochanek et al., 2011). Since women tend to live longer than and outnumber men in the aging population, the sheer number of older women with aging-related medical conditions is in and of itself an important public health issue (Yang & Leveille, 2013).

Although women tend to live longer and survive at higher rates at all ages than men, they also show higher rates of disabling conditions, including CVD, COPD, osteoarthritis and osteoporosis, blindness and hearing loss; see Figure 4.8: Results of the Cardiovascular Health Study in the United States (in which the effects of age, race, education, and marital status were controlled), which shows that women have higher rates of obesity, arthritis, and CVD, including coronary artery disease, congestive heart failure and stroke, as well as hearing problems, when compared with

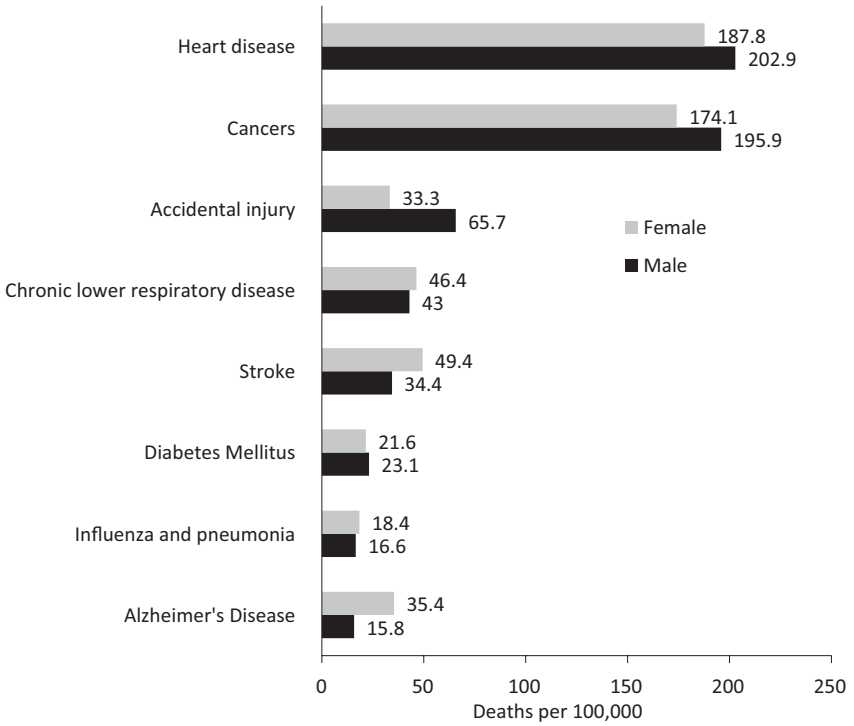


Figure 4.6 Death rates for men and women of different ages from eight of the most deadly diseases of aging in the United States in 2009. (Data are for all races combined, expressed as deaths/100,000 population. Kochanek et al. [2011]. Deaths: Final data for 2009. *National Vital Statistics Reports, 60*(3).)

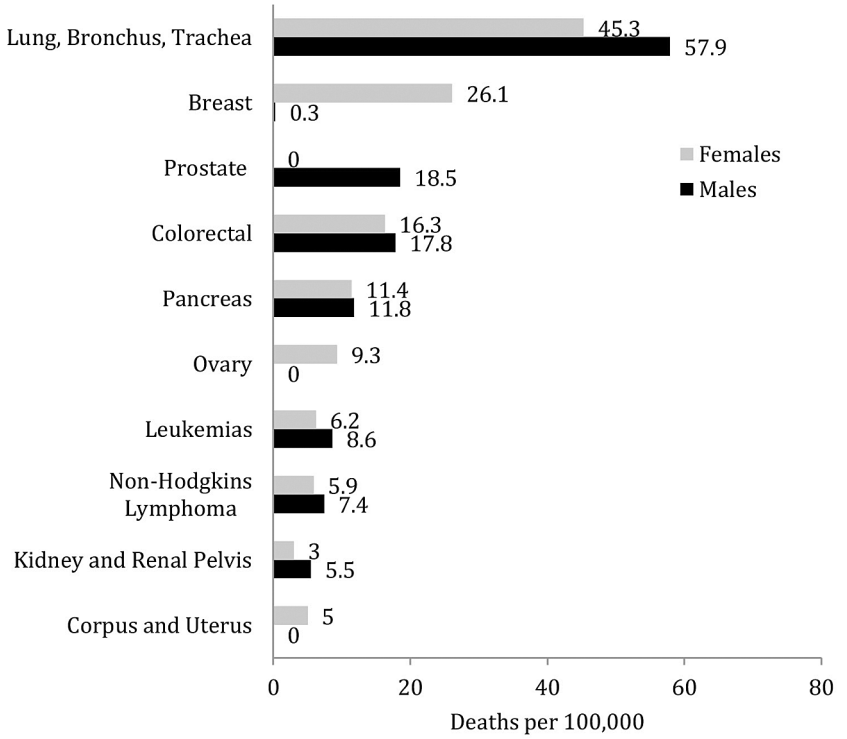


Figure 4.7 Death rates for men and women of different ages from 10 of the most deadly cancers in the United States in 2009. (Data are for all races combined, expressed as deaths/100,000 population. Kochanek et al. [2011]. Deaths: Final data for 2009. *National Vital Statistics Reports, 60*(3).)

men of the same age (Pan et al., 2009; Whitson et al., 2010). Women are also at higher risk of dementia. The drop in estrogen after menopause in midlife provides a plausible biological explanation for sex differences in prevalence of disabling osteoarthritis and osteoporosis. Where the other conditions are concerned, however, the explanation for the sex difference is less clear.

Other reasons for these sex differences in aging-related functional disabilities may include differences in physical training and strength, as well as women's self-perceived functional performance. Men and women have different psychological and social risk factors, as well as differences in their subjective experience of pain, dependency or stress, and these affect their risks of illness and disability. There are also gendered differences in styles of coping with medical issues and in attitudes toward and relationships with the medical system. All of these have the potential to affect sex

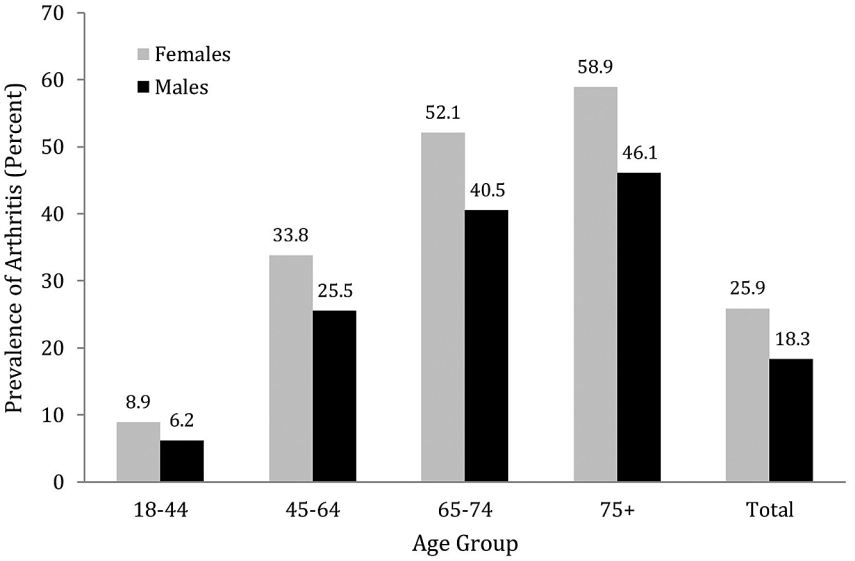


Figure 4.8 Prevalence of osteoarthritis in adult females and males of different age groups in the United States, 2007–2009. Note the higher prevalence of arthritis in older women. Prevalence is calculated as a percentage of each sex who reported they had received a diagnosis of arthritis from a medical provider. (Department of Health and Human Services, Women's Health U.S.A. 2011.)

differences in health, aging, and longevity in complex ways that are still poorly understood.

Obesity has been on the rise since the 1960s in the United States and other industrialized countries. Being significantly overweight is clearly a risk factor for aging-related diseases, including diabetes, CVD, dementias, and cancers. Women are far more likely to be overweight than men, with Hispanic and African American women at even greater risk. Dietary customs and cultural norms for body weight and appearance, as well as education and ideology about health and weight, also contribute significantly to the risk of obesity and associated conditions as women age.

Culture, Health, and Life Expectancy

Culturally influenced norms and behaviors undoubtedly contribute to sex differences in health, aging, and LE. These influences are difficult to separate from biological causes, particularly since they encompass an array of potential influences that includes economic status, education, access to medical support, lifestyle choices, and gender inequities. The causative influences on health of culturally influenced gender differences and roles

are extremely complex: they are likely to include influences that are perceived or enacted by individuals, socially enforced, or all three.

Cultural innovations, including medical advances, have had a dramatic influence on human LE in sex- and gender-specific ways. Over the past two centuries, both sexes have exhibited dramatic declines in mortality in infancy (from birth to one year of age), and childhood diseases, as well as increases in LEs after age 50. Until very recent times, mortality from infections or other perinatal complications were major causes of mortality for women (Goldman & Hatch, 1999). Improvements in maternal health, prenatal and antenatal care account for much of the decrease in maternal and infant mortality rates since the mid-1800s. Since the mid-1900s in industrialized cultures, reliable contraceptives have also become widely available. Childbearing is generally delayed, and fertility overall has declined. In contrast, women living in traditional cultures with natural fertility cycles are either pregnant or lactating for most of the reproductive lifespan (Hrdy, 1999; Ellison, 2003). Women in traditional cultures with high rates of parity often have significantly shorter lives, as well (Jasienska, 2013), living beyond menopause only rarely. Since lifespans in industrialized countries now often extend to 80 years and beyond, modern women commonly spend up to a third of their lives in a postreproductive state. The full scope of this culturally produced reproductive shift on women's health is still being weighed, but it is clear that older women with aging-related medical issues comprise a growing segment of the population in industrialized countries. Strategies for sustaining women's health over a longer lifespan should be a major global priority (Goldman & Hatch, 1999a; Goldman, Troisi, & Rexrode, 2013b).

The Women's Health Movement

The women's movement in the United States and Europe brought to light long-standing effects of gender inequality on women's health (Goldman & Hatch, 1999b; Seaman & Wood, 1999; Goldman, Rexrode, & Troisi, 2013a) and stimulated a historical shift toward better access for women and their families to medical care and education, plus respect for our reproductive autonomy and rights to information about health and reproduction. The women's movement has also played a pivotal role in reducing rates of violence against women. Access to reproductive and health education, contraception, and legal abortions have all contributed to reductions in mortality rates of women of reproductive age, as well as infant deaths. Fertility rates have dropped to unprecedented low levels in industrialized countries over the past 50 years, as more women are delaying childbearing. All of these changes, along with longer LEs for women,

have shifted dramatically the trajectory of the "normal" female life course, with most women expecting to live well beyond the age of menopause in their early 50s.

Since the 1980s, in the interest of correcting for historical gender bias in medical research and a lack of information on the health of older women, the U.S. National Institutes of Health has undertaken a series of very large, longitudinal studies focused on various aspects of the health of older women. These include the Heart and Estrogen/Progestin Replacement Study, referred to by the acronym HERS, which was designed to examine the effects of hormone replacement therapy on women's cardiovascular health, and the Women's Health Initiative, WHI, a 15-year trial exploring causes of death, disease, and disability in women after menopause. While some of the results of these large clinical studies have been controversial, their size and scope have made them invaluable for understanding health risks in older women.

Men and Mortality

Men are affected by their own sex-specific biological risk factors at older ages. All over the world, men engage in more risky behaviors, and are injured or die violent deaths at higher rates, as shown in Figure 4.9. Men on average are more likely to abuse substances, including tobacco, alcohol

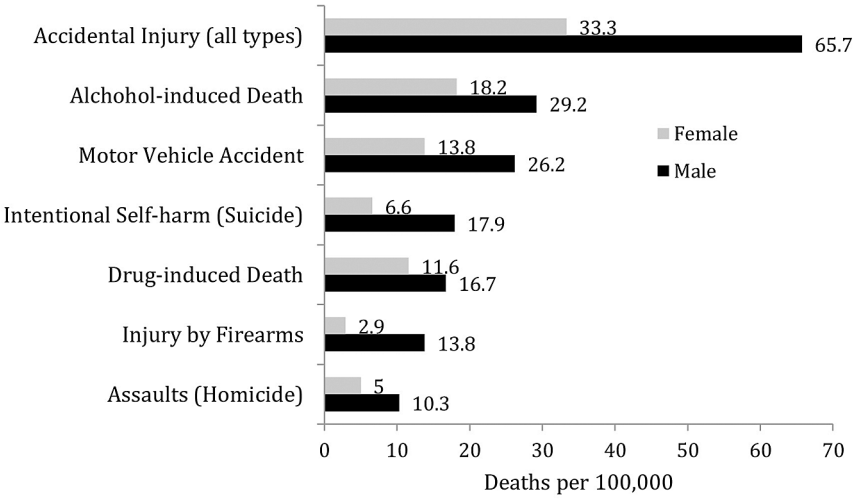


Figure 4.9 Rates of death by accident, substance abuse, or violence in women vs. men in the United States in 2009 (all races combined). (Note the higher rates of death in men by accidents of all types. Kochanek et al. [2011]. Deaths: Final data for 2009. *National Vital Statistics Reports, 60*(3).)

and other drugs, and they die more often from lung cancer, tuberculosis, and liver cirrhosis. Despite a historically male-centered medical paradigm, older men die at higher rates of CVD, including fatal heart attacks. This is, in part, likely to be due to the fact that men are less likely to seek regular medical support. Somewhat surprisingly, while women's rates of depression are higher than men's overall, men commit more suicides. Suicide is a significant risk to younger people, and young men between the ages of 15 and 24 are four to five times more likely to die than women of the same age (Kruger & Nesse, 2006; Austad, 2011).

Married men in the United States live longer, on average, than either single men or married women. Gender roles and other gender-specific social factors continue to change rapidly. More research into the complex interactions among cultural expectations, sex, gender, health, and longevity in both men and women should help to distinguish better among biological and cultural and lifestyle influences.

Gender Roles, Health, and Aging

Social factors with the potential to impact health and longevity include cultural norms and beliefs regarding gender differences and social roles (Goldman & Hatch, 1999b; Rowland Hogue, 2000; Denton et al., 2004; Goldman, Rexrode, & Troisi, 2013a). For example, social and psychosocial determinants of health, like life stressors, social and emotional resources, may play a greater role in women's health, while behavior and lifestyle factors like exercise and smoking, in contrast, seem to be more important for men (see, e.g., Denton & Walters, 1999; Denton et al., 2004). Culturally imposed gender roles can also negatively impact men's health (Verbrugge, 1986; Gryzwacz et al., 2012). The traditional masculine breadwinner role, along with cultural norms for masculinity, likely contributes to the higher risks of accidents, physical injury, participation in violent crime, substance abuse, and suicide affecting men worldwide. Gendered social norms could also help account for the fact that men less often seek medical or social support for health issues (National Center for Vital and Health Statistics, 2001). Men all over the world also smoke more than women and are at greater risk of mortality from lung cancer; note, however, that smoking rates for women are on the rise in many countries.

Discussion and Conclusions

The biology of aging is an integrative, interdisciplinary field unified by common objectives: to understand the basic mechanisms underlying aging and aging-related disease—and, ultimately, to intervene in the aging

process to increase healthy human lifespan. While aging and the incidence and age-adjusted prevalences of associated diseases and disabilities clearly vary between men and women, and socially enforced gender roles are likely to underlie some portion of this variation, the actual nature of the interactions between the social and biological factors responsible are still rather poorly understood.

An evolutionary perspective on the biology of aging can be useful for understanding some sex differences in disease risk. Some physiological liabilities, such as the increased risk of cancer associated with reproductive hormones, are likely a result of sex-specific evolutionary trade-offs to maximize successful reproduction. The epidemiological sex steroid hormones are clearly responsible in part for sex differences in some diseases of aging, like reproductive cancers, and osteoporosis; less clear, however, is the part these hormones play in the risk of CVD.

Evolutionary analysis can also help to explain why aging occurs in humans in the first place, as well as why the risks of disease and death increase rapidly after the peak reproductive years have passed. Since the human lifespan in the United States has now increased well past that of our ancestors before the industrial revolution, aging-related health conditions are more likely to be the ultimate cause of death than ever before; the epidemiological shift in the common diseases of aging represents a major social and economic challenge for the new millennium all over the world. Paradoxically, while both LE and healthy lifespan have increased by several decades since 1900, a millennial epidemic of obesity, sedentary lifestyles, and diabetes now poses a new public health challenge. It is becoming increasingly clear that overnutrition and obesity can set the stage very early in life for "diseases of aging" associated with metabolic syndromes, like diabetes and CVD (Finch, 2007; Gluckman et al., 2009). In this sense, some aspects of aging may actually be triggered during prenatal development if the adaptive limits of healthy fetal developmental plasticity are exceeded. It remains to be seen if LEs continue to rise, if these diseases of modern abundance curtail this longevity increase, or if ultimately some intrinsic biological limit to human lifespan is reached.

References

Allard, M., Lebre, V., Robine, J., & Calment, J. (1998). *Jeanne Calment: From Van Gogh's time to ours: 122 extraordinary years*. New York: W.H. Freeman.

Allsopp, R.C., Chang, E., Kashefi-Aazam, M., Rogaev, E.I., Piatyszek, M.A., Shay, J.W., & Harley, C.B. (1995). Telomere shortening is associated with cell division in vitro and in vivo. *Experimental Cell Research, 220*(1), 194–200.

Anderson, R. M., & Weindruch, R. (2012). The caloric restriction paradigm: Implications for healthy human aging. *American Journal of Human Biology, 24*(2), 101–106. doi: 10.1002/ajhb.22243

Atzmon, G., Rincon, M., Schechter, C. B., Shuldiner, A. R., Lipton, R. B., Bergman, A., & Barzilai, N. (2006). Lipoprotein genotype and conserved pathway for exceptional longevity in humans. *PLoS Biology, 4*(4), e113. doi: 10.1371/journal.pbio.0040113

Austad, S. N. (2006). Why women live longer than men: Sex differences in longevity. *Gender Medicine, 3*(2), 79–92.

Austad, S. N. (2011). Sex differences in longevity and aging. In E. J. Masoro & S. N. Austad (Eds.), *Handbook of the biology of aging* (7th ed., pp. 479–495). New York: Academic Press.

Austad, S. N., & Masoro, E. J. (Eds.). (2006). *Handbook of the biology of aging* (6th ed.). New York: Academic Press.

Avery, P., Barzilai, N., Benetos, A., Bilianou, H., Capri, M., Caruso, C., . . . Kolovou, G. (2014). Ageing, longevity, exceptional longevity and related genetic and non-genetic markers: Panel statement. *Current Vascular Pharmacology, 12*(5), 659–661.

Bohr, V., Wilson, D., III, de Souza-Pinto, N., van der Pluijm, I., & Hoeijmakers, J. (2008). DNA repair and aging. In L. P. Guarente, L. Partridge, & D. Wallace (Eds.), *Molecular biology of aging* (pp. 309–346). New York: Academic Press.

Bonduriansky, R., Maklakov, A., Zajitschek, F., & Brooks, R. (2008). Sexual selection, sexual conflict and the evolution of ageing and life span. *Functional Ecology, 22*, 443–453.

Brinton, R. D., & Nilsen, J. (2003). Effects of estrogen plus progestin on risk of dementia. *JAMA-Journal of the American Medical Association, 290*(13), 1706.

Brown-Borg, H. M. (2011). Role of the somatotropic axis in mammalian aging. In E. J. Masoro & S. N. Austad (Eds.), *Handbook of the biology of aging* (7th ed., pp. 25–46). New York: Academic Press.

Brown-Borg, H. M. (2014). Endocrinology of aging and longevity. Reference modules in biomedical sciences. Retrieved from http://dx.doi.org/10.1016/B978-0-12-801238-3.00151-3

Buffenstein, R., Edrey, Y. H., Yang, T., & Mele, J. (2008). The oxidative stress theory of aging: Embattled or invincible? Insights from non-traditional model organisms. *Age (Dordrecht, Netherlands), 30*(2–3), 99–109. doi: 10.1007/s11357-008-9058-z

Bull, J. J. (1983). *Evolution of sex determining mechanisms*. Menlo Park, CA: Benjamin/Cummings.

Butler, R. N., Warner, H. R., Williams, T. F., Austad, S. N., Brody, J. A., Campisi, J., . . . Wright, W. E. (2004). The aging factor in health and disease: The promise of basic research on aging. *Aging Clinical and Experimental Research, 16*(2), 104–111.

Carey, J. R. (1999). Population study of mortality and longevity with Gompertzian analysis. In B. P. Yu (Ed.), *Methods in aging research* (pp. 3–24). New York: CRC.

Chen, S.H., Nilsen, J., & Brinton, R.D. (2006). Dose and temporal pattern of estrogen exposure determines neuroprotective outcome in hippocampal neurons: Therapeutic implications. *Endocrinology, 147*(11), 5303–5313.

Chung, H.Y., Cesari, M., Anton, S., Marzetti, E., Giovannini, S., Seo, A.Y., . . . Leeuwenburgh, C. (2009). Molecular inflammation: Underpinnings of aging and age-related diseases. *Ageing Research Reviews, 8*(1), 18–30. doi: 10.1016/j.arr.2008.07.002

Clutton-Brock, T.H., & Isvaran, K. (2007). Sex differences in ageing in natural populations of vertebrates. *Proceedings of the Royal Society B: Biological Sciences, 274*(1629), 3097–3104.

Cohen, A.A., & Holmes, D.J. (2014). Aging: Evolution. *Elsevier Reference Modules in Biomedical Sciences*. doi: 10.1016/B978-0-12-801238-3.00032-5

Cohen, A.A., Milot, E., Yong, J., Seplaki, C.L., Fülöp, T., Bandeen-Roche, K., & Fried, L.P. (2013). A novel statistical approach shows evidence for multi-system physiological dysregulation during aging. *Mechanisms of Ageing and Development, 134*, 110–117.

Conn, P.M. (Ed.). (2006). *Handbook of models for human aging*. New York: Academic Press.

Crews, D.C. (2003). *Human senescence: Evolutionary and biocultural perspectives*. Cambridge: Cambridge University Press.

de Magalhaes, J.P., & Church, G.M. (2005). Genomes optimize reproduction: Aging as a consequence of the developmental program. *Physiology (Bethesda), 20*, 252–259. doi: 20/4/252 [pii] 10.1152/physiol.00010.2005

Denton, M., Prus, S., & Walters, V. (2004). Gender differences in health: A Canadian study of the psychosocial, structural and behavioural determinants of health. *Social Science and Medicine, 58*, 2585–2600.

Denton, M., & Walters, V. (1999). Gender differences in structural and behavioral determinants of health: An analysis of the social production of health. *Social Science and Medicine, 48*, 1221–1235.

Ellison, P.T. (2003). *On fertile ground: A natural history of human reproduction*. Cambridge, MA: Harvard University Press.

Ellison, P.T. (2005). Evolutionary perspectives on the fetal origins hypothesis. *American Journal Human of Biology, 17*(1), 113–118. doi: 10.1002/ajhb.20097

Effros, R.B. (2003). Genetic alterations in the ageing immune system: Impact on infection and cancer. *Mechanisms of Ageing and Development, 124*, 71–77.

Finch, C.E. (1990). *Longevity, senescence, and the genome*. Chicago, IL: University of Chicago Press.

Finch, C.E. (2007). *The biology of human longevity: Inflammation, nutrition, and aging in the evolution of lifespans*. Amsterdam: Academic (Elsevier).

Gilbert, S., & Epel, D. (2008). *Ecological developmental biology*. Sunderland, MA: Sinauer Associates.

Goldman, M.B., & Hatch, M.C. (1999a). Chapter 1. Overview of women and health. In M.B. Goldman & M.C. Hatch (Eds.), *Women and health.* New York: Academic Press.

Goldman, M.B., & Hatch, M.C. (1999b). *Women and health*. New York: Academic Press.

Goldman, M. B., Troisi, R., & Rexrode, K. (2013a). *Women and health* (2nd ed.). New York: Academic Press.

Goldman, M. B., Troisi, R., & Rexrode, K. (2013b). Women's health in the 21st century. In M. B. Goldman, R. Troisi, & K. Rexrode (Eds.), *Women and health* (2nd ed., pp. 5–19). New York: Academic Press.

Gluckman, P. D., Hanson, M. A., Bateson, P., Beedle, A. S., Law, C. M., Bhutta, Z. A., . . . West-Eberhard, M. J. (2009). Towards a new developmental synthesis: Adaptive developmental plasticity and human disease. *The Lancet, 373*(9675), 1654–1657. doi: S0140-6736(09)60234-8 [pii] 333

Gryzwacz, J. G., Stoller, E. P., Brewer-Lowry, A. N., Bell, R. A., Quandt, S. A., & Arcury, T. A. (2012). Gender and health lifestyle: An in-depth exploration of self-care activities in later life. *Health Education and Behavior, 39*, 332–340.

Guarente, L., Partridge, L., & Wallace, D. C., (Eds.). (2008). *Molecular biology of aging*. New York: Cold Spring Harbor Laboratory Press.

Haigis, M. C., & Sinclair, D. A. (2011). Sirtuins in aging and age-related diseases. In E. J. Masoro & S. N. Austad (Eds.), *Handbook of the biology of aging* (7th ed., pp. 243–274). New York: Academic Press.

Hales, C., & Barker, D. (1992). Type 2 (non-insulin-dependent) diabetes mellitus: The thrifty phenotype hypothesis. *Diabetologia, 35*, 595–601.

Ham, R., Sloane, P., Warshaw, G., Potter, J., & Flaherty, E. (2014). *Ham's primary care geriatrics: A case-based approach* (6th ed.). New York: Elsevier Health Sciences.

Harman, D. (1956). Aging: A theory based on free radical and radiation chemistry. *Journal of Gerontology, 11*(3), 298–300.

Herbig, U., Jobling, W. A., Chen, B. P., Chen, D. J., & Sedivy, J. M. (2004). Telomere shortening triggers senescence of human cells through a pathway involving ATM, p53, and p21(CIP1), but not p16(INK4a). *Molecular Cell, 14*(4), 501–513. doi: S1097276504002564 [pii]

Heron, M. (2012). Deaths: Leading causes for 2008. *National Vital Statistics Reports, 60*(6): 1–94. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/22827019

Holmes, D. (2014). Sex and gender differences in life span, aging, and health. *Elsevier Reference Modules in Biomedical Sciences*. October 15, 2014. doi: 10.1016/B978-0-12-801238-3.00161-6

Holmes D. J., & Cohen A. A. (2014). Overview: Aging and gerontology. Reference Module in *Biomedical Sciences*. Elsevier. October 15, 2014. doi: 10.1016/B978-0-12-801238-3.00149-5

Hoyert, D. L. (2012). *75 years of mortality in the United States, 1935–2010*. (No. 88). Hyattsville, MD: National Center for Health Statistics.

Hrdy, S. B. (1999). *Mother nature: A history of mothers, infants, and natural selection*. New York: Pantheon.

Huan, J., Chang, M. D., Burke, A. E., & Glass, R. M. (2009). Preventive health care for older adults. *Journal of the American Medical Association, 302*(24), 2722. doi: doi:10.1001/jama.302.24.2722

Ingram, D. K., Nakamura, E., Smucny, D., Roth, G. S., & Lane, M. A. (2001). Strategy for identifying biomarkers of aging in long-lived species. *Experimental Gerontology, 36*(7), 1025–1034.

Jasienska, G. (2013). *The fragile wisdom: An evolutionary view on women's biology and health*. Cambridge, MA: Harvard University Press.

Kanfi, Y., Naiman, S., Amir, G., Peshti, V., Zinman, G., Nahum, L., . . . Cohen, H.Y. (2012). The sirtuin SIRT6 regulates lifespan in male mice. *Nature, 483*(7388), 218–221. doi: 10.1038/nature10815

Kapahi, P., & Kockel, L. (2011). TOR: A conserved nutrient-sensing pathway that determines life-span across species. In E.J. Masoro & S.N. Austad (Eds.), *Handbook of the biology of aging* (7th ed., pp. 203–214). New York: Academic Press.

Kennedy, B.K., Berger, S.L., Brunet, A., Campisi, J., Cuervo, A.M., Epel, E.S., . . . Sierra, F. (2014). Geroscience: Linking aging to chronic disease. *Cell, 159*(4), 709–713. doi: 10.1016/j.cell.2014.10.039

Kirkwood, T.B., & Austad, S.N. (2000). Why do we age? *Nature, 408*(6809), 233–238. doi: 10.1038/35041682

Kochanek, A.R., Xu, J., Murphy, S.L., Minino, A.M., & Kung, H. (2011). Deaths: Final data for 2009. *National Vital Statistics Reports, 60*(3).

Kopchick, J., Bartke, A., & Berryman, D. (2008). Extended life span in mice with reduction in the GH/IGF-1 axis. In L. Guarente, L. Partridge, & D. Wallace (Eds.), *Molecular biology of aging* (pp. 347–370). New York: Academic Press.

Kruger, D.J., & Nesse, R.M. (2006). An evolutionary life-history framework for understanding sex differences in human mortality rates. *Human Nature, 17*, 74–97.

Kujoth, G.C., Hiona, A., Pugh, T.D., Someya, S., Panzer, K., Wohlgemuth, S.E., . . . Prolla, T.A. (2005). Mitochondrial DNA mutations, oxidative stress, and apoptosis in mammalian aging. *Science, 309*(5733), 481–484.

L'Hermite, M., Simoncini, T., Fuller, S., & Genazzani, A.R. (2008). Could transdermal estradiol plus progesterone be a safer postmenopausal HRT? A review. *Maturitas, 60*(3–4), 185–201.

Lithgow, G.J. (2013). Origins of geroscience. *Public Policy & Aging Report, 23*(4), 10–11.

Mayeux, R., & Gandy, S. (1999). Alzheimer's disease. In M.B. Goldman & M.C. Hatch (Eds.), *Women and health* (pp. 1228–1238). New York: Academic Press.

Maki, P.M., & Henderson, V.W. (2012). Hormone therapy, dementia, and cognition: The Women's Health Initiative 10 years on. *Climacteric, 15*(3), 256–262.

Marshall Graves, J.A. (2008). Weird animal genomes and the evolution of vertebrate sex and sex chromosomes. *Annual Review of Genetics, 42*, 565–586.

Masoro, E.J., & Austad, S.N., Eds. (2005). *Handbook of the biology of aging* (6th ed.). New York: Academic Press.

McDonald, R.B. (2014). *Biology of aging*. New York: Garland Science, Taylor and Francis Group.

McEwen, B.S. (2002). Sex, stress and the hippocampus: Allostasis, allostatic load and the aging process. *Neurobiology of Aging, 23*(5), 921–939.

Meilahn, E. (2000). Hormonal milieu and heart disease. In M.B. Goldman & M.C. Hatch (Eds.), *Women and Health* (pp. 782–788). New York: Academic Press.

Mendelsohn, M.E., & Karas, R.H. (2005). Molecular and cellular basis of cardiovascular gender differences. *Science, 308*, 1583–1587.

Mikkola, T. S., & Clarkson, T. B. (2002). Estrogen replacement therapy, atherosclerosis and vascular function. *Cardiovascular Research, 53*(605–619).

Miller, R. A. (2001). Biomarkers of aging: Prediction of longevity by using age-sensitive T-cell subset determinations in a middle-aged, genetically heterogeneous mouse population. *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences, 56*(4), B180–186.

Miller, R., Harrison, D., Astle, C., Baur, J., Boyd, A., de Cabo, R., . . . Strong, R. (2011). Rapamycin, but not resveratrol or simvastatin, extends life span of genetically heterogeneous mice. *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences, 66A*(2), 191–201.

Moolman, J. (2006). Unravelling the cardioprotective mechanism of action of estrogens. *Cardiovascular Research, 69*(2006), 777–780.

Muller, F. L., Lustgarten, M. S., Jang, Y., Richardson, A., & Van Remmen, H. (2007). Trends in oxidative aging theories. *Free Radical Biology and Medicine, 43*(4), 477–503.

National Center for Vital and Health Statistics. (2001). Utilization of ambulatory care by women: United States, 1997–1998. *National Center for Vital and Health Statistics, Series 13*, 149.

Nilsen, J., Irwin, R. W., Gallaher, T. K., & Brinton, R. D. (2007). Estradiol in vivo regulation of brain mitochondrial proteome. *Journal of Neuroscience, 27*(51), 14069–14077.

Olshansky, S. J. (2005). Projecting the future of U.S. health and longevity. *Health Affairs (Millwood), 24*(Suppl. 2), W5R86–W5R89. doi: 10.1377/hlthaff.w5.r86

Olshansky, S. J., & Ault, A. B. (1986). The fourth stage of the epidemiologic transition: The age of delayed degenerative diseases. *Milbank Quarterly, 64*(3), 355–391.

Olshansky, S. J., Carnes, B., Rogers, R. G., & Smith, L. (1997). Infectious diseases—New and ancient threats to world health. *Population Bulletin, 52*(2), 1–52.

Pan, L., Galuska, D. A., Sherry, B., Hunter, A. S., Rutledge, G. E., Dietz, W. H., & Balluz, L. S. (2009). Differences in prevalence of obesity among black, white, and Hispanic Adults—United States, 2006–2008. *Morbidity and Mortality Weekly Report, 58*, 740–744.

Partridge, L., Gems, D., & Withers, D. J. (2005). Sex and death: What is the connection? *Cell, 120*(4), 461–472. doi: S0092-8674(05)00100-5 [pii] 10.1016/j.cell.2005.01.026

Pearson, K., Baur, J., Lewis, K., Peshkin, L., Price, N., Navas, P., . . . de Cabo, R. (2008). Resveratrol delays age-related deterioration and mimics aspects of dietary restriction in mice on a standard diet. *Cell Metabolism, 8*(2), 157–168.

Perls, T. T., & Sebastiani, P. (2008). Genetics of exceptional longevity. In L. Guarente, L. Partridge, & D. Wallace (Eds.). *Molecular biology of aging* (pp. 517–544). New York: Academic Press.

Preston, S. H., Heuvelein, P., & Guillot, M. (2001). *Demography: Measuring and modeling population processes*. Oxford: Wiley-Blackwell.

Promislow, D. E. L. (2003). Mate choice, sexual conflict, and evolution of senescence. *Behavior Genetics, 33*, 191–201.

Promislow, D. E. L., Montgomerie, R. D., & Martin, E. (1992). Mortality costs of sexual dimorphism in birds. *Proceedings of the Royal Society of London Series B. Biological Sciences, 250*, 143–150.

Tatar, M., Bartke, A., & Antebi, A. (2003). The endocrine regulation of aging by insulin-like signals. *Science, 299*, 1346–1351.

Riley, K.P., Snowdon, D.A., Saunders, A.M., Roses, A.D., Mortimer, J.A., & Nanayakkara, N. (2000). Cognitive function and apolipoprotein E in very old adults: Findings from the Nun Study. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 55*(2), S69–S75.

Rocca, W.A., Grossardt, B.R., de Andrade, M., Malkasian, G.D., & Melton, J. (2006). Survival patterns after oophorectomy in premenopausal women: A population-based cohort study. *The Lancet, 7*, 821–828.

Rose, M.R. (1991). *Evolutionary biology of aging*. New York: Oxford University Press.

Rowland Hogue, C.J. (2000). Gender, race, and class: From epidemiological association to etiologic hypotheses. In M.B. Goldman & M.C. Hatch (Eds.), *Women and health* (pp. 15–23). New York: Academic Press.

Seaman, B., & Wood, S.F. (1999). Role of advocacy groups in research on women's health. In M.B. Goldman & M.C. Hatch (Eds.), *Women and health* (pp. 27–35). New York: Academic Press.

Snowdon, D. A. (1990). Early natural menopause and the duration of postmenopausal life. Findings from a mathematical model of life expectancy. *Journal of the American Geriatrics Society, 38*(4), 402–408. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/2329249

Sonntag, W.E., Csiszar, A., deCabo, R., Ferrucci, L., & Ungvari, Z. (2012). Diverse roles of growth hormone and insulin-like growth factor-1 in mammalian aging: Progress and controversies. *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences, 67*(6), 587–598. doi: 10.1093/gerona/gls115

Stearns, S. C., & Koella, J. C. (Eds.). (2008). *Evolution in health and disease* (2nd ed.). New York: Oxford University Press.

Stuenkel, C. (2012). Cardiovascular risk and menopause: Cause or consequence? *Menopause, 19*, 1067–1069.

Suh, Y., Atzmon, G., Cho, M.O., Hwang, D., Liu, B., Leahy, D.J., . . . Cohen, P. (2008). Functionally significant insulin-like growth factor I receptor mutations in centenarians. *Proceedings of the National Academy of Sciences of the United States of America, 105*(9), 3438–3442. doi: 0705467105 [pii] 10.1073/pnas.0705467105

Trivers, R.L. (1985). *Social evolution*. Menlo Park, CA: Benjamin/Cummings.

United Nations. (2011). *2009–2010 United Nations demographic yearbook*. New York: United Nations.

Van Remmen, H., Qi, W., Sabia, M., Freeman, G., Estlack, L., Yang, H., . . . Richardson, A. (2004). Multiple deficiencies in antioxidant enzymes in mice result in a compound increase in sensitivity to oxidative stress. *Free Radical Biology and Medicine, 36*(12), 1625–1634.

Van Remmen, H., & Richardson, A. (2001). Oxidative damage to mitochondria and aging. *Experimental Gerontology, 36*(7), 957–968.

Vaupel, J.W. (2010). Biodemography of human ageing. *Nature, 464*(7288), 536–542. doi: 10.1038/nature08984

Verbrugge, L. M. (1986). Role burdens and physical health of women and men. *Women and Health, 11*, 47–77.

Von Zglinicki, T., Saretsky, G., & Passos, J. (2014). Aging and telomeres. Reference Module in Biomedical Sciences. Retrieved from http://www.sciencedirect.com/science?_ob=ArticleListURL&_method=list&_ArticleListID=-816858873&_sort=r&_st=13&view=c&md5=153b6e46123ed908b38b5fbe397244d0&searchtype=a

Wallace, D. (2008). The human mitochondrion and pathophysiology of aging and aging-related diseases. In L. Guarente, L. Partridge, & D. Wallace (Eds.), *Molecular biology of aging* (pp. 1–38). Cold Spring Harbor, NY: Cold Spring Harbor Press.

Weindruch, R., & Walford, R.L. (1988). *The retardation of aging and disease by dietary restriction*. Springfield, IL: Charles C. Thomas.

Wellons, M., Ouyang, P., Schreiner, P., Herrington, D., & Vaidya, D. (2012). Early menopause predicts future coronary heart disease and stroke: The Multi-ethnic Study of Atherosclerosis. *Menopause, 19*(10), 1081–1087.

Whitson, H.E., Landerman, L.R., Newman, A.B., Fried, L.P., Pieper, C.F., & Cohen, H.J. (2010). Chronic medical conditions and the sex-based disparity in disability: The Cardiovascular Health Study. *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences, 65*(12), 1325–1331. doi: 10.1093/gerona/glq139

U.S. Department of Health and Human Services, Health Resources and Services Administration. (2011). *Women's health U.S.A., 2011*. U.S. Department of Health and Human Services.

World Health Organization. (2011). *World health statistics 2011*. Geneva: World Health Organization.

Yang, F.M., & Leveille, S.G. (2013). Morbidity, disability and mortality. In M.B. Goldman, R. Troisi, & K. Rexrode (Eds.), *Women and health* (2nd ed.). New York: Academic Press.

CHAPTER FIVE

Leading Causes of Morbidity and Mortality among Older Americans

Anna Zajacova and Vicki Johnson-Lawrence

The population of the United States is aging. By 2050, the number of adults aged 65 and older is projected to be 88.5 million, more than double compared to the 40.2 million in 2010 (Vincent and Velkoff 2010). This growth is driven by the large baby boomer cohorts born in 1946–1964, who started to turn 65 in 2011 (Ortman, Velkoff and Hogan 2014). As a proportion of the total population, adults 65 or older are projected to grow to 20 percent from the current 14 percent, and barely 5 percent in the early 20th century (Johnson et al. 2014). As medical and social interventions added *years to life*, drastically increasing life expectancy in the 20th century, the task now is to add *life to years* and improve the quality of life and health of the American older adults.

While today's older adults are healthier than ever before by most measures, health deteriorates at an accelerating pace with age. The prevalence of chronic disease, functional limitations, disability, and the risk of dying all increase with older age (NCHS 2013). The increasing rate of morbidity at old age, combined with the increasing size of older populations, significantly influence American lives: there is an increased burden on the health-care system, accompanied by the economic costs of medical care, as well as increased caregiving and economic burden on families and individuals called on to manage and control the long-term conditions and functional impairments of older Americans.

Chronic conditions such as heart disease, diabetes, cancer, and arthritis have profound systemic and person-level implications for the U.S.

health-care system as well as the well-being of older adults and their caregivers. The United States spends more on health care, both in dollars and as a proportion of GDP, than any other country in the world (WHO 2015a), but life expectancy and other key indicators of population health show worse outcomes than most other developed countries. About 75 percent of U.S. health-care spending is on patients with chronic conditions (CDC 2009a). This is in part because older adults are more likely to have chronic conditions, as well as experience other health problems that combine to make treatment more costly. For instance, the average medical expenditures are estimated to be 2.3 times higher for adults with diagnosed diabetes compared to adults without diabetes (CDC 2014). It is estimated that the direct medical expenditures exceed $313 billion annually for cardiovascular disease including stroke, $100 billion for cancer, $116 billion for diabetes, and $81 billion for arthritis (CDC 2009a). Total costs, including direct medical costs and indirect costs such as employment losses, disability, and premature deaths, are higher still. For example, the total cost of diabetes is estimated to be $245 billion annually (CDC 2014).

Definitions, Measurement, Data Sources

Health is a complex, multidimensional construct defined as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (World Health Organization 1948). Especially when we focus on older adults in developed countries, we often consider and measure two major dimensions of health status: (1) diseases, especially chronic conditions like heart disease and diabetes and (2) physical limitations and disability. *Morbidity* sometimes refers to both dimensions but usually refers specifically to diseases. In this chapter, we use morbidity to refer to diseases. We focus on six leading causes of morbidity: heart disease, cancer, diabetes, arthritis, chronic lower respiratory disease, and Alzheimer's, as well as their main health-behavioral antecedents.

Activity limitations and disability are critical aspects of health and important correlates of mortality (Üstün 2010). *Activity limitations* refer to difficulties a person may have in various activities due to physical or mental health problems. Limitations are often captured with activities of daily living (ADLs) and instrumental activities of daily living (IADLs). ADLs include basic self-care activities like bathing, dressing, or getting in and out of bed. IADLs comprise more complex activities critical for independent living, such as shopping, preparing meals, managing finances, and housework. *Disability* is a broad term that indicates the inability to carry out social roles due to underlying health limitations—it reflects a gap between the requirements of a social role and an individual's capacity

within a particular environment. A discussion of limitations and disability is beyond the scope of this chapter. Interested readers can consult excellent studies of limitations and disability trends and disparities among older adults (Martin et al. 2010, Martin and Schoeni 2014, Schoeni et al. 2005, Schoeni, Freedman and Martin 2008, Seeman et al. 2010).

Mortality refers to death. Demographers have developed numerous ways to measure mortality, but the most intuitive measure is life expectancy. *Life expectancy* at birth represents the number of years an individual can expect to live assuming they experience the age-specific death rates present in the year of birth throughout their lives (Murphy, Xu and Kochanek 2013). Life expectancy is often used to indicate the overall health of a population (NCHS 2014).

Older adults, in this chapter, are defined as those 65 years or older unless indicated otherwise. As for *race/ethnicity*, the major groups in the United States are non-Hispanic white, non-Hispanic black, Hispanic, Asian or Pacific Islander (API), and American Indian or Alaska Native (AIAN). In this chapter, we largely focus on the first three groups. Many surveys do not include enough respondents from the last two groups to enable reliable estimates. For instance, for mortality estimates, it is estimated that the API and AIAN populations are underreported in death certificates by 7 percent for API and 30 percent for AIAN populations, making comparisons problematic (Murphy, Xu and Kochanek 2013).

Data Sources

The majority of statistics reported in this chapter are from large, national community-based population surveys such as the National Health Interview Surveys (NHIS), or from mortality statistics collected by the National Center for Health Statistics (NCHS). Morbidity information is self-reported in the surveys and has associated strengths and limitations. The strengths are that people know about their conditions and the surveys would be prohibitively expensive if morbidity data had to be measured or medical records collected. The limitations include systematic differences in reporting that may result in over reporting or underreporting of conditions, as well as differences in the definitions of chronic conditions across surveys. When studying older adults, national surveys present an additional barrier, in that they are often designed to represent the noninstitutionalized population. In other words, the surveys exclude adults in institutions such as nursing homes, which has the potential to underestimate the health problems among older adults, especially the oldest-old. About 4 percent of the older population—aged 65 and more—live in an institutional setting and thus are omitted from many national surveys. The proportion

is strongly dependent on age so that the percentage of institutionalized individuals increases from about 1 percent among those aged 65–74 to 15 percent among those aged 85–94 and 33 percent among those aged 95 or older (Redfoot, Houser and AARP Public Policy Institute 2010). Some health problems are similar among community-dwelling older adults and their institutionalized counterparts—such as hypertension, heart disease, arthritis, and diabetes being among leading conditions—but there are also important differences. For instance, Alzheimer's disease and other dementias represent the second most prevalent set of conditions among residential-care persons, at 42 percent (Caffrey et al. 2012). Alzheimer's disease statistics are drawn from sources other than the self-reports in NHIS because too high a proportion of Alzheimer's patients live in institutional settings and thus are missed by the survey. This suggests that some statistics presented here may underestimate the *burden of disease*—the total impact of the health problems that encompasses morbidity, mortality, but also financial and other costs—among older Americans.

Conceptual Framework

Frameworks that tie together different parts of the morbidity and mortality process have been developed. Link and Phelan's (1996,1995) *Fundamental Causes* theory focuses on the key role of the underlying socioeconomic factors in shaping health—socioeconomic status (SES), operating through myriad mechanisms, shapes access to resources, including resources to maintain or improve health. Low SES means few resources to obtain desirable goods including health, putting people at *risk for risks* (Link and Phelan 1995): for instance, low SES puts individuals at risk for smoking via increased stress, fewer healthier alternatives to cope with the stressors, higher prevalence of smoking within one's social network that influences our own behavior, and increased advertising for cigarettes in low-income neighborhoods.

Other frameworks focus on the process from morbidity to disability (see Figure 5.1). In the 1960s, Nagi proposed a *Disablement Process* framework to describe the complex dynamic process of disablement, whereby an active pathology such as chronic illness leads to impairment—an abnormality at the organ or system level, which in turn may lead to activity limitations and disability (Nagi 1965, 1976). This framework does not imply direct causal effects from one factor to another. It also does not imply unidirectionality of effects or even time-dependency of the factors. The framework is a conceptual tool to consider the upstream factors from structural social influences to individual health behaviors and their links to health and longevity.

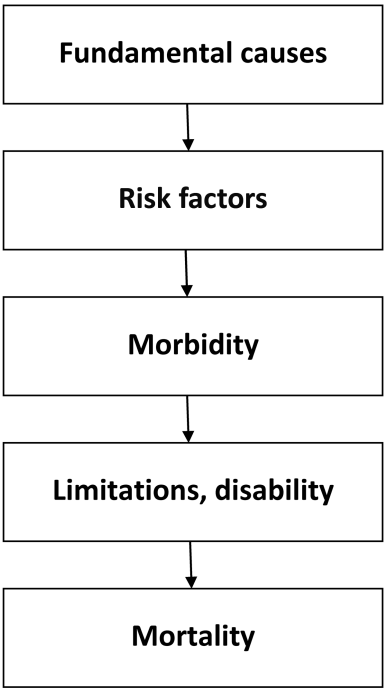


Figure 5.1 Conceptual framework (Authors' figure based on conceptualizations by Nagi [1965, 1976] and Verbrugge and Jette [1994] and Link and Phelan [1995])

For readers interested in a detailed treatment of the disablement process, we suggest the following sources for more information (Freedman, Martin and Schoeni 2002, Freedman et al. 2007, Manton, Gu and Lamb 2006, Martin, Schoeni and Andreski 2010, Martin and Schoeni 2014, Nagi 1965, 1976, Schoeni et al. 2005, Seeman et al. 2010, Verbrugge 1986, Verbrugge and Jette 1994).

Risk Factors for Morbidity and Mortality

Behavioral risk factors include smoking, alcohol use, physical activity, diet and nutrition, as well as a range of other behaviors such as avoiding impaired driving and use of seat belts. Four health behaviors—tobacco use, alcohol use, physical activity, as well as diet and nutrition—are linked to most burdens of chronic disease among American adults (CDC 2009a). Health behaviors are further tightly linked to biological risk factors such as obesity, blood pressure, and cholesterol levels. We will address the health behaviors and biological risk factors below; however, first a brief discussion of fundamental determinants of health is necessary.

Fundamental Determinants of Health

Underneath the individual level health-behavioral factors lie deeper, structural fundamental causes (Link and Phelan 1995). It is critical to consider these causes to recognize that the choices about health behaviors do not occur in a social vacuum but are structured and constrained by social factors (Cockerham 2005). These factors include SES of individuals and societal inequalities in access to resources, environmental factors such as presence of parks and safe sidewalks, health-care access and quality, community programs to enhance health, and a host of other influences that will enable making healthy choices—such as the availability of farmers' markets or supermarkets, public transportation, or reduced exposure to second-hand smoking or lead in household paint (Johnson et al. 2014, Link and Phelan 1995, Wilkinson 1996, Wilkinson and Marmot 2003).

At an even more fundamental level, health disparities are caused by social inequalities in access to resources (Link et al. 1998, Link and Phelan 1995). The factors noted above, such as safe and healthy environments, access to healthy diet, help with smoking cessation, are not distributed equally in the population. Social status, whether captured with education, income, or occupational prestige, is tightly linked with access to these types of resources and thus to health. It is therefore critical to always consider the underlying fundamental factors that shape access to resources for some and put others at *risk for risks*, which makes it easier for some compared to others to follow healthy lifestyles and minimize health risks.

Key mechanisms through which the fundamental effects of social status influence risk factors for morbidity and mortality include social stress and social support (Pearlin 1989). While there is a complex cognitive-emotional process through which stressors translate into perceived stress (Lazarus and Folkman 1984), in general stress impacts mental and physical health (Thoits 1995). The role of stress in health disparities has long been recognized (Antonovsky 1979). Numerous studies have documented a greater number of stressors among lower social classes; moreover, these stressors tend to be more enduring over time (Aneshensel 1992, Turner, Wheaton and Lloyd 1995). For nonwhite adults, the ongoing daily stress of racism contributes an additional salient burden on their health (Clark et al. 1999).

Health Behaviors

Health behaviors comprise a large set of mechanisms through which fundamental factors such as SES influence health. While health behaviors have been the focus of much public health intervention, it is necessary

to contextualize these behaviors within the fundamental social factors in order to both understand them better and ultimately to design more effective prevention programs (Link and Phelan 1995, 1996, Link et al. 1998).

Tobacco Use

Tobacco use, primarily smoking, is the leading preventable cause of death among American adults. This behavior remains the leading cause of preventable morbidity and mortality, causing over 440,000 premature deaths (CDC 2008) and over $330 billion in direct and indirect costs annually (Mozaffarian et al. 2015).

The good news is that smoking has declined over time: at its prevalence peak in 1965, 42 percent of U.S. adults smoked as compared to just under 20 percent in 2011 (Garrett et al. 2011). The declining trends were particularly pronounced for men: among older men, for instance, 29 percent smoked in 1965, compared to 10 percent in 2011—the rates for older women have remained relatively constant, decreasing in that same time period slightly from 10 percent to 9 percent (FIFARS 2012). As the statistics above indicate, smoking is less prevalent at older ages—while 23 percent of adults 25–44 are smokers, so are 13 percent of those aged 65–74, and 6 percent of those aged 75 and older (Schoenborn, Adams and Peregoy 2013). Unfortunately, the progress on smoking has slowed or stalled in recent years. Smoking remains high in low-SES groups, as 6 percent of adults with postbaccalaureate education smoke, in contrast to 24 percent of those with less than a high school diploma, and a staggering 41 percent among general educational development (GED) recipients (Jamal et al. 2014).

Smoking has a strong SES gradient: low-educated and low-income adults are substantially more likely to smoke than their more-educated and higher-income counterparts. In terms of race/ethnicity, 22 percent of non-Hispanic white adults and 20 percent non-Hispanic black adults smoke, compared to 14 percent of Hispanic adults or 10 percent Asian Americans (Schoenborn, Adams and Peregoy 2013). Due to a complex set of social influences, women have always smoked less than men (Waldron 1991). The gender difference was particularly pronounced in the mid-1960s when about 33 percent of women and 52 percent of men smoked; since then, smoking declined to a prevalence rate of 15 percent among women and 20 percent among men (Garrett et al. 2011, Jamal et al. 2014).

Alcohol Use

Moderate alcohol use is likely not problematic and may even be beneficial to health (Rehm et al. 2003), but heavy regular use or binge-pattern

use is detrimental to health. Excessive alcohol use is associated with nearly 90,000 deaths annually (CDC 2013a). The two main causes of death were alcoholic liver disease and motor vehicle accidents, but heavy alcohol use is a contributing factor to other causes of death as well. Economic costs of excessive alcohol use were estimated in 2006 to exceed $220 billion annually. This amount comprised loss of productivity, health-care costs, criminal justice costs, and losses in other economic areas (Bouchery et al. 2011).

Alcohol use declines with age. Among adults aged 65–74, 52 percent are current drinkers; at ages 75 and older, only 39 percent use alcohol (Schoenborn, Adams and Peregoy 2013). Yet, 8 percent of adults aged 65–74 report at least one episode of binge drinking—defined as having five or more drinks in a day—during the previous year. The race/ethnic and socioeconomic patterns in alcohol use are complex because the relationships pertaining to moderate use are not the same as relationships due to excessive use. One study noted that the rates of any current alcohol use in 2001–2002 were about 70 percent for whites, 53 percent for blacks, and 60 percent for Hispanics—among these drinkers, whites and blacks had higher rates of heavy drinking than Hispanics. To complicate matters further, the statistics differed substantially by gender and by whether the heavy drinking was daily or weekly (Chartier and Caetano 2010). The links between alcohol use and SES are similarly complex. Any current alcohol use is directly related to SES, meaning that adults with more education and higher income are more likely to be current drinkers—however, most of the current drinkers do not have the problematic heavy or binge-drinking patterns. For instance, alcohol use in general increased with education and with income, but binge drinking was highest among those with a GED certificate and was lowest among those with a high school diploma (Schoenborn, Adams, and Peregoy 2013).

Physical Activity

Physical activity has only relatively recently received deserved attention for its importance in many highly prevalent chronic conditions. Physical activity is associated with lower risk of most leading causes of morbidity and mortality including heart disease, diabetes, arthritis, some cancers, mental conditions like depression, cognitive functioning in old age, as well as levels of biological risk influenced by hypertension, cholesterol levels, and obesity (Elsawy and Higgins 2010, Nelson et al. 2007). Even among the oldest-old, physical functioning can be improved with physical activity (Butler et al. 1998). However, only 51 percent of older adults engaged in enough physical activity to meet federal guidelines released in 2008. The guidelines for older adults recommend at least 150 minutes of

moderate-intensity aerobic activity, 75 minutes of vigorous-intensity aerobic activity, or an equivalent combination of each per week. Older adults should also engage in strengthening activities that involve all major muscle groups at least two days a week (Elsawy and Higgins 2010). Some reports find that only 33 percent of older adults met the guidelines for aerobic activity and fewer than 17 percent met the guidelines for muscle strengthening activity (Schoenborn, Adams and Peregoy 2013). On the positive side, the focus on exercise as an important health behavior seems to have increased physical activity in American adults since 1990 (Haskell et al. 2007).

Clear gender differences exist in physical activity among adults of all ages: men exercise more than women. Large race/ethnic disparities exist for physical activity: 51 percent of non-Hispanic white adults meet the physical activity guidelines compared to 42 percent of non-Hispanic black and 44 percent of Hispanic adults (Haskell et al. 2007). The SES patterns were similar for education and income: physical activity increased substantially at higher SES levels among adults of all ages, including older adults (Nelson et al. 2007, Schoenborn, Adams, and Peregoy 2013).

Diet and Nutrition

Healthy diets are important because of their close connection to chronic disease. Diet and nutrition are difficult to measure due to the complexities of the foods and meals we consume, as well as the day-to-day variation that complicates the recall and reporting among respondents. The overall picture, regardless of the specific measure, is that older Americans' nutrition fails to meet the recommendation for healthy diets (Krebs Smith et al. 2010). Often statistics use the consumption of fruits and vegetables as a marker of healthy nutrition. Using this marker, only a quarter of American adults meet the five-serving a day recommendation (BRFSS 2009). The USDA developed a more complex Healthy Eating Index (HEI), which takes into account the consumption of 10 categories such as whole grains, fatty acids, vegetables, seafood and plant proteins, and micronutrients like sodium (USDA 2010). Overall, older adults earned a score of 68 out of a maximum of 100 for the consumption of fruit, meat and beans, and total grains (Juan, Guenther and Kott 2009). The lowest scores were for the consumption of dark green vegetables and legumes, whole grains, and sodium intake. The diet of adults aged 75 and older was overall better than the diet of their younger—65–74 years—counterparts (FIFARS 2012). Not surprisingly, the HEI score of older adults who were not in poverty was higher than the score of older adults in poverty: 21 percent of the nonpoor had *good* diets while only 9 percent of poor older adults

had HEI scores high enough to classify as having a *good* diet (Juan, Lino, and Basiotis 2004).

Biological Risk Factors

The three most widely known and perhaps most important biological chronic disease risk factors, also referred to as biomedical risk factors or biomarkers, include obesity, hypertension, and elevated blood cholesterol.

Obesity is calculated from an individual's height and weight using the formula for body mass index: BMI = weight in kg/height in m squared, and defined as BMI ≥ 30 (WHO 2015b). Among U.S. adults aged 60 and older, 35 percent are obese (Ogden et al. 2014). Obesity is a risk factor for all leading chronic conditions except chronic lower respiratory disease.

Hypertension, or high blood pressure, is defined as blood pressure 140/90 mmHg or above. Among older Americans, the prevalence of self-reported hypertension is high: 56 percent report having been diagnosed with hypertension (FIFARS 2012). Hypertension is a risk factor for heart disease and may also increase the risk for Alzheimer's disease.

Elevated cholesterol is defined as 240 mg/dL or above; levels between 200 and 240 mg/dL are considered borderline elevated. Among older Americans, only 24 percent have cholesterol levels under 200 mg/dL; 55 percent are in the borderline elevated range and 22 percent have high cholesterol (Shay et al. 2012). Elevated cholesterol is a strong risk factor for heart disease.

One way to conceptualize these factors within the framework used in this chapter is as biological consequences of unhealthy risk behaviors and antecedents of diagnosed chronic conditions. For instance, diet with excessive calories and a high proportion of simple carbohydrates may lead to impaired glucose tolerance, as well as obesity, and these two biological risk factors are strong predictors of diabetes. It is important to keep in mind that the associations among health behaviors, biological risk, and diseases are probabilistic rather than deterministic, and also that there are numerous other genetic, social, environmental, and biological predictors at all levels of the disablement process. It is also important to note that the causal directionalities across the three factors are complex and not simply unidimensional as our conceptual framework shows for parsimony. Finally, we note that various sources may put these biological risk markers among health behaviors—especially obesity (Hubert et al. 1983)—and they can be sometimes found among disease—especially hypertension, although the American Medical Association decided to officially categorize obesity as a disease in 2013 as well (American Medical Association 2013).

Morbidity

Morbidity refers to disease and illness. In this section, we review leading causes of morbidity among older American adults: heart disease, cancer, diabetes, arthritis, chronic lower respiratory disease, and Alzheimer's disease. These are conditions with highest burden in the population—a combination of having the highest prevalence among older adults, the salience of the disease to the patient, the direct and indirect costs associated with the disease, and being among the leading causes of death.

We note that all these leading causes of morbidity and mortality are chronic rather than acute conditions. Acute conditions are temporary illnesses such as colds, influenza, or pneumonia. The prevalence of acute conditions is actually lower among older adults than among younger adults—however, when they do occur among the elderly, they tend to be more severe, resulting in hospitalizations and deaths at higher rates than among younger adults (Thompson et al. 2004). Chronic conditions, also referred to as noncommunicable disease, are long-term, progressive, often incurable diseases that can be managed and lived with for a long time (Mendis 2014). Chronic diseases comprises most of the leading causes of disability and mortality among older Americans, as well as the bulk of health-care spending and cost increases (Thacker et al. 2006).

Throughout this chapter, we will discuss the often high levels of chronic conditions and large disparities in their prevalence. It is therefore useful to note up front that many older adults consider themselves to be relatively healthy. When asked how they judge their health in general, about 3 out of 4 people aged 65 and older rate their health as excellent, very good, or good (FIFARS 2012). At the same time, disparities are evident even for self-rated health: 78 percent of non-Hispanic white men and women report excellent to good health, compared to 62 percent of non-Hispanic black and 63 percent of Hispanic older adults (FIFARS 2012).

Trends in Morbidity

Understanding recent trends in the prevalence of morbidity and disability in the older population is important because it gives us a more dynamic picture of the health status of the population, including some indications of what we can expect in the near future with respect to older adults' morbidity and mortality.

Since the 1980s, the prevalence of disability and physical limitations among older adults has declined (Freedman et al. 2013, Freedman, Martin and Schoeni 2002, Martin, Schoeni and Andreski 2010). Surprisingly, there were no corresponding declines in chronic conditions (Crimmins

and Beltrán-Sánchez 2011, Freedman et al. 2007, Martin et al. 2010). In fact, the prevalence of many conditions and multimorbidity has been increasing over time (Chatterji et al. 2015, Verbrugge and Liu 2014). The fact that the prevalence of chronic conditions has remained stable or even increased while disability declined over time suggests an improved ability to successfully manage chronic conditions, whether with medical interventions or with more effective environmental improvements like housing alternations. Advances in medical care, from pharmaceuticals to new diagnostic technologies and surgical procedures have improved the care of acute illnesses, which paradoxically increases the numbers of elderly with chronic conditions (Anderson 2010). At the aggregate level, population aging also contributes to the increases in morbidity among Americans. The prevalence of chronic disease is high in the U.S. population, but particularly so at older ages. About half of Americans have at least one chronic condition; the proportion rises to 91 percent among those aged 65 and older (Anderson 2010). Additionally, 73 percent of older Americans have two or more chronic conditions, a state referred to as multimorbidity (Barnett et al. 2012). The probability of having a chronic condition, as well as the number of conditions, increases with age—thus a greater proportion of Americans at older ages means a greater average prevalence of chronic disease (Anderson 2010).

Disparities in Morbidity

The average health levels in the older population mask profound inequalities across population groups. Health among older adults is not distributed equally. There are large systematic differences in health by gender, race/ethnicity, and SES whether measured by education, income, occupation, and other factors such as neighborhood where older adults reside. The term *systematic differences* refers to large and/or persistent differences in average levels of some characteristic or health outcome between population groups.

Race and ethnic inequalities are to a large extent but not completely due to systematic differences in SES: minority older adults, especially older blacks and Hispanics, have lower education and fewer economic resources on average than older whites (Williams and Collins 1995). Among Medicare beneficiaries, the proportion with two or more conditions was 69 percent among non-Hispanic white and non-Hispanic black respondents, 68 percent among Asian American respondents, and 66 percent among Hispanic respondents. However, black and Hispanic respondents were most likely to have at least six different chronic conditions (CMMS 2013).

Gender differences are somewhat complex. For some conditions, men have higher prevalence; for others, women do. For instance, among the top conditions in Medicare beneficiaries, women were more likely to have hypertension (61% vs. 54%), hypercholesterolemia (46% vs. 44%), and arthritis (35% vs. 22%). Men were more likely to have ischemic heart disease (36% vs. 27%) and diabetes (29% vs. 27%) (CMMS 2013). One way to see these gender differences in light of the longer life expectancy for women is that women have a higher prevalence of nonfatal though potentially debilitating conditions than men while men are more likely to be diagnosed with serious and potentially fatal conditions (Case and Paxson 2005, Macintyre, Hunt and Sweeting 1996). These differences arise from a combination of social and biological factors. One pronounced difference between older men and women is economic well-being: women aged 65 or older are about twice as likely as men to be poor (Meyer and Herd 2007). Other factors include chromosomal and hormonal differences, health behaviors, occupational risks, and social role differences (Gorman and Read 2006, Read and Gorman 2010).

SES differences are persistent, profound, and occur for most conditions in the same direction: socially and economically disadvantaged older adults are more likely to suffer from most conditions (CMMS 2013). For example, the age-adjusted prevalence of doctor-diagnosed diabetes among adults with family income over 400 percent of the poverty threshold was 8.5 percent as compared to 14.5 percent among adults with family incomes below the poverty threshold. Moreover, the socioeconomic inequalities appear to be increasing over time—for instance, educational disparities in various health outcomes have grown over the last several decades (Luo and Waite 2005, Montez et al. 2011, Schoeni et al. 2005).

Leading Chronic Conditions

Among adults aged 65 and older, leading chronic conditions include arthritis, which is reported by 51 percent of respondents; 30 percent report heart disease, 24 percent cancer, 22 percent chronic lower respiratory disease, and 20 percent report diabetes (see Figure 5.2). We review these leading causes of morbidity below. In addition, we also include Alzheimer's disease due to its high burden on the quality of life, mortality, economic costs, and rapid increases in the U.S. population. Because of the very nature of dementias, Alzheimer's disease patients are not interviewed in population health surveys at representative rates; therefore, the data tend to come from sources other than the self-reports we have for the other conditions.

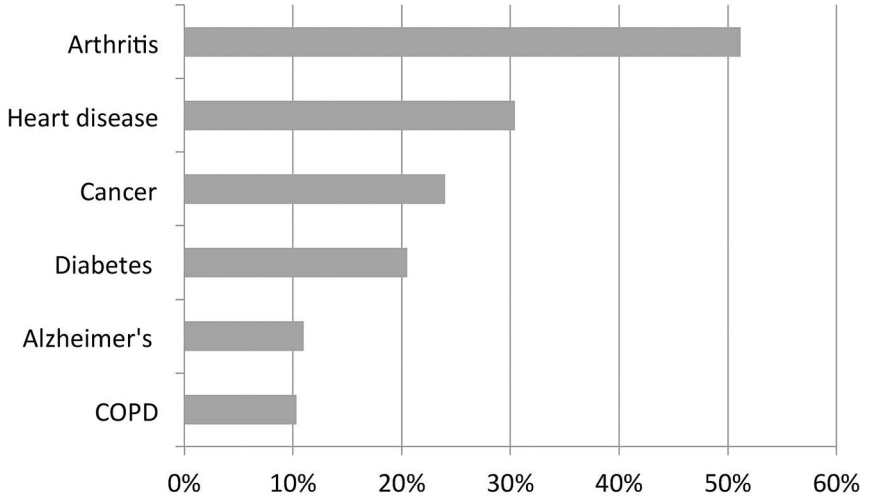


Figure 5.2 Prevalence of leading chronic conditions in U.S. adults aged 65 and older. (FIFARS [Federal Interagency Forum on Aging-Related Statistics], 2012; Alzheimer's Association 2014)

Heart Disease

Heart disease comprises a range of conditions of the heart and blood vessels, such as coronary heart/artery disease, heart attack, arrhythmia, and congestive heart failure. Many of these conditions are the result of atherosclerosis. Atherosclerosis is a condition that develops when a fatty substance referred to as plaque builds up in the walls of the arteries. This buildup hardens and narrows the arteries, making it harder for blood to flow through. Gradually or suddenly a plaque may partially or completely block the flow of blood in an artery. If this is an artery that supplies blood to the heart muscle, it is referred to as coronary heart disease or coronary artery disease.

Risk factors for heart disease include (1) high blood pressure, (2) high cholesterol, (3) diabetes, and (4) health behaviors including current smoking, physical inactivity, and unhealthy diet and obesity (CDC 2009a). A recent analysis determined that the population attributable fractions for heart disease mortality were 41 percent for high blood pressure, 14 percent for smoking, 13 percent for unhealthy diet and obesity, 12 percent for insufficient physical activity, and 9 percent for abnormal blood glucose levels (Go et al. 2014). Although death rates from heart disease have been declining steadily (FIFARS 2012), heart disease remains the leading cause of death in the United States (CDC 2009a). Moreover, there is some concern that the high levels of obesity and low levels of physical activity will

cause a reversal of this trend and possible increases in heart disease deaths in the future (Mitka 2012).

Prevalence, Age Patterns, and Trends over Time

Among older Americans, about 30 percent report having heart disease (FIFARS 2012). This proportion has been relatively steady since the 1990s, with no systematic increases or decreases. Heart disease prevalence, as well as incidence, increase with age. For instance, coronary heart disease has been diagnosed in 20 percent of men and 10 percent of women aged 60–79 compared to 32 percent of men and 19 percent of women aged 80 or older (Mozaffarian et al. 2015).

Disparities in Heart Disease

The prevalence of heart disease is higher among men than among women except at the oldest ages when the gender pattern is reversed; the incidence of heart disease remains higher for men at all ages (Mozaffarian et al. 2015). With respect to race/ethnicity, the prevalence of heart disease is about 32 percent among older non-Hispanic white respondents, 25 percent among non-Hispanic black, and 22 percent among Hispanic respondents (FIFARS 2012). It is important to point out, however, that measured data or data on cardiovascular disease that includes hypertension is higher among non-Hispanic black respondents across the lifespan compared to non-Hispanic white adults (Mozaffarian et al. 2015). There is also a strong socioeconomic component whereby the prevalence of heart disease decreases with higher education or income in the population, in large part though different health behaviors such as smoking or healthy diet (Fiscella and Tancredi 2008, Winkleby et al. 1992).

Cancer

Cancer is a broad term for a range of over 100 diseases with different progression, symptoms, treatment options, and survival times. Biologically, cancer is caused by damage to the genes involved in cell replication. The three cancers with the highest incidence, as well as the highest number of deaths for each gender are lung, prostate, and colorectal for men; lung, breast, and colorectal for women (Siegel et al. 2014). Risk factors vary by cancer type but generally include (1) family history, (2) age, (3) smoking, (4) obesity, and (5) environmental exposure—such as sunburns or the use of tanning beds which are risk factors for melanoma (Tucker and Goldstein 2003). A recent study in *Science* showed that inherited predisposition and

environmental factors account for only one-third of the variation in cancer risk; the majority is due to bad luck—random mutations that occur during DNA replication in normal stem cells (Tomasetti and Vogelstein 2015). Cancer remains one of the most prominent public health concerns in the United States and around the world. A recent study estimated the annual loss of productivity due to cancer between $9.6 and $16 billion among working-age adults in the United States (Guy et al. 2013). Cancer survivors report difficulties in multiple domains, from health-related quality of life (Brown, Lipscomb and Snyder 2001) to psychological problems such as depression and anxiety (Baker et al. 2005, Hewitt, Rowland and Yancik 2003). Despite improved diagnosis and treatment, cancer is the second leading cause of mortality in the United States and predicted to become the top leading cause of death in the next several years (Johnson et al. 2014).

Prevalence, Age Patterns, and Trends over Time

Thanks to earlier diagnosis and more effective treatment of many cancers, the number of cancer survivors in the U.S. population is estimated at 13 million and expected to reach 18 million within a decade (de Moor et al. 2013). Cancer is unique among the leading conditions in that we often focus on new cases—incidence—rather than prevalence. In 2014, 1,665,000 new cases of cancer were diagnosed and 586,000 deaths due to cancer occurred in the United States (Siegel et al. 2014). The incidence increases across the adult lifespan: among adults younger than 65, there are about 225 new cases per 100,000 annually while among older adults, there are about 2,040 cases (National Cancer Institute 2015). The age-adjusted incidence of cancer among older adults rose from the 1970s through the early 1990s and has been declining slightly since (National Cancer Institute 2015).

Disparities in Cancer

The lifetime probability of being diagnosed with cancer is slightly higher among non-Hispanic whites—41 percent—compared to 38 percent among non-Hispanic blacks and 37 percent among Hispanics (Howlader et al. 2014). There are large differences in the age at diagnosis, cancer sites, or survival, however. For example, non-Hispanic blacks are more likely to die of cancer than adults from any other race/ethnic group (CDC 2009a). With respect to gender, the lifetime probability of being diagnosed with cancer is higher in men (43 percent) than women (38 percent), and the lifetime probability of dying from cancer is also slightly higher in men: 23 percent compared to 19 percent among women (Howlader et al. 2014). Survival from cancer is higher for patients living in higher SES areas (Ward et al.

2004)—however, SES effects vary tremendously by cancer type. For instance, there is a strong SES inverse gradient for lung cancer because less-educated individuals smoke at higher rates, but breast cancer has a positive correlation with SES among women (Clegg et al. 2009).

Diabetes

A healthy body produces insulin, which is necessary for all cells in the body to accept the glucose as source of energy. *Diabetes* occurs when the body is unable to metabolize glucose, either because it does not produce insulin—Type I diabetes—or because the body produces sufficient insulin, but the cells are "resistant" to it or fail to respond to it—Type II. Nearly all cases of diabetes diagnosed among adults—90–95 percent—are Type II diabetes, previously referred to as adult-onset diabetes (CDC 2014).

The main risk factors for Type II diabetes are obesity and sedentary lifestyle. Diabetes increases the risk of heart disease, stroke, blindness and vision problems, kidney disease, and amputations (CDC 2014). Diabetes is also the seventh leading cause of mortality in the United States. Additionally it may be severely underreported on death certificates. For instance, among people with diabetes, only 10–15 percent had diabetes listed as the underlying cause (CDC 2014).

Prevalence, Age Patterns, and Trends over Time

Over 11 million older Americans, or 26 percent of the older U.S. population, have diabetes. About 28 percent of these individuals are undiagnosed and are thus not receiving any treatment. Moreover, 1.7 million new cases of diabetes are diagnosed annually in the United States; among older adults it's 400,000 new diagnoses annually. Even more worrisome, an additional 37 percent of U.S. adults have prediabetes, a condition when blood glucose levels are elevated but not high enough to be diagnosed a diabetes, as do 51 percent of adults aged 65 and older (CDC 2014).

As the statistics in the previous paragraphs indicate, the prevalence of Type II diabetes increases sharply with age. Over time, there has also been a dramatic rise in the prevalence of diabetes. In 1997–1998, the prevalence of diabetes for adults aged 65 and older was 13 percent; this proportion doubled in 15 years to 26 percent (FIFARS 2012).

Disparities in Diabetes

Among older adults, men have higher prevalence of diabetes than women: 23 percent versus 18 percent. There are large socioeconomic and

race/ethnic differences in age-adjusted prevalence of diabetes as well. As with many other conditions, the prevalence of diabetes is higher among lower SES individuals (Mokdad et al. 2003). Among non-Hispanic whites and Asian Americans, the prevalence of diabetes is 8 percent and 9 percent, respectively; among Hispanic and non-Hispanic black populations, the prevalence is 13 percent, and among AIAN adults it is nearly 16 percent. Interestingly, the rates of prediabetes were comparable across major race/ethnic groups, suggesting there are systematic differences in how the disease develops over time (CDC 2014).

Arthritis

Arthritis is the most prevalent disease of the musculoskeletal system in older adults. Osteoarthritis, the most common form of arthritis, is a degenerative disease of the joints, typically knees, hips, hands, and lower back, that develops when the cartilage that protects the bones meeting at a joint wears away, resulting in inflammation, pain, and reduced movement. Risk factors for arthritis include overuse or injuries and obesity. Arthritis is not fatal but is the leading cause of disability among Americans (CDC 2009b): 19 percent of disabled individuals attributed their difficulties to arthritis or rheumatism, which exceeded back or spine problems—17 percent—and heart trouble—7 percent (CDC 2009b). Moreover it is estimated that the total cost of arthritis in terms of medical costs and lost earnings is about $130 billion annually (CDC 2013b).

Prevalence, Age Patterns, and Trends over Time

Arthritis is the second most common health complaint—after hypertension—among older adults: 51 percent of respondents aged 65 and older reported having been diagnosed with arthritis. The age-adjusted prevalence of arthritis has been relatively stable during the last decade (FIFARS 2012), but since arthritis prevalence increases with age (Lawrence et al. 2008), the aging of the U.S. population likely means increasing total burden of this disease in the future (CDC 2013b).

Disparities in Arthritis

Women report arthritis at higher rates than men: among older adults, about 56 percent of women and 45 percent of men have this condition (FIFARS 2012). The pattern of race/ethnic differences for arthritis differs from the pattern for other diseases, in that among older adults non-Hispanic whites are most likely to report arthritis (53%), followed by non-Hispanic

black (51%) and Hispanic (44%) respondents (FIFARS 2012). However, non-Hispanic black adults were more likely to report severe pain or activity limitations due to arthritis compared to non-Hispanic white adults (CDC 2005). Finally, arthritis has a strong socioeconomic gradient. Among U.S. adults, the age-adjusted prevalence of arthritis is 26 percent among those with less than a high school diploma and 18 percent among those with at least a college degree (CDC 2013b).

Chronic Lower Respiratory Disease

This is a class of diseases that impact the lungs. The most fatal in this group is *chronic obstructive pulmonary disease* (COPD), which includes two underlying diseases: chronic bronchitis and emphysema. These diseases obstruct the flow of air within the respiratory system, causing difficulty breathing. Smoking is the primary risk factor for COPD; additional risks are from environmental exposures such as air pollution. COPD has a high morbidity and mortality burden: it is the third leading cause of death in the Unites States (Akinbami and Liu 2013).

Prevalence, Age Patterns, and Trends over Time

Among older adults, about 10 percent report having been diagnosed with COPD (FIFARS 2012). The prevalence of COPD has been declining slightly—although the declines were not statistically significant—in the U.S. population in recent years, partly because fewer adults are smoking (Akinbami and Liu 2013). With respect to age patterns, COPD prevalence increases for most of the lifespan and is highest among adults aged 65 and older—however, within this older adult group, the elderly aged 85+ have a lower prevalence than those aged 65–84 (Akinbami and Liu 2013). This may be a cohort effect—the oldest-old are cohorts that did not smoke at as high a rate as the cohorts that followed—or a selection effect whereby those with COPD die before reaching the oldest ages.

Disparities in COPD

The prevalence of COPD is significantly higher among women than men (Akinbami and Liu 2013). This is interesting given the lower smoking rates of women compared to men and suggests greater vulnerability of women with respect to the effects of smoking. Moreover, as the smoking differences between men and women decrease, the burden of COPD is shifting more to women. The race/ethnic differences for COPD are somewhat like those for arthritis: non-Hispanic white older adults have the highest

prevalence (11%), compared to non-Hispanic black (8%), and Hispanic adults (7%). To some degree, this pattern reflects race/ethnic differences in smoking patterns as the primary risk factor for COPD (Schoenborn, Adams and Peregoy 2013). And finally, reflecting the strong socioeconomic patterning of greater smoking among low-SES individuals, the prevalence of COPD also has a close inverse relationship with SES (Viegi et al. 2000).

Alzheimer's Disease

Dementia is a general term for several conditions that cause a decline in memory and cognitive abilities. The most common type of dementia is *Alzheimer's disease*, a progressive and fatal condition (Alzheimer's Association 2014). The symptoms of Alzheimer's disease vary across patients but typically start with difficulties remembering new information. Later symptoms may include memory loss, difficulty planning complex actions or solving problems, trouble expressing oneself, confusion, poor judgment, and personality changes. The risk factors for Alzheimer's remain poorly understood but include (1) age, (2) genetic vulnerability—the gene apolipoprotein e4 (APOE e4) was found related to the probability of developing the disease, and (3) a range of behavioral and socioeconomic factors such as low education, past head trauma, smoking, and lack of physical activity (Lindsay et al. 2002). Alzheimer's is one of the leading causes of disability and the sixth leading cause of death in the United States (Alzheimer's Association 2014, Murphy, Xu and Kochanek 2013).

Prevalence, Age Patterns, and Trends over Time

The estimated prevalence of Alzheimer's in the older U.S. population is 11 percent, or about five million diagnosed individuals. As noted above, the incidence and prevalence of Alzheimer's rises sharply at the oldest ages. Among people aged 65 and older, the prevalence of Alzheimer's is estimated to double with every five years of age, so among adults aged 85 and older, 32 percent have Alzheimer's (Alzheimer's Association 2014). Because the disease occurs most frequently among the elderly, whose numbers and proportions in the U.S. population are rising rapidly, there will be a corresponding dramatic rise in Alzheimer's patients in the near future (Hebert et al. 2013).

Disparities in Alzheimer's Disease

The prevalence is higher in women than men although this is in part because women live longer than men on average, and age is the largest risk factor for Alzheimer's (Letenneur et al. 1999). Alzheimer's is more

prevalent among African American and Hispanic older adults, compared to non-Hispanic whites and Asian Americans (Manly and Mayeux 2004). Finally, there is a strong SES component to Alzheimer's disease epidemiology: less-educated adults are at significantly higher risk of developing the disease than those with more education (Alzheimer's Association 2014).

Multimorbidity

The sections above described the leading chronic conditions in U.S. older adults. Most older adults, however, have more than one condition (CMMS 2013). *Multimorbidity*, which refers to the presence of two or more chronic conditions, adds additional complications to managing chronic disease and coordinating care across the different conditions, increases costs and risks of adverse outcomes, introduces medication interactions that result in complications of care, functional limitations, costly hospitalizations, lower health-related quality of life, and mortality (Anderson 2010, Fortin et al. 2007). The most prevalent multimorbidity combination is arthritis and hypertension among those with two conditions; the most common triad also includes diabetes.

Prevalence, Age Patterns, and Trends over Time

In 2010, about two thirds of U.S. adults aged 65 or older had multimorbidities; most of this age group had two or three conditions (CMMS 2013, Ward and Schiller 2013). The prevalence of multimorbidity increases steeply with age, so that among adults aged 85 years and older, 83 percent have two or more chronic conditions (CMMS 2013). The prevalence of multimorbidity has been increasing slightly, but significantly, throughout the first decade of the 21st century. The rise was observed in most demographic subgroups and across all ages, including in older Americans aged 65 and above (Ward and Schiller 2013).

Disparities in Multimorbidity

While women tend to report more conditions than men especially at earlier ages, there is a convergence among older adults such that some studies find men aged 65 and older to have a slightly higher probability of multimorbidity than women (Fortin et al. 2005, Ward and Schiller 2013). Black older adults have a higher prevalence than white older adults (Quiñones et al. 2011) while Hispanics are effectively comparable to non-Hispanic whites in the prevalence of multimorbidity (Ward and Schiller 2013). Not surprisingly, given that most individual chronic conditions are linked to SES, the prevalence of multimorbidity is also higher among

adults of lower SES, whether measured by education or income. Among older Americans, for instance, adults without a high school diploma had a 46 percent higher probability of being multimorbid than their counterparts with a college diploma (Tucker-Seeley et al. 2011).

Mortality

One of the most widely used measures of population health is life expectancy at birth, which indicates the average—expected—number of years of life for individuals born in a given year. In 2010, life expectancy for U.S. adults was 78.7 years (Murphy, Xu and Kochanek 2013). For comparison, life expectancy 100 years prior in 1910 was about 50 years and in 1960 was about 70 years (Noymer 2005). Life expectancies at ages 65 and 85 have also been gradually increasing, meaning that older adults can expect to live longer than ever before. The life expectancy at age 65, for instance, is over 19 years (FIFARS 2012).

Mortality Risks across Age and Trends over Time

The risk of dying increases exponentially at older ages. The probability of dying within one year is 1.6 percent for an average 65-year-old person; it is 6 percent at age 80 and 27 percent at age 95 (Bell and Miller 2011). The life expectancy among Americans has been increasing steadily, by about 0.3 percent annually in recent years (Johnson et al. 2014). Mortality rates have been declining for most leading causes of death; the main drivers of the declining mortality are lower heart disease and cancer death rates. Between 1981 and 2009, the age-adjusted mortality among adults aged 65 and older declined for most leading causes: mortality due to cardiovascular and cerebrovascular disease dropped by over 50 percent—however, mortality due to chronic lower respiratory disease increased, as did deaths from Alzheimer's disease (Johnson et al. 2014, Murphy, Xu and Kochanek 2013).

Disparities in Mortality

The disparities in mortality across population groups in the United States are staggering. The disparities occur along socioeconomic, race/ethnic, gender, and geographic dimensions. If we look at major sex/race group combinations, for instance, then life expectancy in the early 21st century was nearly 87 years for Asian women, compared to 69 years for black men, a difference of 18 years (Murray et al. 2006). Or if we compared the most advantaged county-race combination versus the least advantaged combination, the life expectancy difference is 35 years (Murray et al. 2006).

With respect to sex, women's life expectancy of 81 years exceeds men's life expectancy of 76.2 years as is typical for most populations (Murphy, Xu and Kochanek 2013). Racial disparities persist for both genders although they have narrowed since 1990. Life expectancy at birth in 2010 was 4.7 years longer for white men than for black men; the difference was 8.2 years in 1990. White women's life expectancy was 3.3 years more than black women's; it was 5.8 years in 1990 (Kochanek, Arias and Anderson 2013). The disparities are caused by underlying differences in major chronic diseases and, among younger and middle-aged adults, in injuries (Murray et al. 2006). Hispanic males and females had longer life expectancy at birth than non-Hispanic white or non-Hispanic black males and females (Murphy, Xu and Kochanek 2013). The high life expectancy of Hispanic adults is referred to as the *Hispanic mortality paradox* because Hispanics have lower average education and income levels, which are typically associated with lower life expectancy (Crimmins, Kim and Vasunilashorn 2010, Markides and Eschbach 2011).

The mortality disparities are more pronounced among middle-aged adults and tend to decline at older ages (Murray et al. 2006). This may be in part because the overall higher mortality at older ages makes relative differences less obvious (Lynch et al. 2006), due to selection by prior mortality (Zajacova, Goldman and Rodriguez 2009), or due to cohort effects (Murray et al. 2006). In particular, the black-white gap decreases among older adults and even reverses among the oldest-old, so that among those who survive to age 85, black adults have slightly higher life expectancy compare to white adults: 6.8 vs. 6.6 years (FIFARS 2012).

An additional worrisome fact is that the disparities across most dimensions have increased over time (Murray et al. 2006, Pappas et al. 1993), and, moreover, the increased disparities reflect the *increase* in mortality for disadvantaged Americans (Ezzati et al. 2008). In the last two decades of the 20th century, 20 percent of women and 4 percent of men experienced a stagnation or decline in longevity, despite the continued increases in life expectancy for the population as a whole (Ezzati et al. 2008). This stagnation or rise in mortality was caused by the higher prevalence of cancer, COPD due to smoking, and diabetes (Ezzati et al. 2008).

Yoon et al. (2014) provided a different perspective on inequalities in leading causes of death. Focusing on deaths occurring prior to age 80, they compared the deaths in every U.S. state to the one that had the lowest mortality for this cause. This analysis enabled them to determine that if every state lowered mortality to the level of the lowest state, mortality would decline by between 21 percent for cancer and 38 percent for chronic lower respiratory disease and unintentional injuries.

Leading Causes of Mortality

Table 5.1 shows the top 10 leading causes of mortality in the United States, the proportion of all deaths due to each cause, as well as the sex and race death ratios due to each cause. Seven of these leading 10 are chronic diseases, and the top two—heart disease and cancer—comprise nearly half of all deaths in the United States (Johnson et al. 2014).

The list of leading causes of death has remained relatively stable for years. However, deaths due to heart disease, while still the leading group, have been declining to a point when, if current trends continue, cancers will become the leading cause of death in the next several years (Johnson et al. 2014). For nearly half a century, the third leading cause was cerebrovascular diseases—as of 2008: however, this cause was superseded by chronic lower respiratory disease (Johnson et al. 2014).

Table 5.1 Top 10 Leading Causes of Mortality, and Gender and Race Ratios for Each

Rank	Cause of Death	Percent of Total	Male:Female	Black:White
1	Diseases of heart (heart disease)	24.2	1.4	1.2
2	Malignant neoplasms (cancer)	23.3	1.6	1.3
3	Chronic lower respiratory diseases	5.6	1.4	1.2
4	Cerebrovascular diseases (stroke)	5.2	1.3	0.7
5	Accidents (unintentional injuries)	4.9	1.0	1.4
6	Alzheimer's disease	3.4	2.0	0.8
7	Diabetes mellitus (diabetes)	2.8	0.8	0.8
8	Nephritis, nephrotic syndrome and nephrosis (kidney disease)	2.8	1.4	2.0
9	Influenza and pneumonia	2.0	1.4	2.1
10	Intentional self-harm (suicide)	1.6	1.4	1.1

Source: Authors' summaries, based on data in Johnson et al. (2014).

The male:female ratio and the black:white ratio in Table 5.1 represent the risk of dying for one group relative to another group. For all leading causes except diabetes, the death rates were higher for men compared to women; and for 7 out of the 10 leading conditions the death rates were higher for black than white Americans. Death rates for the top two causes of death, heart disease and cancer, have declined since 2009. On a positive note, the black to white differences have narrowed slightly over time, to 4.1 years in 2010 although the age-adjusted death rate for the black population remains 1.2 times the rate for the non-Hispanic white population (Murphy, Xu and Kochanek 2013). The group with the highest life expectancy is Hispanic females, who can expect to live 83.8 years, followed by non-Hispanic white females with a life expectancy of 81.1 years, and Hispanic males at 78.5 years—however, caution is required because mortality for Hispanics is underreported by about 5 percent (Murphy, Xu and Kochanek 2013).

Conclusions

Throughout the 20th century, Americans added a tremendous number of years to life, in large part thanks to more effective medical and pharmaceutical interventions. Life expectancy is continuing to grow in the first part of the 21st century—at this point, however, the question of adding *life to years* is becoming increasingly urgent. What are the trends and inequalities in the health status, and perhaps quality of life, of older Americans?

The question of morbidity burden among older adults in the United States is critical not only because of the high burden of chronic diseases with respect to health-care cost, which is already higher in the United States than anywhere else in the world, but also due to other outcomes. Chronic diseases are expensive to treat, negatively impact quality of life, increase the probability of activity limitations and disability, are associated with increased use of health care, and predict higher mortality (Barnett et al. 2012, FIFARS 2012). With respect to health-care costs for older adults, 80 percent of all Medicare spending goes toward individuals with five or more conditions (Anderson 2010). Morbidity and poor health in general have profound consequences in different areas of life, including labor force participation. Older adults who experience health problems or health declines are more likely to exit the labor force (Mutchler et al. 1999). Those who remain in the labor force are more likely to change jobs, likely toward those where their limitations can be accommodated. About half of older workers in poor health who leave the labor force prematurely apply for disability benefits (Bound et al. 1999).

The challenges are enormous. American society is aging, with the proportion of older adults inching toward 20 percent. At the same time, as the trends in morbidity reviewed above showed, the prevalence of leading chronic conditions are not systematically declining and in some cases are increasing. Additionally, vast socioeconomic and race/ethnic disparities persist for many diseases and for mortality.

What are some directions toward solutions? One message is that prevention is key. Helping individuals lead healthier lives will decrease the incidence and prevalence of most chronic diseases and, in turn, disability. Successful prevention strategies however, must go beyond the individual and need to be oriented at the community, state, and national levels. This perspective is clear from the fundamental causes approach to health: upstream socioeconomic factors put individuals at *risk for risks* such as smoking or lack of physical activity (Link and Phelan 1995).

The American health-care system remains focused on diagnosis and curing acute diseases rather than the prevention and ongoing treatment of chronic disease (CDC 2009a). The U.S. health-care system therefore needs to be reoriented toward long-term care for patients with often multiple chronic diseases. Second, the system, which has achieved tremendous progress on curing acute illness and injury, must reorient itself from this focus toward preventing chronic illness onset and management. Third, health disparities must be reduced and eliminated. And finally, all health intervention needs to include the entire life course, as the risk factors for chronic illness develop years or decades prior to the diagnosis of a condition.

References

Akinbami, Lara J. and Xiang Liu. 2013. "Chronic Obstructive Pulmonary Disease among Adults Aged 18 and over in the United States, 1998–2009." *Women* 6:8.

Alzheimer's Association. 2014. "2014 Alzheimer's Disease: Facts and Figures." *Alzheimer's & Dementia* 10(2). Retrieved from https://www.alz.org/downloads/facts_figures_2014.pdf

American Medical Association. 2013, "Obesity as a Disease: AMA Adopts New Policies on Second Day of Voting at Annual Meeting." Retrieved March 18, 2015, 2015 (http://www.ama-assn.org/ama/pub/news/news/2013/2013-06-18-new-ama-policies-annual-meeting.page).

Anderson, Gerard. 2010. "Chronic Conditions: Making the Case for Ongoing Care." Princeton, NJ: Robert Wood Johnson Foundation.

Aneshensel, Carol S. 1992. "Social Stress: Theory and Research." *Annual Review of Sociology* 18:15–38.

Antonovsky, Aaron. 1979. "Health, Stress, and Coping." San Francisco, CA: Jossey-Bass.

Baker, Frank, Maxine Denniston, Tenbroeck Smith and Michele M. West. 2005. "Adult Cancer Survivors: How Are They Faring?" *Cancer* 104(S11):2565–76.

Barnett, Karen, Stewart W. Mercer, Michael Norbury, Graham Watt, Sally Wyke and Bruce Guthrie. 2012. "Epidemiology of Multimorbidity and Implications for Health Care, Research, and Medical Education: A Cross-Sectional Study." *The Lancet* 380(9836):37–43. doi: http://dx.doi.org/10.1016/S0140-6736(12)60240-2.

Bell, Felicitie C. and Michael L. Miller. 2011. "Life Tables for the United States Social Security Area 1900–2100: Actuarial Study No. 120." Washington, DC: US Social Security Administration.

Bouchery, Ellen E., Henrick J. Harwood, Jeffrey J. Sacks, Carol J. Simon and Robert D. Brewer. 2011. "Economic Costs of Excessive Alcohol Consumption in the U.S., 2006." *American Journal of Preventive Medicine* 41(5):516–24. doi: http://dx.doi.org/10.1016/j.amepre.2011.06.045.

Bound, John, Michael Schoenbaum, Todd R. Stinebrickner and Timothy Waidmann. 1999. "The Dynamic Effects of Health on the Labor Force Transitions of Older Workers." *Labour Economics* 6(2):179–202. doi: http://dx.doi.org/10.1016/S0927-5371(99)00015-9.

BRFSS. 2009, "Prevalence and Trends Data [Internet]." Atlanta, GA: Centers for Disease Control and Prevention. Retrieved March 31, 2015 (http://apps.nccd.cdc.gov/brfss/page.asp?cat=AC&yr=2007&state=US#AC).

Brown, Martin L., Joseph Lipscomb and Claire Snyder. 2001. "The Burden of Illness of Cancer: Economic Cost and Quality of Life." *Annual Review of Public Health* 22:91–113.

Butler, Robert N., Regina Davis, Carole B. Lewis, Miriam E. Nelson and Elton Strauss. 1998. "Physical Fitness: Benefits of Exercise for the Older Patient." *Geriatrics* 53(10):46–62.

Caffrey, Christine, Manisha Sengupta, Eunice Park-Lee and Lauren Harris-Kojetin. 2012. *Residents Living in Residential Care Facilities: United States, 2010*. Congress, NCHS data brief (http://www.cdc.gov/nchs/data/databriefs/db91.pdf).

Case, Anne and Christina Paxson. 2005. "Sex Differences in Morbidity and Mortality." *Demography* 42(2):189–214.

CDC. 2005. "Racial/Ethnic Differences in the Prevalence and Impact of Doctor-Diagnosed Arthritis—United States, 2002." *MMWR: Morbidity and Mortality Weekly Report* 54(5):119.

CDC. 2008. "Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses—United States, 2000–2004." *MMWR: Morbidity and Mortality Weekly Report* 57(45):1226.

CDC. 2009a. *The Power of Prevention: Chronic Disease . . . The Public Health Challenge of the 21st Century Congress* (http://www.cdc.gov/chronicdisease/pdf/2009-Power-of-Prevention.pdf).

CDC. 2009b. "Prevalence and Most Common Causes of Disability among Adults—United States, 2005." *MMWR: Morbidity & Mortality Weekly Report* 58(16):421–26.

CDC. 2013a, "Alcohol and Public Health: Alcohol-Related Disease Impact (ARDI) Application." Retrieved February 12, 2015 (http://apps.nccd.cdc.gov/DACH_ARDI/Default/Default.aspx).

CDC. 2013b. "Prevalence of Doctor-Diagnosed Arthritis and Arthritis-Attributable Activity Limitation—United States, 2010–2012." *MMWR. Morbidity and Mortality Weekly Report* 62(44):869–71.

CDC. 2014. "National Diabetes Statistics Report: Estimates of Diabetes and Its Burden in the United States, 2014." Atlanta, GA: U.S. Department of Health and Human Services (http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf).

Chartier, Karen and Raul Caetano. 2010. "Ethnicity and Health Disparities in Alcohol Research." *Alcohol Research & Health* 33(1–2):152.

Chatterji, Somnath, Julie Byles, David Cutler, Teresa Seeman and Emese Verdes. 2015. "Health, Functioning, and Disability in Older Adults—Present Status and Future Implications." *The Lancet*. doi: http://dx.doi.org/10.1016/S0140-6736(14)61462-8.

Clark, Rodney, Norman B. Anderson, Vernessa R. Clark and David R. Williams. 1999. "Racism as a Stressor for African Americans: A Biopsychosocial Model." *American Psychologist* 54(10):805–16. doi: 10.1037/0003-066X.54.10.805.

Clegg, Limin X., Marsha E. Reichman, Barry A. Miller, Benjamin F. Hankey, Gopal K. Singh, Yi Dan Lin, Marc T. Goodman, Charles F. Lynch, Stephen M. Schwartz, Vivien W. Chen, Leslie Bernstein, Scarlett L. Gomez, John J. Graff, Charles C. Lin, Norman J. Johnson and Brenda K. Edwards. 2009. "Impact of Socioeconomic Status on Cancer Incidence and Stage at Diagnosis: Selected Findings from the Surveillance, Epidemiology, and End Results: National Longitudinal Mortality Study." *Cancer Causes & Control* 20(4):417–35. doi: 10.1007/s10552-008-9256-0.

CMMS. 2013, "Chronic Conditions among Medicare Beneficiaries, Chartbook, 2012 Edition." Baltimore, MD: U.S. DHHS. (http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Downloads/2012Chartbook.pdf).

Cockerham, William C. 2005. "Health Lifestyle Theory and the Convergence of Agency and Structure." *Journal of Health and Social Behavior* 46(1):51–67. doi: 10.2307/4147653.

Crimmins, Eileen, JungKi Kim and Sarinnapha Vasunilashorn. 2010. "Biodemography: New Approaches to Understanding Trends and Differences in Population Health and Mortality." *Demography* 47(1):S41–64. doi: 10.1353/dem.2010.0005.

Crimmins, Eileen M. and Hiram Beltrán-Sánchez. 2011. "Mortality and Morbidity Trends: Is There Compression of Morbidity?" *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* 66B(1):75–86. doi: 10.1093/geronb/gbq088.

de Moor, Janet S., Angela B. Mariotto, Carla Parry, Catherine M. Alfano, Lynne Padgett, Erin E. Kent, Laura Forsythe, Steve Scoppa, Mark Hachey and Julia H. Rowland. 2013. "Cancer Survivors in the United States: Prevalence across the Survivorship Trajectory and Implications for Care." *Cancer Epidemiology Biomarkers & Prevention*. doi: 10.1158/1055-9965.epi-12-1356.

Elsawy, Bassem and Kim E. Higgins. 2010. "Physical Activity Guidelines for Older Adults." *American Family Physician* 81(1):55–59.

Ezzati, Majid, Ari B. Friedman, Sandeep C. Kulkarni and Christopher J.L. Murray. 2008. "The Reversal of Fortunes: Trends in County Mortality and Cross-County Mortality Disparities in the United States." *PLoS Medicine* 5(4):e66.

FIFARS. 2012. "Older Americans 2012: Key Indicators of Well-Being." Washington, DC: U.S. Government Printing Office (http://www.agingstats.gov/main_site/data/2012_documents/docs/entirechartbook.pdf).

Fiscella, Kevin and Daniel Tancredi. 2008. "Socioeconomic Status and Coronary Heart Disease Risk Prediction." *Journal of the American Medical Association* 300(22):2666–68.

Fortin, Martin, Gina Bravo, Catherine Hudon, Alain Vanasse and Lise Lapointe. 2005. "Prevalence of Multimorbidity among Adults Seen in Family Practice." *Annals of Family Medicine* 3(3):223–28.

Fortin, Martin, Marie-France Dubois, Catherine Hudon, Hassan Soubhi and José Almirall. 2007. "Multimorbidity and Quality of Life: A Closer Look." *Health and Quality of Life Outcomes* 5:52–59. doi: 10.1186/1477-7525-5-52.

Freedman, Vicki, Brenda Spillman, Patti Andreski, Jennifer Cornman, Eileen Crimmins, Ellen Kramarow, James Lubitz, Linda Martin, Sharon Merkin, Robert Schoeni, Teresa Seeman and Timothy Waidmann. 2013. "Trends in Late-Life Activity Limitations in the United States: An Update from Five National Surveys." *Demography* 50(2):661–71. doi: 10.1007/s13524-012-0167-z.

Freedman, Vicki A., Linda G. Martin and Robert F. Schoeni. 2002. "Recent Trends in Disability and Functioning among Older Adults in the United States: A Systematic Review." *Journal of the American Medical Association* 288(24):3137–46.

Freedman, Vicki A., Robert F. Schoeni, Linda G. Martin and Jennifer C. Cornman. 2007. "Chronic Conditions and the Decline in Late-Life Disability." *Demography* 44(3):459–77. doi: 10.2307/30053097.

Garrett, Bridgette E., Shanta R. Dube, Angela Trosclair, Ralph S. Caraballo, Terry F. Pechacek, Centers for Disease Control and Prevention. 2011. "Cigarette Smoking—United States, 1965–2008." *MMWR: Morbidity and Mortality Weekly Report* 60(Suppl.):109–13.

Go, Alan S., Dariush Mozaffarian, Véronique L. Roger, Emelia J. Benjamin, Jarett D. Berry, et al. 2014. "Heart Disease and Stroke Statistics—2014 Update: A Report from the American Heart Association." *Circulation* 129(3):e28–e292. doi: 10.1161/01.cir.0000441139.02102.80.

Gorman, Bridget K. and Jen'nan Ghazal Read. 2006. "Gender Disparities in Adult Health: An Examination of Three Measures of Morbidity." *Journal of Health and Social Behavior* 47(2):95–110. doi: 10.2307/30040304.

Guy, Gery P., Donatus U. Ekwueme, K. Robin Yabroff, Emily C. Dowling, Chunyu Li, Juan L. Rodriguez, Janet S. de Moor and Katherine S. Virgo. 2013. "Economic Burden of Cancer Survivorship among Adults in the United States." *Journal of Clinical Oncology*. doi: 10.1200/jco.2013.49.1241.

Haskell, William L., I. Lee, Russell R. Pate, Kenneth E. Powell, Steven N. Blair, Barry A. Franklin, Caroline A. Macera, Gregory W. Heath, Paul D. Thompson and Adrian Bauman. 2007. "Physical Activity and Public Health: Updated Recommendation for Adults from the American College of Sports Medicine and the American Heart Association." *Medicine and Science in Sports and Exercise* 39(8):1423–34.

Hebert, Liesi E., Jennifer Weuve, Paul A. Scherr and Denis A. Evans. 2013. "Alzheimer Disease in the United States (2010–2050) Estimated Using the 2010 Census." *Neurology* 80(19):1778–83.

Hewitt, Maria, Julia H. Rowland and Rosemary Yancik. 2003. "Cancer Survivors in the United States: Age, Health, and Disability." *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences* 58(1):82–91.

Howlader, Nadia, Anne-Michele Noone, Martin Krapcho, Jessica Garshell and Daniel S. Miller. 2014, "Seer Cancer Statistics Review, 1975–2011," Bethesda, MD: National Cancer Institute. Retrieved March 20, 2015 (http://seer.cancer.gov/csr/1975_2011/).

Hubert, Helen B., Manning Feinleib, Patricia M. McNamara and William P. Castelli. 1983. "Obesity as an Independent Risk Factor for Cardiovascular Disease: A 26-Year Follow-up of Participants in the Framingham Heart Study." *Circulation* 67(5):968–77. doi: 10.1161/01.cir.67.5.968.

Jamal, Ahmed, Israel T. Agaku, Erin O'Connor, Brian A. King, John B. Kenemer and Linda Neff. 2014. "Current Cigarette Smoking among Adults—United States, 2005–2013." *MMWR: Morbidity and Mortality Weekly Report* 63(47):1108–12.

Johnson, Nicole Blair, Locola D. Hayes, Kathryn Brown, Elizabeth C. Hoo and Kathleen A. Ethier. 2014. "CDC National Health Report: Leading Causes of Morbidity and Mortality and Associated Behavioral Risk and Protective Factors—United States, 2005–2013." *MMWR: Surveillance Summaries* 63(4):3–27.

Juan, Wen Y., Mark Lino and P. Peter Basiotis. 2004. "Quality of Diets of Older Americans." *Nutrition Insights*.

Juan, Wen Y., Patricia M. Guenther and Phillip S. Kott. 2009. "Diet Quality of Older Americans in 1994–96 and 2001–02 as Measured by the Healthy Eating Index—2005." *Nutrition Insight 41*. Alexandria, VA: USDA, Center for Nutrition Policy and Promotion (http://www.cnpp.usda.gov/sites/default/files/nutrition_insights_uploads/Insight41.pdf).

Kochanek, Kenneth D., Elizabeth Arias and Robert N. Anderson. 2013. "How Did Cause of Death Contribute to Racial Differences in Life Expectancy in the United States in 2010." *NCHS Data Brief* 125:1–8.

Krebs Smith, Susan M., Patricia M. Guenther, Amy F. Subar, Sharon I. Kirkpatrick and Kevin W. Dodd. 2010. "Americans Do Not Meet Federal Dietary Recommendations." *The Journal of Nutrition*. doi: 10.3945/jn.110.124826.

Lawrence, Reva C., David T. Felson, Charles G. Helmick, Lesley M. Arnold, Hyon Choi, Richard A. Deyo, Sherine Gabriel, Rosemarie Hirsch, Marc C. Hochberg, Gene G. Hunder, Joanne M. Jordan, Jeffrey N. Katz, Hilal Maradit Kremers, Frederick Wolfe and Workgroup National Arthritis Data. 2008. "Estimates of the Prevalence of Arthritis and Other Rheumatic Conditions in the United States: Part II." *Arthritis & Rheumatism* 58(1):26–35. doi: 10.1002/art.23176.

Lazarus, Richard S. and Susan Folkman. 1984. *Stress, Appraisal, and Coping*. New York, NY: Springer Publishing Company.

Letenneur, Luc, Veronique Gilleron, Daniel Commenges, Catherine Helmer, Jean-Marc Orgogozo and Jean-Francois Dartigues. 1999. "Are Sex and Educational Level Independent Predictors of Dementia and Alzheimer's Disease? Incidence

Data from the Paquid Project." *Journal of Neurology, Neurosurgery & Psychiatry* 66(2):177–83. doi: 10.1136/jnnp.66.2.177.

Lindsay, Joan, Danielle Laurin, René Verreault, Réjean Hébert, Barbara Helliwell, Gerry B. Hill and Ian McDowell. 2002. "Risk Factors for Alzheimer's Disease: A Prospective Analysis from the Canadian Study of Health and Aging." *American Journal of Epidemiology* 156(5):445–53. doi: 10.1093/aje/kwf074.

Link, Bruce G. and Jo Phelan. 1995. "Social Conditions as Fundamental Causes of Disease." *Journal of Health and Social Behavior* Extra Issue: 80–94.

Link, Bruce G. and Jo Phelan. 1996. "Understanding Sociodemographic Differences in Health—the Role of Fundamental Social Causes." *American Journal of Public Health* 86(4):471–72.

Link, Bruce G., Mary E. Northridge, Jo C. Phelan and Michael L. Ganz. 1998. "Social Epidemiology and the Fundamental Cause Concept: On the Structuring of Effective Cancer Screens by Socioeconomic Status." *Milbank Quarterly* 76(3):375–402, 304–05.

Luo, Ye and Linda J. Waite. 2005. "The Impact of Childhood and Adult SES on Physical, Mental, and Cognitive Well-Being in Later Life." *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* 60(2):S93–S101. doi: 10.1093/geronb/60.2.S93.

Lynch, John, George D. Smith, Sam Harper and Kathleen Bainbridge. 2006. "Explaining the Social Gradient in Coronary Heart Disease: Comparing Relative and Absolute Risk Approaches." *Journal of Epidemiology and Community Health (1979–)* 60(5):436–41. doi: 10.2307/40793976.

Macintyre, Sally, Kate Hunt and Helen Sweeting. 1996. "Gender Difference in Health: Are Things Really as Simple as They Seem?" *Social Science and Medicine* 42(4):617–24.

Manly, Jennifer J. and Richard Mayeux. 2004. "Ethnic Differences in Dementia and Alzheimer's Disease." Pp. 95–145 in *Critical Perspectives on Racial and Ethnic Differences in Health in Late Life*, edited by N. B. Anderson, R. A. Bulatao and B. Cohen. Washington, DC: National Academies Press.

Manton, Kenneth G., XiLiang Gu and Vicki L. Lamb. 2006. "Change in Chronic Disability from 1982 to 2004/2005 as Measured by Long-Term Changes in Function and Health in the U.S. Elderly Population." *Proceedings of the National Academy of Sciences* 103(48):18374–79. doi: 10.1073/pnas.0608483103.

Markides, Kyriakos S. and Karl Eschbach. 2011. "Hispanic Paradox in Adult Mortality in the United States." Pp. 227–40 in *International Handbook of Adult Mortality*. New York, NY: Springer.

Martin, Linda G., Vicki A. Freedman, Robert F. Schoeni and Patricia M. Andreski. 2010. "Trends in Disability and Related Chronic Conditions among People Aged Fifty to Sixty-Four." *Health Affairs* 29(4):725–31. doi: 10.1377/hlthaff.2008.0746.

Martin, Linda G., Robert F. Schoeni and Patricia M. Andreski. 2010. "Trends in Health of Older Adults in the United States: Past, Present, Future." *Demography* 47(1):S17–40. doi: 10.1353/dem.2010.0003.

Martin, Linda G. and Robert F. Schoeni. 2014. "Trends in Disability and Related Chronic Conditions among the Forty-and-over Population: 1997–2010." *Disability and Health Journal* 7(1, Suppl.):S4–S14. doi: http://dx.doi.org/10.1016/j.dhjo.2013.06.007.

Mendis, Shanthi. 2014. "Global Status Report on Noncommunicable Diseases 2014." Geneva, Switzerland: World Health Organization.

Meyer, Madonna Harrington and Pamela Herd. 2007. "Market Friendly or Family Friendly? The State and Gender Inequality in Old Age." New York, NY: Russell Sage Foundation.

Mitka, Mike. 2012. "Heart Disease and Stroke Deaths Fall, but Some Fear a Reverse in the Trend." *Journal of the American Medical Association* 307(6):550–52.

Mokdad, Ali H., Earl S. Ford, Barbara A. Bowman, William H. Dietz, Frank Vinicor, Virginia S. Bales and James S. Marks. 2003. "Prevalence of Obesity, Diabetes, and Obesity-Related Health Risk Factors, 2001." *Journal of the American Medical Association* 289(1):76–79.

Montez, Jennifer Karas, Robert A. Hummer, Mark D. Hayward, Hyeyoung Woo and Richard G. Rogers. 2011. "Trends in the Educational Gradient of U.S. Adult Mortality from 1986 through 2006 by Race, Gender, and Age Group." *Research on Aging* 33(2):145–71. doi: 10.1177/0164027510392388.

Mozaffarian, Dariush, Emelia J. Benjamin, Alan S. Go, Donna K. Arnett, Michael J. Blaha, Mary Cushman, Sarah de Ferranti, Jean-Pierre Després, Heather J. Fullerton and Virginia J. Howard. 2015. "Executive Summary: Heart Disease and Stroke Statistics—2015 Update. A Report from the American Heart Association." *Circulation* 131(4):434–41.

Murphy, Sherry L., Jiaquan Xu and Kenneth D. Kochanek. 2013. "Deaths: Final Data for 2010." *National Vital Statistics Reports* 61(4):1–118.

Murray, Christopher J. L., Sandeep C. Kulkarni, Catherine Michaud, Niels Tomijima, Maria T. Bulzacchelli, Terrell J. Iandiorio, Majid Ezzati and Thomas Novotny. 2006. "Eight Americas: Investigating Mortality Disparities across Races, Counties, and Race-Counties in the United States." *PLoS Medicine* 3(9). doi: http://dx.doi.org/10.1371/journal.pmed.0030260.

Mutchler, Jan E., Jeffrey A. Burr, Michael P. Massagli and Amy Pienta. 1999. "Work Transitions and Health in Later Life." *The Journals of Gerontology, Series, B: Psychological Sciences and Social Sciences* 54B(5):S252–61. doi: 10.1093/geronb/54B.5.S252.

Nagi, Saad Z. 1965. "Some Conceptual Issues in Disability and Rehabilitation." Pp. 100–13 in *Sociology and Rehabilitation*, edited by Marvin B. Sussman. Washington, DC: American Sociological Association.

Nagi, Saad Z. 1976. "An Epidemiology of Disability among Adults in the United States." *Milbank Quarterly* 54(4):439–67. doi: 10.2307/3349677.

National Cancer Institute. 2015. "Fast Stats: An Interactive Tool for Access to Seer Cancer Statistics." Surveillance Research Program.

NCHS. 2013. *Health, United States, 2012: With Special Feature on Emergency Care*. Congress.

NCHS. 2014. *Health, United States, 2013: Special Feature on Prescription Drugs*. Congress (http://www.cdc.gov/nchs/data/hus/hus13.pdf).

Nelson, Miriam E., W. Jack Rejeski, Steven N. Blair, Pamela W. Duncan, James O. Judge, Abby C. King, Carol A. Macera and Carmen Castaneda-Sceppa. 2007. "Physical Activity and Public Health in Older Adults: Recommendation from the American College of Sports Medicine and the American Heart Association." *Circulation* 116(9):1094–104.

Noymer, Andrew. 2005, "Life Expectancy in the USA, 1900–98." Retrieved March 25, 2015 (http://demog.berkeley.edu/~andrew/1918/figure2.html).

Ogden, Cynthia L., Margaret D. Carroll, Brian K. Kit and Katherine M. Flegal. 2014. "Prevalence of Childhood and Adult Obesity in the United States, 2011–2012." *Journal of the American Medical Association* 311(8):806–14.

Ortman, Jennifer M., Victoria A. Velkoff and Howard Hogan. 2014. *An Aging Nation: The Older Population in the United States*. P25-1140 Congress. Current Population Reports (http://www.census.gov/prod/2014pubs/p25–1140.pdf).

Pappas, Gregory, Susan Queen, Wilbur Hadden and Gail Fisher. 1993. "The Increasing Disparity in Mortality between Socioeconomic Groups in the United States, 1960 and 1986." *New England Journal of Medicine* 329(2):103–09.

Pearlin, Leonard I. 1989. "The Sociological Study of Stress." *Journal of Health and Social Behavior* 30(3):241–56. doi: 10.2307/2136956.

Quiñones, Ana R., Jersey Liang, Joan M. Bennett, Xiao Xu and Wen Ye. 2011. "How Does the Trajectory of Multimorbidity Vary across Black, White, and Mexican Americans in Middle and Old Age?" *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* 66B(6):739–49. doi: 10.1093/geronb/gbr106.

Read, Jen'nan Ghazal and Bridget K. Gorman. 2010. "Gender and Health Inequality." *Annual Review of Sociology* 36(1):371–86. doi: 10.1146/annurev.soc.012809.102535.

Redfoot, Donald L., Ari Houser and AARP Public Policy Institute. 2010. "More Older People with Disabilities Living in the Community: Trends from the National Long-Term Care Survey, 1984–2004." Washington, DC: AARP Public Policy Institute (http://assets.aarp.org/rgcenter/ppi/ltc/2010-08-disability.pdf).

Rehm, Jürgen, Robin Room, Kathryn Graham, Maristela Monteiro, Gerhard Gmel and Christopher T. Sempos. 2003. "The Relationship of Average Volume of Alcohol Consumption and Patterns of Drinking to Burden of Disease: An Overview." *Addiction* 98(9):1209–28. doi: 10.1046/j.1360-0443.2003.00467.x.

Schoenborn, Charlotte A., Patricia F. Adams and Jennifer A. Peregoy. 2013. "Health Behaviors of Adults: United States, 2008–2010." *Vital and Health Statistics. Series 10, Data from the National Health Survey* 257:1–184.

Schoeni, Robert F., Linda G. Martin, Patricia M. Andreski and Vicki A. Freedman. 2005. "Persistent and Growing Socioeconomic Disparities in Disability among the Elderly: 1982–2002." *American Journal of Public Health* 95(11):2065–70.

Schoeni, Robert F., Vicki A. Freedman and Linda G. Martin. 2008. "Why Is Late-Life Disability Declining?" *Milbank Quarterly* 86(1):47–89. doi: 10.1111/j.1468-0009.2007.00513.x.

Seeman, Teresa E., Sharon S. Merkin, Eileen M. Crimmins and Arun S. Karlamangla. 2010. "Disability Trends among Older Americans: National Health and Nutrition Examination Surveys, 1988–1994 and 1999–2004." *American Journal of Public Health* 100(1):100–07. doi: 10.2105/AJPH.2008.157388.

Shay, Christina M., Hongyan Ning, Norrina B. Allen, Mercedes R. Carnethon, Stephanie E. Chiuve, Kurt J. Greenlund, Martha L. Daviglus and Donald M. Lloyd-Jones. 2012. "Status of Cardiovascular Health in US Adults: Prevalence Estimates from the National Health and Nutrition Examination Surveys (NHANES) 2003–2008." *Circulation* 125(1):45–56. doi: 10.1161/circulationaha.111.035733.

Siegel, Rebecca, Jiemin Ma, Zhaohui Zou and Ahmedin Jemal. 2014. "Cancer Statistics, 2014." *CA: A Cancer Journal for Clinicians* 64(1):9–29. doi: 10.3322/caac.21208.

Thacker, Stephen B., Donna F. Stroup, Vilma Carande-Kulis, James S. Marks, Kakoli Roy and Julie L. Gerberding. 2006. "Measuring the Public's Health." *Public Health Reports* 121(1):14–22.

Thoits, Peggy A. 1995. "Stress, Coping, and Social Support Processes: Where Are We? What Next?" *Journal of Health and Social Behavior* Extra Issue:53–79.

Thompson, William W., David K. Shay, Eric Weintraub, Lynnette Brammer, Carolyn B. Bridges, Nancy J. Cox and Keiji Fukuda. 2004. "Influenza-Associated Hospitalizations in the United States." *Journal of the American Medical Association* 292(11):1333–40.

Tomasetti, Cristian and Bert Vogelstein. 2015. "Variation in Cancer Risk among Tissues Can Be Explained by the Number of Stem Cell Divisions." *Science* 347(6217):78–81. doi: 10.1126/science.1260825.

Tucker, Margaret A. and Alisa M. Goldstein. 2003. "Melanoma Etiology: Where Are We?" *Oncogene* 22(20):3042–52.

Tucker-Seeley, Reginald D., Yi Li, Glorian Sorensen and S.V. Subramanian. 2011. "Lifecourse Socioeconomic Circumstances and Multimorbidity among Older Adults." *BMC Public Health* 11(1):313.

Turner, R. Jay, Blair Wheaton and Donald A. Lloyd. 1995. "The Epidemiology of Social Stress." *American Sociological Review* 60(1):104–26.

USDA. 2010. *Dietary Guidelines for Americans 2010 (7th Ed.)*. Congress.

Üstün, T. Bedirhan. 2010. *Measuring Health and Disability: Manual for WHO Disability Assessment Schedule WHODAS 2.0*. Geneva, Switzerland: World Health Organization.

Verbrugge, Lois M. 1986. "From Sneezes to Adieux: Stages of Health for American Men and Women." *Social Science & Medicine* 22(11):1195–212.

Verbrugge, Lois M. and Alan M. Jette. 1994. "The Disablement Process." *Social Science and Medicine* 38(1):1–14.

Verbrugge, Lois M. and Xian Liu. 2014. "Midlife Trends in Activities and Disability." *Journal of Aging and Health* 26(2):178–206. doi: 10.1177/0898264313508189.

Viegi, Giovanni, Antonio Scognamiglio, Sandra Baldacci, Francesco Pistelli and Laura Carrozzi. 2000. "Epidemiology of Chronic Obstructive Pulmonary Disease (COPD)." *Respiration* 68(1):4–19.

Vincent, Grayson K. and Victoria A. Velkoff. 2010. *The Next Four Decades, the Older Population in the United States: 2010 to 2050*. P25-1138 Congress. Current Population Reports (http://www.census.gov/prod/2010pubs/p25-1138.pdf).

Waldron, Ingrid. 1991. "Patterns and Causes of Gender Differences in Smoking." *Social Science and Medicine* 32(9):989–1005.

Ward, Brian W. and Jeannine S. Schiller. 2013. "Prevalence of Multiple Chronic Conditions among US Adults: Estimates from the National Health Interview Survey, 2010." *Preventing Chronic Disease* 10:1–15.

Ward, Elizabeth, Ahmedin Jemal, Vilma Cokkinides, Gopal K. Singh, Cheryll Cardinez, Asma Ghafoor and Michael Thun. 2004. "Cancer Disparities by Race/Ethnicity and Socioeconomic Status." *CA: A Cancer Journal for Clinicians* 54(2):78–93.

WHO. 2015a. "National Health Account Database." Retrieved March 31, 2015 (http://apps.who.int/nha/database/ViewData/Indicators/en).

WHO. 2015b, "Overweight and Obesity: Fact Sheet No. 311: World Health Organization." Retrieved March 31, 2015 (http://www.who.int/mediacentre/factsheets/fs311/en/).

Wilkinson, Richard G. 1996. *Unhealthy Societies: The Afflictions of Inequality*. New York, NY: Routledge.

Wilkinson, Richard G. and Michael G. Marmot, eds. 2003. *Social Determinants of Health: The Solid Facts*. Copenhagen, Denmark: World Health Organization.

Williams, David R. and Chiquita Collins. 1995. "US Socioeconomic and Racial Differences in Health: Patterns and Explanations." *Annual Review of Sociology* 21:349–86.

Winkleby, Marilyn A., Darius E. Jatulis, Erica Frank and Stephen P. Fortmann. 1992. "Socioeconomic Status and Health: How Education, Income, and Occupation Contribute to Risk Factors for Cardiovascular Disease." *American Journal of Public Health* 82(6):816–20.

World Health Organization. 1948. "Preamble to the Constitution of the World Health Organization as Adopted by the International Health Conference." Paper presented at the New York, June, 19–22, 1946; signed on July, 22, 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on April, 7, 1948.

Yoon, Paula W., Brigham Bastian, Robert N. Anderson, Janet L. Collins and Harold W. Jaffe. 2014. "Potentially Preventable Deaths from the Five Leading Causes of Death—United States, 2008–2010." *Morbidity and Mortality Weekly Report* 63(17):369–74.

Zajacova, Anna, Noreen Goldman and German Rodriguez. 2009. "Unobserved Heterogeneity Can Confound the Effect of Education on Mortality." *Mathematical Population Studies* 16(2):153–73.

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CHAPTER SIX

Mental Health, Cognitive Ability, and Dementia across the Life Course

Donna D. McAlpine and Taeho Greg Rhee

Cognitive decline in abilities such as reasoning and memory begin quite early in adulthood and continue to decay throughout one's life course (Salthouse, 2010). Indeed, some decline in cognitive ability is expected as a function of normal biological aging. However, cognitive functioning that is impaired to the extent that it interferes with one's ability to carry out desired activities, be independent, sustain meaningful relationships, and to participate purposefully in life sharply increases in later life. The burden of severe cognitive impairment including the direct and indirect economic costs, diminished quality of life, increased morbidity and mortality, and deleterious impact on family and friends is tremendous (Alzheimer's Association [AA], 2014).

In contrast to observed trends in risk for cognitive impairments over the life course, the prevalence of other common mental health problems such as depression and anxiety appear to decline with age (Kessler et al., 2005). However, symptoms of other psychiatric disorders often cooccur with cognitive impairments (Gauthier et al., 2010; Lyketsos et al., 2002); for example, persons with cognitive disorders may also feel apathetic, agitated, or depressed. The comorbidity between types of mental health problems complicates diagnosis, diminishes quality of life, and adds to the burden of disorder.

While it is well documented that genetics plays a role in risk for cognitive impairments and other mental problems, we argue that variation

in the trajectories of people who experience these problems is shaped by social context. Recognizing that the experience of cognitive impairment and other mental health problems for older adults varies with social circumstances allows us to understand differences in prevalence patterns, risks, and outcomes. Most importantly, a life-course framework identifies the important historical, developmental, and social factors that shape how we define mental disorders, who is at risk, and the consequences for individuals and their families (Elder, 1998; Halfon & Hochstein, 2002; Whalley, Dick, & McNeill, 2006).

The Epidemiology of Cognitive Impairments, Mental Health, and Illness

Mental health and mental illness are not simply antonyms and our definitions of what constitutes either vary by culture and time. Mental health is a holistic concept representing an individual's ability to cope or adapt to everyday changes and stress, perform important role functions, and feel that one's life is satisfying and fulfilling (U.S. Department of Health and Human Services, 1999; World Health Organization [WHO], 2014). Keyes (2007), for example, defines mental health in terms of characteristics such as feeling useful, having a sense of belonging and purpose, and feeling in control over the direction of life.

While it is now commonly acknowledged that there is a distinction between mental health and mental illness, much of the focus remains on mental illness or disorder. The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*), now in its fifth major iteration (*DSM-5*), is the major classification system used in the United States to define various types of mental disorders (American Psychiatric Association [APA], 2013). The classification of what constitutes a mental disorder and the symptoms that define each type of disorder are not merely the products of scientific discovery or consensus, but are instead partially the results of sharp political debates among interest groups (Mayes & Horwitz, 2005). The resulting delineations between categories of disorders and between symptoms that constitute each disorder in the DSM are, therefore, often somewhat arbitrary and amorphous. While recognizing that the difference between mental illness and mental health are often unclear and mental disorders are culturally and socially defined, *DSM-5* broadly defines mental disorder as "a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning" (APA, 2013, p. 20).

Earlier versions of the *DSM* were relatively agnostic to age of onset as a criterion to define disorder. The newest edition deliberately lays out the

classification using a life-course perspective, beginning with disorders that typically first occur in early childhood such as developmental disorders progressing through the common disorders of adolescence and adulthood such as depression or anxiety to disorders that most often have first onset in later life including neurocognitive disorders (NCDs).

The major classification of NCD in the *DSM-5* replaced the classification of "delirium, dementia, amnestic and other cognitive disorders" in the previous version of the *DSM* (APA, 2000, p. 135). The authors decided to change the language, partially because the term dementia is stigmatized (Ganguli et al., 2011). Here we continue to use the term dementia, because, like the authors of the *DSM*, we recognize it continues to be widely used both by laypeople and health professionals. NCDs include delirium, a condition marked by sudden problems in awareness and attention. However, the focus of this review is on NCD that have a more gradual onset and are progressive and increase exponentially during later life.

According to the *DSM-5*, NCDs cover deficits in six areas: complex attention such as being easily distracted or having problems retaining new information; executive functions such as planning or decision-making skills; language including problems like forgetting words; learning and memory difficulties such as having problems keeping track of the day; perceptual motor skills such as difficulty following directions; and social cognition, which includes difficulty understanding or conforming to social norms. Most importantly, the most recent version of the *DSM* distinguishes between major neurocognitive disorder (major NCD), and mild or minor neurocognitive disorder (mild NCD). A diagnosis of major NCD, also referred to as dementia in previous versions of the *DSM*, requires evidence of a decline in at least one of the six areas of cognitive functioning that is also of concern to the individual or his or her social networks. The cognitive problems must substantially interfere with an individual's ability to independently perform everyday activities, not only occur during periods of delirium, and not be the result of another mental disorder, such as schizophrenia or depression. The diagnostic category of mild NCD was introduced in the *DSM-5* to cover declines in cognitive performance that do not meet the threshold of major NCD but are of concern to the individual, their social networks, or health professionals. To meet the diagnostic criteria for mild NCD, the decline in cognitive performance does not substantially interfere with being able to perform the tasks of daily life independently, but makes these activities more difficult. The *DSM-5* recognizes that "the distinction between major and mild NCD is inherently arbitrary, and the disorders exist along a continuum." (APA, 2013, p. 608).

The addition of mild NCD was greeted with some controversy. As Wakefield (2013) points out, one of the most publicly vocal critics of the *DSM-5*

was Allen Frances, who was an editor of the previous version of the *DSM*. Frances objected to the expansion of *DSM-5* to include as disorders what might be considered normal emotions and behaviors. In specific reference to the inclusion of mild NCD, Frances (2012) explained:

> The everyday forgetting characteristic of old age will now be misdiagnosed as Minor Neurocognitive Disorder, creating a huge false positive population of people who are not at special risk for dementia. Since there is no effective treatment for this 'condition' (or for dementia), the label provides absolutely no benefit (while creating great anxiety) even for those at true risk for later developing dementia. It is a dead loss for the many who will be mislabeled.

Others support the inclusion of mild NCD, arguing that patients may be "comforted to know their healthcare providers recognize their problem" (Blazer, 2013, pp. 585–586) and may be able to offer some strategies to deal with minor changes in cognitive functioning. Further, there is some evidence that mild forms of cognitive impairment may be precursors to major NCD (AA, 2014), making the identification of mild NCD a promising strategy for early intervention.

It is clear that many people meet the criteria for mild cognitive impairments, although estimates vary widely based on the population surveyed and the measures used (Ward et al., 2012). In a recent national survey of 21 states, almost 13 percent of the population aged 45 and older reported they had experienced increased confusion or memory loss over the past year (Anderson et al., 2015), a crude, but conservative, estimate of what might be considered mild NCD under the *DSM-5*. Moreover, most persons with mild cognitive impairment do not progress to dementia (Petersen et al., 2014). There are reasons, therefore, to be concerned that the *DSM-5* may have overmedicalized cognitive disorders that are mild, transitory, or are a part of normal aging—although it is too soon to tell whether this will result in many more people getting unnecessary treatment and the diversion of resources from those who are more critically ill.

For both major and mild NCD, the *DSM-5* details a variety of subtypes that help specify etiology such as NCD due to Alzheimer's disease, Huntington's disease, Parkinson's disease, vascular disease, and traumatic brain injury (APA, 2013). Distinguishing between various types of NCD in the absence of specific diseases such as Huntington's is often difficult in practice because of a lack of clear biomarkers.

National and global estimates of the various subtypes of mild and major NCD have not caught up with *DSM-5* definitions, and estimates vary with the definitions of disorder that are employed and the populations that

are studied (Wilson et al., 2011). One of the most rigorous studies in the United States is based on data collected in the Aging, Demographics, and Memory Study, a subsample of the National Health and Retirement Survey (Plassman et al., 2007, 2008). In this study, estimates of the prevalence of dementias and cognitive impairment are based on either in-home assessments or personal and proxy interviews. As shown in Table 6.1, about 14 percent of the population over the age of 70 meets the criteria for dementia, with Alzheimer's being the most common cause, affecting about 10 percent of the population. Cognitive impairments that do not meet the criteria for dementia are even more prevalent, impacting approximately 22 percent of the population. Extrapolating these prevalence estimates to the projected U.S. population in 2015 (U.S. Census Bureau Population Division, 2015), almost 4.1 million adults over the age of 70 are living with dementia, and a further 6.4 million are living with significant cognitive impairment that has not met the dementia threshold. It is also clear that the prevalence of both dementia and cognitive impairment significantly increase with age. After the age of 90, more than one in three older adults are living with dementia, and a further two in five are living with significant cognitive impairment. Globally, the prevalence of dementia is also very high, with an estimate of 35.6 million people in 2010 (World Health Organization [WHO] & Alzheimer's Disease International [ADI], 2012).

There is some controversy about whether the incidence of cognitive disorders has changed in recent years. Looking specifically at data from Medicare, the health insurance program that covers almost 100 percent of the population 65 years of age and older in the United States, some studies find an increasing incidence of Alzheimer's (Akushevich et al., 2013). In contrast, other studies conducted with community samples suggest that there has not been an increase in rates of Alzheimer's or other dementias and that instead incidence rates have been relatively stable or have even gone down (Rocca et al., 2011; Sheffield & Peek, 2011). For example, Sheffield and Peek (2011) examine changes in cognitive impairment from 1993 to 2004 using community-dwelling respondents to the Health and Retirement Survey, a large nationally representative study of older adults in the United States. Overall, they found that cognitive impairment declined from about 4 percent of the population over the age of 70 in 1993 to 2 percent in 2004. It is possible that the increase in incidence or prevalence of dementia that has been observed in studies using Medicare data may reflect increased case finding rather than a real increase in rates of disorder. Moreover, a decline in incidence of cognitive disorders may be due to the fact that more recent cohorts of older adults have higher educational achievement than did earlier cohorts (Dodge et al., 2013). However,

Table 6.1 Prevalence of Dementia and Cognitive Impairment without Dementia (CIND) in the United States by Age

	71–79 Years (95% CI)		80–89 Years (95% CI)		≥90 Years (95% CI)		Total (95% CI)	
Dementias								
All	5.0%	(2.6–7.3)	24.2%	(19.3–29.1)	37.4%	(25.5–49.3)	13.9%	(11.4–16.4)
Alzheimer's Disease	2.3%	(1.3–3.4)	18.1%	(13.5–22.7)	29.7%	(18.6–40.8)	9.7%	(7.6–11.9)
CIND								
	16.0%	(11.5–20.5)	29.2%	(24.3–34.1)	39.0%	(25.7–52.2)	22.2%	(18.7–25.7)

Note: Estimates of prevalence of dementia are based on data presented in Plassman et al. (2007); Estimates of prevalence of CIND are based on data presented in Plassman et al. (2008).

even if the incidence of cognitive impairments and dementia is steady or slightly decreasing, a matter still of some controversy, the numbers of persons with these problems will continue to increase with the aging of the population both in the United States and globally.

Most other major mental illnesses show a prevalence-pattern opposite of that observed for NCD in that most major mental illnesses have first onset early in life and the 12-month and life-time prevalence of common mental disorders such as depression, anxiety, and substance abuse appear to decline with age (Gum, King-Kallimanis, & Kohn, 2009; Kessler et al., 2005; Reynolds et al., 2015). Overall, about 23 percent of adults in the community meet the criteria for having an anxiety, mood, or substance use disorder in the past 12 months, compared to only 8.5 percent of persons aged 65 years and older (Gum, King-Kallimanis, & Kohn, 2009). The prevalence of schizophrenia in later life is between 0.3 percent and 1 percent, slightly lower than the prevalence among the total adult population (McAlpine, 2003). Rates of most common mental disorders also appear to decline across later life (Gum, King-Kallimanis, & Kohn, 2009; Reynolds et al., 2015). For example, Reynolds et al. (2015) estimate that persons aged 55 to 64 have about 4 times the odds of having a mood disorder than persons 85 years and older. Moreover, they find the same general pattern for anxiety, substance use, and personality disorders. However, these community studies underestimate the true prevalence of mental health problems because they do not include persons living in institutions. While estimates of the number of residents of nursing homes living with mental illness vary widely depending on the data set used, it is clear that the prevalence is higher than observed in community settings. For example, Bagchi, Verdier, and Simon (2009) estimate that between 16 percent and 45 percent of residents aged 65 or older living in nursing homes have a mental illness diagnosis. In another study, Grabowski et al. (2009) estimate that 27 percent of new admissions to nursing homes had a severe mental illness such as schizophrenia, bipolar disorder, or depression. Common mental illnesses such as depression or substance abuse are often accompanied by cognitive symptoms such as memory loss or difficulties with attention, making it sometimes difficult to distinguish between disorders.

It is also clear that other mental health problems often co-occur with dementia or cognitive impairment. The most commonly studied mental health problem among older adults is depression, because it is both prevalent and debilitating. Between about 2 percent and 6 percent of the population 65 years or older living in the community meet the criteria for having a recent episode of major depression (Gum, King-Kallimanis, & Kohn, 2009; Reynolds et al., 2015), and as many as 1 in 10 percent experience significant depressive symptomatology that does not meet the

clinical threshold for disorder (Meeks et al., 2011). Rates of depression are even higher among persons with cognitive impairments. Using national data from the United States, for example, Steffens et al. (2009) estimate that while the rate of depression was about 8 percent for persons aged 71 years and older who did not have cognitive problems, it was 20 percent for persons with dementia and about 13 percent among persons with cognitive impairment that did not meet the threshold for dementia. While commanding less research attention, other studies suggest an association between mental health disorders such as alcohol abuse, anxiety and schizophrenia, and cognitive impairment in later life (Beaudreau & O'Hara, 2008; Hendrie et al., 2014; Mukamal et al., 2003).

The causal relationship between other mental health problems and cognitive impairments is complicated and difficult to establish with full certainty. Much of the research attention has focused on depression. It may be that a higher rate of depression among persons with cognitive impairments is a reaction caused by the stress of losing functioning and independence. It may also be that a third characteristic is associated with both risk of developing depression and cognitive impairment and thus confounds the relationship. Finally, it may be that depression is casually a risk factor for developing later cognitive disorders. Research has been robust in exploring this later possibility, which we explore further in the discussion of risk factors later in the chapter.

Many more individuals with NCD than meet the diagnostic criteria for a comorbid mental health problem experience significant psychiatric symptoms. Individuals with dementia face unique behavioral and psychological symptoms of dementia (BPSD), which is defined as "a heterogeneous range of psychological reactions, psychiatric symptoms, and behaviors occurring in people with dementia of any etiology" (Finkel & Burns, 2000). As shown on Table 6.2, BPSD is divided into two major clusters—behavioral and psychological symptoms clusters—and each cluster has two subgroups. In the behavioral symptoms cluster, two subgroups include aberrant motor behaviors and inappropriate behaviors. In the psychological symptoms cluster, two subgroups include mood-related symptoms and psychotic-related symptoms. The list of BPSD shown in Table 6.2 is not meant to be exhaustive, but is based on the current neuropsychiatric inventory (NPI), which is widely measured and collected in clinical practice and research (Gauthier et al., 2010). Co-occurring physical and mental conditions, as well as unmet needs, can cause BPSD in individuals with dementia.

Less attention has been paid to the association between cognitive impairment and mental health, if we conceptualize the former as much more than the absence of mental disorder. Given that the prognosis for

Table 6.2 Behavioral and Psychological Symptoms that Accompany Dementia

Behavioral Symptoms	Psychological Symptoms
Aberrant motor behaviors:	*Mood-related symptoms:*
– Pacing, kicking, hitting, pushing	– Depression/dysphoria
– Wandering	– Anxiety
– Fidgeting	– Apathy/indifference
– Hand-wringing	– Irritability/lability
– Other types of aberrant motor behaviors	
Inappropriate behaviors:	*Psychotic-related symptoms:*
– Agitation/aggression	– Delusions
– Disinhibition	– Hallucinations
– Euphoria/elation	
– Night-time behaviors (neuro-vegetative changes)	
– Appetite/eating changes (neuro-vegetative changes)	

Source: Adapted from International Psychogeriatric Association [IPA], 1996.

dementia is typically irreversible and the deficits associated with major NCD are many and profound, it is somewhat surprising that people with even severe dementia are mentally healthy on some measures. Much of the research on what might be considered mental health among persons with cognitive disorders has been done in the context of examining variation in quality of life. There are a variety of conceptualization and measures of quality of life, but broadly it "encompasses the individual's physical health, psychosocial well-being and functioning, independence, control over life, material circumstances and the external environment." (Bowling, 2005). One aspect of psychological well-being that contributes to quality of life, and can be considered a part of mental health, is life satisfaction. St. John and Montgomery (2010) in a study of community-dwelling older Canadians found that individuals with dementia or with cognitive impairment but no dementia reported slightly lower satisfaction with life in general and lower satisfaction with their material and social circumstances than did their counterparts with no cognitive impairments. While there were differences, they were modest—and overwhelmingly, the older adults in their study, irrespective of level of cognitive impairment, were satisfied with life. However, the study did not include people with severe dementia.

It is difficult to measure subjective dimensions of well-being for persons with severe dementia because cognitive impairments make awareness, insight, and communication difficult. However, there is a range of measures available to assess the subjective aspects of quality of life across the range of cognitive disorder, including severe disorder (Bowling et al., 2015). Some of the most important work is qualitative: research that involves asking patients with NCD what they value about life or what makes them satisfied and happy. In a synthesis of these studies, O'Rourke et al. (2015) identify six key themes that respondents with dementia identify as mattering for their quality of life: (1) connectedness to others and to one's environment; (2) positive relationships with others that provide a sense of being loved and cared about and which is reciprocal; (3) feeling a sense of purpose in life; (4) sense of wellness despite experience of significant symptoms; (5) feeling attached to the place or environment where one is living; and (6) having a sense of happiness or contentment. Importantly, it is these subjective assessments of life, rather than degree of impairment or disability itself that shape quality of life (Byrne-Davis, Bennett, & Wilcock, 2006; O'Rouke et al., 2015). Moreover, even persons with severe NCD express similar aspects of life such as relationships that they most care about and that shape their well-being (Cahill & Diaz-Ponce, 2011). Menne, Judge, and Whitlatch (2009) used 13 items to capture physical, emotional, interpersonal, and environmental domains of quality of life, and they found that being African American, having a nonspousal caregiver, more depressive symptoms, and less involvement in daily decision making were associated with poorer quality of life among individuals with dementia.

The Burden of Cognitive Impairment and Mental Health Problems

The overall burden of cognitive disability and mental illness includes their impact on individuals, their families and the overall community in terms of increased morbidity, mortality, diminished quality of life, lost productivity, and costs of health care and other services such as home and institutional care. There are a number of estimates of the economic impact of dementia (World Health Organization (WHO) & Alzheimer's Disease International (ADI), 2012; Wimo & Prince, 2010; Wimo et al., 2013; Yang et al., 2012); while they vary in assumptions about the prevalence of dementia, and in definitions of costs, they concur that the costs are enormous. A recent analysis by Wimo et al. (2013) estimates the global costs of dementia care, including both direct and indirect costs. Direct costs include expenditures associated with medical services such as medications,

inpatient stays and visits to the doctor as well as expenditures associated with social care such as home care or nursing home care. Indirect costs of informal care include the estimated costs of unpaid care provided by family members. In 2010, they estimate that the total, worldwide economic costs for dementia care were 604 billion U.S. dollars, or about 1 percent of the world's gross national product. Approximately, 58 percent of these costs are attributable to direct medical and social costs and 42 percent to the cost of informal care. Not surprisingly, informal care represents a larger proportion of all costs in lower-income countries than in higher-income countries. The per capita costs of dementia-related care—$48,605 in U.S. dollars—are the highest in the world in North America (Wimo & Prince, 2010). In the United States, the total economic costs of dementia in 2010 was estimated to be between 159 billion and 215 billion dollars, with informal care comprising between 31 percent and 49 percent of the total costs (Hurd et al., 2013).

Another way to measure the burden of mental health problems is in terms of disability-adjusted life years (DALY), where DALY represents the years of healthy life lost to the disorder (World Health Organization (WHO), 2008). DALY takes into account both premature mortality and years spent in less than ideal health, and it is widely used to compare the impact of various types of health problems and interventions. In high-income countries, mental health disorders comprise 3 of the 10 leading causes of burden; depression ranks first, Alzheimer's disease and other dementias rank fourth, and alcohol abuse disorders rank as the fifth leading cause of disease burden (World Health Organization (WHO), 2008).

Having comorbid cognitive impairment and other mental health disorders such as depression is expected to increase the burden of either type of disorder. For example, mental health comorbidities increase the direct medical costs, especially inpatient care, for persons with cognitive conditions (Leibson et al., 2015).

Considerable research attention has focused on the caregiving burden, or the subjective and objective tasks associated with providing care for a person with a chronic health problem (Montgomery, Gonyea, & Hooyman, 1985). Objective burden includes the specific activities and resources involved in caregiving, such as time spent supervising someone, or helping with daily activities such as shopping and food preparation. Subjective burden refers to the emotions and feelings associated with the experience of caregiving (Montgomery, Gonyea, & Hooyman, 1985). Many of the responsibilities involved with caring for a person with mental health problems rest with family members. Perhaps not surprisingly, due to women's longer life expectancy and continued gendered expectations about who

should fulfill caregiving roles (Walker, Pratt, & Eddy, 1995), the burden of caregiving disproportionately falls on women.

The objective burden is high for caregivers of persons with both severe and mild cognitive impairments. Using a nationally representative sample, Fisher et al. (2011) examined variation in the amount of time helping with specific activities or in supervision, physical and emotional strain, and perceived benefits of caregiving among individuals who reported that they had primary responsibility for caring for a family member with dementia, or CIND. Caregivers spent a considerable amount of time doing caregiving tasks; on average, approximately 9 hours per day for persons with dementia and 4 hours per day for CIND. Approximately 66 percent of caretakers reported significant physical strain and 71 percent significant emotional strain associated with their responsibilities; however, there were not significant differences between the two groups in perceived strain.

The objective and subjective tasks involved in caregiving have costs for the caregiver. Caregivers are at risk for depression and anxiety associated with the stress of being a caregiver (Covinsky et al., 2003; Seeher et al., 2013; Werner, 2012). In a study of caregivers of persons with moderate to severe dementia, for example, Covinsky et al. (2003) found that almost one-third of caregivers met the criteria for depression. Patient characteristics associated with increased risk for depression among caregivers include severity of dementia, behavioral problems (such as anger and aggression), and limitations in activities (Covinsky et al., 2003; Hooker et al., 2002). There are also important social group differences both in the types of caregiving and outcomes. Some studies find that depression is less common in caregivers of black compared to white patients with dementia (Covinsky et al., 2003; Janevic & Connell, 2001). Unfortunately, there has been insufficient research examining the burden associated with caring for persons with comorbid cognitive and other mental health disorders such as depression (Schulz & Martire, 2004).

Risk Factors

Research demonstrates that genetics play a role in the development of many mental illnesses, including cognitive disorders. There is a stronger link between genetic risk and early onset rather than later onset dementia (Loy et al., 2014). Overall, however, genetics alone explains very little of the variation in risk for dementia. For other mental disorders, that often co-occur with cognitive disorders, estimates of risk associated with heredity vary widely, although it is generally accepted that disorders such as schizophrenia have much higher heritability risk than disorders such as

depression, although genetics in conjunction with environment probably play a part in the etiology of many types of mental disorders (Rutter, 2006).

While the genetic determinants of cognitive impairment and other mental illnesses continue to be vigorously examined in research, there is a growing body of literature about social determinants of risk and modifiable risk factors (Baumgart et al., 2015). Age, for example, while clearly a risk factor for NCD, is not modifiable. The focus of research and interventions has been on characteristics of individuals' circumstances in early life, their lifestyles and health behaviors, their physical and mental comorbidities, and their social environments that might be amenable to change and therefore reduce risk for later disorder. While this research literature is enormous, here we focus on general themes that have emerged and the most promising research directions.

Early Adversity and Disadvantage

A central tenet of life-course theory is that there are important developmental periods where experiences (both positive and negative) can shape outcome even years later (Elder, 1998). Simply put, what happens in early childhood matters for well-being across the life course. Overwhelming research on risks for common mental disorders such as depression or substance use shows that early-life adversities such as parental neglect and deprivation increase risk of having a mental disorder in childhood. In turn, having a mental disorder in childhood increases risk of having a mental disorder in adulthood (Mechanic, McAlpine, & Rochefort, 2014). The difficulty is, of course, that there is significant variation in the trajectories of children and predicting who will do well in adulthood and later life and who will not.

One of the most consistent findings in the literature is a strong inverse relationship between socioeconomic status (SES) and risk of mental health problems, where SES is usually operationalized as education, income, or occupation (Muntaner et al., 2004; Saraceno, Levav, & Kohn, 2005). For example, across studies persons from low-SES groups have a median of about 3.4 times higher prevalence of schizophrenia and 2.4 higher prevalence of depression compared to people of high SES (Saraceno et al., 2005). However, determining the causal direction between SES and mental disorders is difficult and both social selection and social causation explanations have some utility (Mechanic et al., 2014; Muntaner et al., 2004). Social selection implies that people with mental health problems are selected into lower SES attainment, based on having a mental health problem. For example, experiencing a mental disorder in childhood, adolescence

or early adulthood makes it difficult to finish school, get a good job, or achieve a high income. Thus, early mental health problems may select a person into a lower SES than their more healthy peers. In contrast, social causation explanations for the inverse relationship between SES and the prevalence of mental disorders suggest that lack of material resources and the adversities and strains that come with low SES cause increased risk of disorder. Both social selection and causation probably operate for most major mental illnesses; but evidence suggests that social selection is more relevant for disorders such as schizophrenia, and social causation for disorders such as depression (Mechanic et al., 2014; Muntaner et al., 2004).

There is an emerging body of research examining the association between SES and cognitive impairments, but untangling causation is particularly tricky. While the evidence is not definitive, SES in early childhood—reflected in measures such as parental occupation or poverty in childhood—may be associated with measures of cognitive performance such as IQ in childhood (Borenstein, Copenhaver, & Mortimer, 2006). Others have examined the impact of childhood SES on cognitive performance in later life, but again the results are inconsistent and inconclusive (Borenstein et al., 2006).

The majority of research attention that links SES to cognitive impairments in later life has been focused on educational attainment. There is a growing body of research suggesting that persons with lower educational attainment are at greater risk for developing dementia or other cognitive impairments in later life than persons with higher levels of education (AA, 2014), although some researchers fail to find this association. There are a number of intriguing hypotheses to explain this association, but none are definitive (AA, 2014; Borenstein et al., 2006; Ngandu et al., 2007). First, it may be that educational attainment is a proxy for IQ and thus the observed relationship between educational level and cognitive performance in later life may be spurious. That is, IQ in childhood may select one into higher educational attainment and also be causally related to cognitive functioning across the life course. An alternative hypothesis is that education builds cognitive reserve so that more highly educated persons are able to compensate for declines in brain function in some areas. But it is also possible that pre-existing differences in cognitive reserve select people into various levels of educational achievement. The association between education and cognitive performance in later life may also be mediated by health behaviors and cardiovascular risk factors, although some research fails to support this hypothesis (Ngandu et al., 2007). Overall, we lack the scientific evidence to definitely draw conclusions about the causal connections between educational level and risk of cognitive disorders in later life. If causality is established, however, it would add

compelling evidence for the importance of addressing inequality in early educational opportunities.

Race and Ethnicity

In general, epidemiological research suggests that across adulthood African Americans and Hispanics have similar or lower rates of common mental health disorders such as depression and substance use than whites (Breslau et al., 2005). However, the pattern is quite different for cognitive impairments later in life (AA, 2014; Sheffield & Peek, 2011). For example, compared to whites, the prevalence of Alzheimer's and other dementias is about twice as high among African Americans and about 1.5 times as high among Hispanics (AA, 2014). Research is less consistent about whether there are differences among racial groups in incidence of cognitive impairments (Barnes & Bennett, 2014).

Race and ethnicity are social, not biological, constructs and explanations for these trends likely lie in the social circumstances and experiences of persons from different racial and ethnic groups. One possible explanation for higher prevalence rates among African Americans is that the cognitive tests and measures used to diagnose cognitive impairments may be less valid measures of cognitive functioning in African Americans than in whites (Barnes & Bennett, 2014). However it is more likely that differences in rates of cognitive disorders across cultural groups are partially due to differences in cardiovascular risk factors, such as hypertension, that are associated with cognitive impairment (AA, 2014). Addressing the social factors such as poverty, stress, discrimination, and poor quality health care that put individuals from nonwhite ethnic/racial groups at risk for cardiovascular problems is necessary in order to address racial or ethnic disparities in prevalence of disorder.

Physical Health Comorbidities and Health Behaviors

Physical (also referred to as medical) and mental health conditions often cooccur. As Druss and Walker (2011, p. 4) conclude based on their review of the literature, "[c]omorbidity between medical and mental conditions is the rule rather than the exception." Individuals with mental health problems are also more likely to engage in health risk behaviors such as smoking than are their counterparts without mental health disorders (Druss & Walker, 2011).

Given the high rates of comorbidity between mental and medical problems, it is not surprising there is also a high prevalence of comorbid medical conditions among individuals with cognitive impairments (Bunn et al., 2014; Doraiswamy et al., 2002; Schubert et al., 2006). Common comorbid

conditions include: hypertension, diabetes, visual impairment such as glaucoma and cataracts, stroke, heart disease and genitourinary, musculoskeletal and vascular disorders (Bunn et al., 2014; Doraiswamy et al., 2002; Schubert et al., 2006), and the number of comorbid conditions increases with age and severity of dementia. However, the prevalence of such chronic comorbid conditions in individuals with dementia varies by study setting or specific population of interest (Bunn et al., 2014).

The focus of research attention, however, has been on a cluster of cardiovascular risk factors that appear to be linked to risk for cognitive decline or dementia. While not conclusive, a large body of research suggests that factors such as hypertension, diabetes, smoking, physical activity, obesity, and diet contribute to higher risk of cognitive disorders or to differences in the progression of cognitive impairments (AA, 2014; Baumgart et al., 2015; Haan & Wallace, 2004). This has led to growing interest in the potential impact of targeting cardiovascular risk as a way to reduce either the prevalence or burden of dementia (Baumgart et al., 2015; Haan & Wallace, 2004; Lin et al., 2014). Cardiovascular risk, however, is shaped by social circumstances such as poverty and discrimination. Thus reducing cardiovascular risk factors that are associated with cognitive impairment requires addressing fundamental social determinants of health.

Depression

Finally, of the mental health conditions that co-occur with cognitive functioning, depression shows the strongest association with prevalence of cognitive impairment or dementia (AA, 2014; Byers & Yaffe, 2011; Ownby et al., 2006). However, findings are mixed depending on whether researchers examine early- or late-onset depression, the types of cognitive disorders assessed and the specific populations studied. At least two important lines of inquiry have emerged from this body of research. First, depression may be an earlier indicator or symptom of cognitive disorder, rather than a risk factor. If depression is a prodromal symptom interventions should focus on identification of depression as a means to intervene early before symptoms progress to severe cognitive impairment. Second, it is also possible that depression is an independent risk factor for cognitive impairment, a hypothesis supported by some research (Ownby et al., 2006). If depression is an independent risk factor, it is reasonable to expect that effectively treating depression may reduce the prevalence or progression of cognitive disorders, although this has yet to be demonstrated by research (Byers & Yaffe, 2011; Ownby et al., 2006).

Discussion: Promising Directions and Enduring Challenges

With the aging of the population, the challenges faced in identifying, treating, and improving outcomes for persons with mental health problems and cognitive impairments will only grow. Assuming the incidence of cognitive impairments and dementias remains relatively steady, by 2050 the number of people aged 65 years and older living with Alzheimer's will be almost 14 million (Hebert et al., 2013). Understanding and addressing the mental health needs of the aging population should be a public health priority.

Despite a burgeoning field of research, it is discouraging that there are no clearly effective, evidence-based prevention strategies for most mental disorders, including dementia. Even more discouraging is the observation that there is no compelling evidence that allows us to predict who will go from relatively minor cognitive impairments to irreversible, severe forms of dementia or who will have transitory compared to chronic mental health problems such as depression. There continues to be fundamental debates about the validity of diagnostic categories that are used to distinguish various mental illnesses and cognitive disorders from each other. The wide variety of definitions used and differences in the populations studied make it difficult to fully trust or make sense of the varied research findings. There is no cure for major mental illness, and the prognosis for major cognitive disorders is one of inevitable decline. Given these observations it is tempting to conclude that with the aging of the population the future is bleak for older individuals and their families living with these disorders. Fortunately, there are a number of promising directions that make such a conclusion premature.

First, the recovery movement in the field of mental health reminds us that the absence of disorder or complete remission of symptoms—or a cure—should not always be the priority for research or interventions (Slade, 2010). Recovery denotes "the development of new meaning and purpose in one's life as one grows beyond the catastrophic effects of mental illness" (Anthony, 1993, p. 527). A recovery lens forces us to focus on a central question: "working within the understood limits of biology and environment, what can be done to structure care and support so as to enhance patient functioning and promote the greatest quality of life possible?" (Mechanic et al., 2014, p. 245). Recovery, in the context of severe cognitive disorders, does not mean getting better because currently there are no effective treatments and the prognosis is one of inevitable decline. However, working within a recovery perspective focuses attention on interventions that can improve quality of life and is consistent with a patient-centered approach to health care (Hill et al., 2010).

The large amount of policy attention that is now being directed at addressing cognitive disorder in later life is also encouraging (Hoffman, 2014). One of the most important federal efforts is the National Alzheimer's Project Act, passed in 2011. The Act provided for the creation of a National Plan to address Alzheimer's and related diseases (U.S. Department of Health and Human Services, 2015). The Plan was released in 2012, and each year it is updated to monitor progress. The five central goals of the National Plan are ambitious (U.S. Department of Health and Human Services, 2015, p. 6): "Prevent and Effectively Treat Alzheimer's Disease by 2025; Enhance Care Quality and Efficiency; Expand Supports for People with Alzheimer's Disease and Their Families; Enhance Public Awareness and Engagement; and Track Progress and Drive Improvement."

While it is of course too soon to evaluate whether the Plan will meet these goals, it does provide leadership and directs needed attention and resources to cognitive disorders in later life. Moreover, it brings together individuals with these disorders, family members, researchers, providers, and other key stakeholders to help define the national research agenda and identify gaps in knowledge and practice.

Policy attention has also increasingly focused on alleviating the burden of caregiving (Feinberg & Reamy, 2011). The Affordable Care Act (ACA), the most recent national reform of health care, explicitly recognizes the importance of caregivers in a number of areas (Feinberg & Reamy, 2011). For example, the ACA emphasizes a model of care that includes family in assessments of quality. Family is also incorporated in shared-decision models and the coordination of care between providers and patients. The ACA includes provisions for providing support services to family caregivers to alleviate the burden (Feinberg & Reamy, 2011). While it will take to take to determine whether these reforms will have outcomes for individuals living with mental illness and their caregivers, they are promising (Mechanic et al., 2014).

Finally there are encouraging directions in our understanding of modifiable risk factors. Some suggest that addressing the burden of conditions such as diabetes, hypertension, and depression that are often comorbid with cognitive and other mental health disorders presents the most promising avenue for intervention (Lin et al., 2014; Haan & Wallace, 2004). Lin et al. (2014), for example, suggest that reducing the prevalence of obesity, diabetes, hypertension, and cardiovascular disease would substantially lower risk for dementia and delay onset, resulting in enormous health care saving. Of course, prevention of these types of disorders is difficult. Moreover, risk of developing conditions such as hypertension or diabetes is substantially higher among disadvantaged compared to advantaged groups (Lang et al., 2012). Successful prevention efforts, therefore,

must address the fundamental social determinants of health that produce inequality, some of which have their roots in very early life—a difficult, but necessary challenge if we are to reduce the burden of cognitive disorders and other mental health problems in later life.

References

Akushevich, I., Kravchenko, J., Urkaintseva, S., Arbeev, K., & Yashin, A. I. (2013). Time trends of incidence of age-associated diseases in the US elderly population: Medicare-based analysis. *Age and Ageing, 42*, 494–500.

Alzheimer's Association (2014). Alzheimer's association report. 2014 Alzheimer's disease facts and figures. *Alzheimer's & Dementia, 10*, e47–e92.

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders (4th ed.) (DSM-IV-TR)*. Washington, DC: American Psychiatric Association.

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders (5th ed.) (DSM-5)*. Arlington, VA: American Psychiatric Association.

Anderson, L. A., Deokar, A., Edwards, V. J., Bouldin, E. D., & Greenlund, K. J. (2015). Demographic and health status differences among people aged 45 or older with and without functional difficulties related to increased confusion or memory loss, 2011 Behavioral Risk Factor Surveillance System. *Preventing Chronic Disease, 12*(E30), 140429. doi: http://dx.doi.org/10.5888/pcd12.140429

Anthony, W. A. (1993). Recovery from mental illness: The guiding vision of the mental health system in the 1990s. *Psychosocial Rehabilitation Journal, 16*(4), 11–23.

Bagchi, A. D., Verdier, J. M., & Simon, S. E. (2009). How many nursing home residents live with a mental illness? *Psychiatric Services, 60*, 958–964.

Barnes, L. L., & Bennett, D. A. (2014). Alzheimer's disease in African Americans: Risk factors and challenges for the future. *Health Affairs, 33*, 580–586.

Baumgart, M., Snyder, H. M., Carrillo, M. C., Fazio, S., Kim, H., & Johns, H. (2015). Summary of the evidence on modifiable risk factors for cognitive decline and dementia: A population-based perspective. *Alzheimer's & Dementia, 11*, 718–726.

Beaudreau, S. A., & O'Hara R. (2008). Late-life anxiety and cognitive impairment: A review. *American Journal of Geriatric Psychiatry, 16*, 790–803.

Blazer, D. (2013). Neurocognitive disorders in DSM-5. *American Journal of Psychiatry, 170*, 585–587.

Borenstein, A. R., Copenhaver, C. I., & Mortimer, J. (2006). Early-life risk factors for Alzheimer disease. *Alzheimer Disease and Associated Disorders, 20*(1), 63–72.

Bowling, A. (2005). *Aging Well: Quality of Life in Old Age*. New York, NY: Open University Press.

Bowling, A., Rowe, G., Adams, S., Sands, P., Samsi, K., Crane, M., . . . Manthorpe, J. (2015). Quality of life in dementia: A systematically conducted narrative review of dementia-specific measurement scales. *Aging & Mental Health, 19*, 13–31.

Breslau, J., Kendler K. S., Su, M., Gaxiola-Aguilar S., & Kessler, R. C. (2005). Lifetime risk and persistence of psychiatric disorders across ethnic groups in the United States. *Psychological Medicine, 35*, 317–327.

Bunn, F., Burn, A-M., Goodman, C., Rait, G., Norton, S., Robinson, L., Schoeman, J., & Brayne, C. (2014). Comorbidity and dementia: A scoping review of the literature. *BMC Medicine, 12*(1), 192.

Byers, A. L., & Yaffe, K. (2011). Depression and risk of developing dementia. *Nature Reviews Neurology, 7*, 323–331.

Byrne-Davis, L. M. T., Bennett, P. D., & Wilcock, G. K. (2006). How are quality of life ratings made? Toward a model of quality of life in people with dementia. *Quality of Life Research, 15*, 855–865.

Cahill, S., & Diaz-Ponce, A. M. (2011). "I have nobody here. I'd like to know where they all are": Can qualitative research detect difference in quality of life among nursing home residents with different levels of cognitive impairment. *Aging & Mental Health, 15*, 562–572.

Covinsky, K. E., Newcomer, R., Fox, P., Wood, J., Sands, L., Dane, K., & Jaffe, K. (2003). Patient and caregiver characteristics associated with depression in caregivers of patients with dementia. *Journal of General Internal Medicine, 18,* 1006–1014.

Dodge, H. H., Zhu, J., Lee, C., Chang, C. H., & Ganguli, M. (2014). Cohort effects in age-associated cognitive trajectories. *The Journals of Gerontology, Series A: Medical Sciences, 69*, 687–694.

Doraiswamy, P. M., Leon, J., Cummings, J. L., Marin, D., & Neumann, P. J. (2002). Prevalence and impact of medical comorbidity in Alzheimer's disease. *The Journals of Gerontology, Series A: Medical Sciences, 57A*, M173–M177.

Druss, B. G., & Walker, E. R. (2011). *Mental Disorders and Medical Comorbidity*. Princeton, NJ: Robert Wood Johnson Foundation, The Synthesis Project. Retrieved from: http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2011/rwjf69438/subassets/rwjf69438

Elder, G. H., Jr. (1998). The life course as developmental theory. *Child Development 69*, 1–12.

Feinberg, L., & Reamy, A. M. (2011). *Health reform law creates new opportunities to better recognize and support family caregivers*. Washington, DC: AARP Public Policy Institute. Retrieved from: http://assets.aarp.org/rgcenter/ppi/ltc/fs239.pdf

Finkel, S. I., & Burns, A. (2010). Introduction. *International Psychogeriatrics*, 12 (suppl 1), 9–12.

Fisher, G. G., Franks, M. M., Plassman, B. L., Brown, S. L., Potter, G. G., Llewellyn, D., . . . Langa, K. M. (2011). Caring for individuals with dementia and CIND: Findings from the aging, demographics, and memory study. *Journal of the American Geriatrics Society, 59*, 488–494.

Frances, A. (2012). DSM-5 is a guide, not a bible: Simply ignore its 10 worst changes. *Huffington Post*. Retrieved from: http://www.huffingtonpost.com/allen-frances/dsm-5_b_2227626.html

Ganguli, M., Blacker, D., Blazer, D. G., Grant, I., Jeste, D. V., Paulsen, J. S., . . . The Neurocognitive Disorders Work Group of the American Psychiatric

Association's (APA) DSM-5 Task force (2011). Classification of neurocognitive disorders in DSM-5: A work in progress. *American Journal of Geriatric Psychiatry*, *19*, 205–210.

Gauthier, S., Cummings, J., Ballard, C., Brodaty, H., Grossberg, G., Robert, P., & Lyketsos, C. (2010). Management of behavioral problems in Alzheimer's disease. *International Psychogeriatrics, 22*(3), 346–372.

Grabowski, D. C., Aschbrenner, K. A., Feng, Z., & Mor, V. (2009). Mental illness in nursing homes: Variations across states. *Health Affairs, 28*, 689–700.

Gum, A. M., King-Kallimanis, B., & Kohn, R. (2009). Prevalence of mood, anxiety, and substance-abuse disorders for older Americans in the National Comorbidity Survey-Replication. *American Journal of Geriatric Psychiatry, 17*, 769–781.

Halfon, N., & Hochstein, M. (2002). Life course health development: An integrated framework for developing health, policy, and research. *Milbank Quarterly, 80*, 433–479.

Haan, M. N., & Wallace, R. (2004), Can dementia be prevented? Brain aging in a population-based context. *Annual Review of Public Health, 25*, 1–24.

Hebert, L. E., Weuve, J., Scherr, P. A., & Evans, D. A. (2013). Alzheimer disease in the United States (2010–2050) estimated using the 2010 census. *Neurology, 80*(19), 1778–1783.

Hendrie, H. C., Wanzhu, T., Tabbey, R., Purnell, C. E., Ambuehl, R. J., & Callahan, C. M. (2014). Health outcomes and cost of care among older adults with schizophrenia: A 10-year study using medical records across the continuum of care. *American Journal of Geriatric Psychiatry,* 22, 427–436.

Hill, L., Roberts, G., Wildgoose, J., Perkins, R., & Hahn, S. (2010). Recovery and person-centered care in dementia: Common purpose, common practice? *Advances in Psychiatric Treatment, 16*, 288–298.

Hoffman, D. (2014). Alzheimer's disease legislation and policy: Now and in the future. *Health Affairs, 33*(4), 561–565.

Hooker K., Bowman, S. R., Coehlo, D. P., Lim, S. R., Kaye, J., Guariglia, R., & Li, F. (2002). Behavioral change in persons with dementia: Relationships with mental and physical health of caregivers. *The Journals of Gerontology, Series B: Psychological Sciences, 57B*, 453–460.

Hurd, M. D., Martorell, P., Delavande, A., Mullen, K. J., & Langa, K. M. (2013). Monetary costs of dementia in the United States. *The New England Journal of Medicine, 368*, 1326–1334.

International Psychogeriatric Association (IPA). (1996). Behavioral and psychological signs and symptoms of dementia: Implications for research and treatment. *International Psychogeriatrics, 8*(suppl. 3), 215–552.

Janevic, M. R., & Connell, C. M. (2001). Racial, ethnic, and cultural differences in the dementia caregiving experience: Recent findings. *Gerontologist, 41*, 334–347.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62, 593–602.

Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist, 62*, 95–108.

Lang, T., LePage, B., Schieber, A, Lamy, S., & Kelly-Irving, M. (2012). Social determinants of cardiovascular diseases. *Public Health Reviews, 33*(2), 601–622.

Leibson, C. L., Long, K. H., Ransom, J. E., Roberts, R. O., Hass, S. L., Duhig, A. M., . . . Petersen, R. C. (Epub ahead of print). Direct medical costs and source of cost differences across the spectrum of cognitive decline: A population-based study. *Alzheimer's & Dementia*, doi: 10.1016/j.jalz.2015.01.007

Lin, P. J., Yang, Z., Fillit, H. M., Cohen, J. T., & Neumann, P. J. (2014). Unintended benefits: The potential economic impact of addressing risk factors to prevent Alzheimer's disease. *Health Affairs, 33*(4), 547–554.

Loy, C. T., Schofield, P. R., Turner, A. M., Kwok, J. B. J. (2014). Genetics of dementia. *Lancet, 383*, 828–840.

Lyketsos, C. G., Lopez, O., Jones, B., Fitzpatrick, A. L., Breitner, J., & DeKosky S. (2002). Prevalence of neuropsychiatric symptoms in dementia and mild cognitive impairment: Results from the Cardiovascular Health Study. *Journal of the American Medical Association, 288*, 1475–1483.

Mayes, R., & Horwitz, A. V. (2005). DSM-III and the revolution in the classification of mental illness. *Journal of the History of the Behavioral Sciences, 41*, 249–267.

McAlpine, D. D. (2003). Patterns of care for persons 65 years and older with schizophrenia. In C. I. Cohen (Ed.), *Schizophrenia into later life: Treatment, research, and policy* (pp. 3–18). Arlington, VA: American Psychiatric Publishing, Inc.

Mechanic, D., McAlpine, D. D., & Rochefort, D. A. (2014). *Mental health and social policy: Beyond managed care*. Boston, MA: Pearson Education, Inc.

Meeks, T., Vahia, I., Lavretsky, H., Kulkarni, G., & Jeste, D. (2011). A Tune in "a minor" can "b major": A review of epidemiology, illness course, and public health implications of subthreshold depression in older adults. *Journal of Affective Disorder, 129*, 126–142.

Menne, H. L., Judge, K. S., & Whitlatch, C. J. (2009). Predictors of quality of life for individuals with dementia: Implications for intervention. *Dementia, 8*, 543–560.

Moceri, V. M., Kukull, W. A., Emanuel, I., van Belle, G., & Larson, E. B. (2000). Early-life risk factors and the development of Alzheimer's disease. *Neurology, 54*(2), 415–420.

Montgomery, R. J. V., Gonyea, J. G., & Hooyman, N. R. (1985). Caregiving and the experience of subjective and objective burden. *Family Relations, 34*, 19–26.

Mukamal, K. J., Kuller, L. H., Fitzpatrick, A. J., Longstreth Jr., W. T., Mittleman M. A., & Siscovick, D. S. (2003) Prospective study of alcohol consumption and risk of dementia in older adults. *Journal of the American Medical Association, 289*, 1405–1413.

Muntaner, C., Eaton, W. W., Miech, R., & O'Campo, P. (2004). Socioeconomic position and major mental disorders. *Epidemiologic Reviews*, 26, 53–62.

Murray, L. M., & Boyd, S. (2009). Protecting personhood and achieving quality of life for older adults with dementia in the U.S. health care system. *Journal of Aging and Health, 21*(2), 350–373.

Ngandu, T., von Strauss, E., Helkala, E.-L., Winblad, B., Nissinen, A., Tuomilehto, J., . . . Kivipelto, M. (2007). Education and dementia: What lies behind the association? *Neurology, 69*, 1442–1450.

O'Rourke, H. M., Duggleby, W., Fraser, K. D., & Jerke, L. (2015). Factors that affect quality of life from the perspective of people with dementia: A metasynthesis. *Journal of the American Geriatrics Society, 63*, 24–38.

Ownby, R. L., Crocco, E., Acevedo, A., John, V., & Lowenstein, D. (2006). Depression and risk for Alzheimer Disease: Systematic review, meta-analysis and metaregression analysis. *Archives of General Psychiatry, 63,* 530–538.

Petersen, R. C., Caracciola, B., Brayne, C., Gauthier, S., Jelic, V., & Fratglioni, L. (2014). Mild cognitive impairment: A concept in evolution. *Journal of Internal Medicine, 275*, 214–228.

Plassman, B. L., Langa, K. M., Fisher, G. G., Heeringa, S. G., Weir, D. R., Ofstedal, M. B., . . . Wallace, R. B. (2007). Prevalence of dementia in the United States: The aging, demographics, and memory study. *Neuroepidemiology, 29*, 125–132.

Plassman, B. L., Langa, K. M., Fisher, G. G., Heeringa, S. G., Weir, D. R., Ofstedal, M. B., . . . Wallace, R. B. (2008). Prevalence of cognitive impairment without dementia in the United States. *Annals of Internal Medicine*, *148*, 427–434.

Reynolds, K., Pietrzak, R. H., El-Gabalawy, R., Mackenzie, C. S., & Sareen, J. (2015). Prevalence of psychiatric disorders in U.S. older adults: Findings from a nationally representative survey. *World Psychiatry, 14*, 74–81.

Rocca, W. A., Petersen R. C., Knopman, D. S., Hebert, L. E., Evans, D. A., Hall, K. S., . . . White L. R. (2011). Trends in the incidence and prevalence of Alzheimer's disease, dementia, and cognitive impairment in the United States. *Alzheimer's Dementia, 7*(1), 80–93.

Rutter, M. (2006). *Genes and behaviors: Nature, nurture, and developmental influences: The challenge ahead for mental health*. Malden, MA: Blackwell Publishing.

Salthouse, T. A. (2010). *Major issues in cognitive aging*. Oxford, England: Oxford University Press.

Saraceno, B., Levav, I., & Kohn, R. (2005). The public mental health significance of research on socio-economic factors in schizophrenia and major depression. *World Psychiatry, 4*(3), 181–185.

Schubert, C. C., Boustani, M., Callahan, C. M., Perkins, A. J., Carney, C. P., Fox, C., Unverzagt, F., Hui, S., & Hendrie, H. C. (2006). Comorbidity profile of dementia patients in primary care: Are they sicker? *Journal of the American Geriatrics Society, 54*(1), 104–109.

Schulz, R., & Martire, L. M. (2004). Family caregiving of persons with dementia: Prevalence, health effects, and support strategies. *American Journal of Geriatric Psychiatry, 12*, 240–249.

Seeher, K., Low, L. F., Reppermund, S., & Broadaty, H. (2013). Predictors and outcomes for caregivers of people with mild cognitive impairment: A systematic literature review. *Alzheimer's & Dementia, 9*, 346–355.

Sheffield, K. M., & Peek, M. K. (2011). Changes in the prevalence of cognitive impairment among older Americans, 1993–2004: Overall trends and differences by race/ethnicity. *American Journal of Epidemiology,* 174, 274–283.

Slade, M. (2010). Mental illness and well-being: The central importance of positive psychology and recovery approaches. *BMC Health Services Research, 10*, 26.

St. John, P. D., & Montgomery, P. R. (2010). Cognitive impairment and life satisfaction in older adults. *International Journal of Geriatric Psychiatry, 25*, 814–821.

Steffens, D. C., Fisher, G. G., Langa, K. M., Potter, G. G., & Plassman, B. L. (2009). Prevalence of depression among older Americans: The Aging Demographics and Memory Study. *International Journal of Psychogeriatric, 21*, 879–888.

U.S. Census Bureau Population Division. (2015). *National population estimates for the 2010s. Monthly postcensal resident population, by singe year of age, sex, race and Hispanic origin*. Retrieved from: http://www.census.gov/popest/data/national/asrh/2014/2014-nat-res.html

U.S. Department of Health and Human Services. (1999). *Mental health: A report to the surgeon general*. Rockville, MD: U.S. Department of Health and Human Services. Retrieved from: http://profiles.nlm.nih.gov/ps/retrieve/ResourceMetadata/NNBBHS

U.S. Department of Health and Human Services. (2015). *National plan to address Alzheimer's disease: 2015 update*. Retrieved from: http://aspe.hhs.gov/daltcp/napa/NatlPlan2015.pdf

Wakefield, J. C. (2013). DSM-5: An overview of changes and controversies. *Journal of Clinical Social Work, 41*, 139–154.

Walker, A. J., Pratt, C. C., & Eddy, L. (1995). Informal caregiving to aging family members: A critical review. *Family Relations, 44*, 402–411.

Ward, A., Arrighi, H. M., Michels, S., & Cedarbaum, J. M. (2012). Mild cognitive impairment: Disparities of incidence and prevalence estimates. *Alzheimer's & Dementia, 8*, 14–21.

Werner, P. (2012). Mild cognitive impairment and caregiver burden: A critical review and research agenda. *Public Health Reviews, 34*(2), 1–15.

Whalley, L. J., Dick, F. D., & McNeill, G. (2006). A life-course approach to the aetiology of late-onset dementias. *The Lancet Neurology, 5*(1), 87–96.

Wilson, R. S., Weir, D. R., Leurgans, S. E., Evans, D. A., Hebert, L. E., Langa, K. M., . . . Bennett, D. A. (2011). Sources of variability in estimates of the prevalence of Alzheimer's disease in the United States. *Alzheimer's Dementia, 7*, 74–79.

Wimo, A., Jönsson, L., Bond, J., Prince, M., & Winblad, B. (2013). The worldwide economic impact of dementia 2010. *Alzheimer's & Dementia, 9*, 1–11.

Wimo, A., & Prince, M. (eds.) (2010). *World Alzheimer's report 2010. The global economic impact of dementia. Executive summary*. Retrieved from: http://www.alz.co.uk/research/files/WorldAlzheimerReport2010ExecutiveSummary.pdf

World Health Organization [WHO]. (2014). *Mental health: Strengthening our response*. World Health Organization: Fact Sheet No. 220. Retrieved from: http://www.who.int/mediacentre/factsheets/fs220/en/

World Health Organization (WHO). (2008). *The global burden of disease: 2004 update*. Retrieved from: http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/

World Health Organization (WHO) & Alzheimer's Disease International (ADI). (2012). *Dementia: A public health priority*. Retrieved from: http://www.who.int/mental_health/publications/dementia_report_2012/en/

Yang, Z., Zhang K., Lin, P., Clevenger, C., & Atherly, A. (2012). A longitudinal analysis of lifetime cost of dementia. *Health Services Research, 47*, 1660–1678.

CHAPTER SEVEN

Unpaid Care Work

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Our focus in this chapter is on the unpaid care of ill or disabled adults, or what we refer to as unpaid care work. We use the term care work as opposed to the more commonly used term "caregiving." As pointed out by Harrington Meyer (2000), the term caregiving is misleading because it suggests that care is given by choice. It also obscures the reality of providing care, which is physically and emotionally demanding work, even if it is unpaid. Thus, we use the term care work and refer to those who do that work as care workers. The value and magnitude of unpaid care work is not fully appreciated, even though most adults provide care at some point in their lives and the value of that care is estimated at $450 billion. Estimates suggest that in 2015, about 43.5 million people are providing care to an ill or disabled adult, averaging 24 hours of unpaid care per week (National Alliance for Caregiving and AARP 2015). Although women are more likely to provide care, it is not just a woman's issue. Recent estimates are that 35–45 percent of those caring for ill or disabled adults are men (U.S. Bureau of Labor Statistics 2013, National Alliance for Caregiving and AARP 2015). Thus, a large portion of the U.S. population, both men and women, will provide unpaid care to an ill or disabled adult in their family.

Unpaid care work can be deeply rewarding, but it can also act as a disruptive and stressful event with the potential to cause both short- and long-term damage to families' financial, physical, and emotional well-being. The effects of unpaid care go well beyond individual lives to shape the U.S. health-care system and labor market. Our reliance on unpaid care to meet health needs has significantly increased in recent decades. The Congressional Budget office estimates that in 2011 care work from friends

and family comprised 55 percent of the long-term care costs for the elderly (Congressional Budget Office 2013), and family care workers are increasingly responsible for a wide range of skilled nursing tasks that were once provided by trained medical professionals (Glazer 1990, Reinhard, Levine et al. 2012). The value of care work is also rising sharply, estimated at about $200 billion in 1996, $375 billion in 2007, and $450 billion in 2009 (Feinberg and Choula 2012). As a point of comparison, Medicaid spending in 2009, which includes both federal and state contributions for health and long-term care, was only $361 billion.

Care work is also relevant to the labor market. The most common ages for care work for the ill or disabled are between 45 and 55, which are the peak years for employment. A 2010–2011 Gallup poll estimates that 17 percent of employed Americans are providing unpaid care to an ill or disabled family member or friend, and that employed men are nearly as likely to be providing care as are employed women (Cynkar and Mendes 2011). The majority of those who are providing unpaid care while employed report that their responsibilities as care workers have an impact on their work performance and require some type of work accommodations (Witters 2011, Feinberg and Choula 2012). Unpaid care workers are also more likely to stop work or reduce hours, particularly if their workplace lacks the flexibility necessary to meet care needs. Employers thus bear the costs of unpaid care work through turnover and retraining costs that allow care workers to remain employed.

The prevalence of unpaid care work, along with its social and economic significance, makes it an important area of study. In this chapter, we review what we know about unpaid care of the ill or disabled. We begin by examining who provides care, paying special attention to how care work has changed over time and how it varies by gender, race/ethnicity, and socioeconomic status. We then review more fully the health and economic consequences of providing care. Finally, we turn our attention to the challenges of balancing unpaid care work with employment and the workplace policies that may help care workers balance competing demands on their time.

Age Variation and Social Change in Care Work

Care work is a critically important issue as demographic and social trends suggest a possible increase in the need for unpaid care work at the same time there is a decline in the supply of persons to provide that care. A major factor driving the future need for care is population aging. By 2050, one-fifth of the U.S. population will be 65 or older, compared to 12 percent in 2000 and 8 percent in 1950 (Congressional Budget Office

2013). Growth in the 85 and older population is expected to be especially dramatic because of population aging and increases in life expectancy. However, the number of disabled adults will heavily influence the future demand for care.

The number of Americans with a disability declined in the late 20th century, leading some to speculate that the need for care might decline. However, it is unclear whether this will be the case. Several positive changes, such as increased education, improved medical technology, and reduced tobacco use, suggest that disability rates could continue to decline, but increases in obesity and sedentary lifestyle are likely to negate any health benefits (Freedman, Crimmins et al. 2004, Chen and Guo 2008, Martin, Schoeni et al. 2010, Congressional Budget Office 2013). These countervailing forces suggest that reductions in disability, and thus the need for care, may stagnate or even reverse. At the same time, reductions in family size are shrinking the supply of people available to provide care. As noted by Uhlenberg and Cheuk (2008), "when mothers of the baby boom are in greatest need of care, i.e. when they are over age 80 around 2020, more than a fourth of them will have at least four children. However, 20 years later when baby boomers are over 80, only 10 percent of them will have four or more children." (p. 27). Taken together, these patterns suggest an upcoming deficit of care workers, but it remains difficult to predict precisely how these intersecting trends will impact the need for care workers.

The most dramatic increase in the elderly population will occur as the baby boom generation, currently in their 50s and 60s, ages into later life, but demographic and social changes of the last half century have already affected care work. We can thus consider how care work has been affected by large-scale social change in the past in order to gain insight into the likely future of care. Data from the 1984–1999 National Long-Term Care Surveys shows that from 1984 to 1994, the number of older persons with a disability, and the number with chronic disability living in the community, rose because of the aging of the population. However, the proportion of unpaid care workers declined during this period while the use of paid care rose (Spillman and Pezzin 2000). Analysis of similar data from 1994 to 1999 suggests a reversal in this trend, with paid care declining. Overall, while there were fluctuations, these data suggest that from 1984 to 1999 the rate at which spouses and children provided care remained fairly stable (Spillman and Black 2005). Since the late 1990s, the National Alliance for Caregiving (NAC) has also conducted comparable national surveys of care workers and found little change in the percentage of adults providing care between 1997 and 2009 (National Alliance for Caregiving and AARP 1997, 2009). Despite substantial changes in longevity, disability, family structure, health-care financing, and women's labor force participation, the

proportion of those providing care at any point in time appears to have remained fairly stable between 1984 and 2009.

Comparisons of care work across birth cohorts provide further clarification of the effects of social change on care work. Cohorts also provide insight into how social trends, such as increases in women's employment, have impacted their unpaid care work. A series of studies of birth cohorts of women from New York State born between 1905 and the early 1930s found that women born in more recent cohorts were *more* likely to provide care, to have multiple spells of care work, and to provide care for parents or a disabled child than earlier cohorts, despite the increased employment among women in the later cohorts (Moen, Robison et al. 1994, Robison, Moen et al. 1995). Similarly, our analyses using a nationally representative sample of women born between 1922 and 1952 found little impact of employment on unpaid care work. We did find that the proportion of women providing care declined among more recent cohorts, but this decline only reflected changes at the lowest levels of care. The proportion of women providing moderate or intense levels of care, nine or more hours per week, was stable across cohorts (Pavalko and Wolfe 2015). Together, these studies suggest that families develop strategies for providing care when it is needed regardless of their employment demands, but they prioritize the most intense and necessary forms of care.

In sum, large-scale demographic changes are increasing the need for unpaid care while also decreasing the supply of care workers and the time they have available to provide care. These changes suggest a future deficit in care workers that, because of the reliance of the U.S. health-care system on unpaid care, could have disastrous consequences on families, health-care, and the labor force. However, several social changes in the last half of the 20th century suggested similarly dire situations, but families still appear to be providing care when it is most needed (Pavalko and Wolfe 2015). Although this may buffer the effects of a care deficit on the United States in general, it does not offer any protection to the financial, mental, and physical strains that occur when people try balancing unpaid care work of disabled adults with their other family and employment obligations. Thus, future research should focus on who provides care, the ways they provide it, and how it impacts their lives.

Who Cares? Social Inequalities in Care Work

Who provides care and how much care they provide is not evenly distributed across the population. One of the most documented and consistent findings is that women are more likely to provide care than men. National estimates indicate that about 60 percent of U.S. unpaid care workers are

women (National Alliance for Caregiving and AARP 2015). In addition, women are more likely to help with personal care, devote more hours of care each week, spend more years providing care, and perform more care tasks (Pinquart and Sorensen 2006). Within families, daughters are about twice as likely as sons to provide care for a parent (Pillemer and Suitor 2014). There is also a gender gap in spousal care, with women receiving less care from their husbands than men receive from their wives (Noel-Miller 2011). While gender differences exist across different indicators of care, the magnitude of those differences is not large in many cases. For example, Pinquart and Sorensen (2006) conclude that, while gender differences in care work and its health effects are present, only gender differences in burden, depression, and amount of care are large enough to be of practical concern. Likewise, when considering a broad range of types of support, Kahn et al. (2011) find that the gender gap in most forms of care is modest and decreases with age.

With respect to the life course, unpaid care work is most prevalent during midlife. The NAC estimates that in 2015 the average age of care workers for people aged 18 and older was 49 (National Alliance for Caregiving and AARP 2015) compared to an average of 46 in 2004. Data from the 2011–2012 wave of the American Time Use Survey (ATUS), which focuses on care for those aged 65 and older, identify ages 45–54 as the most common ages of providing care (23%), followed closely by 55–64 (U.S. Bureau of Labor Statistics 2013). These age patterns are similar for men and women, although as we would expect, at any given age, women are slightly more likely to be providing care than are men. For example, between the ages of 45–54, the ATUS estimates that 26 percent of women and 20 percent of men are providing some type of elder care.

Both the forms and amount of care work vary across racial and ethnic groups. A meta-analysis of 116 empirical studies of racial/ethnic differences in care work reports that ethnic minority care workers provided more care than white care workers (Pinquart and Sorensen 2005). White-Means and Rubin (2008) found that blacks are more likely than whites to provide assistance with activities of daily living, but they did not find racial differences in assistance with instrumental activities of daily living or financial assistance. Racial variation in care work also intersects with gender and family structure, and family structure and socioeconomic resources account for most racial differences in care and kin support (Sarkisian and Gerstel 2004, White-Means and Rubin 2008). For example, black and white sons provide similar levels of care, whereas black daughters provide more care than white daughters. However, these differences can also differ by marital status (Laditka and Laditka 2001), suggesting a complex interaction between race and family structure.

Although there are fewer comparisons involving Hispanic populations, a 2008 study found that 36 percent of Hispanic households had at least one care worker compared to 25 percent of non-Hispanic households (Evercare 2008). They also found that the level of care work is more intense in Hispanic households, averaging more hours per week and help with more activities of daily living. There is also variation in care work among Latino subgroups. For example, Mexican Americans are thought to have particularly high rates of care workers because they have higher rates of disability and are less likely to rely on institutional care (Markides, Peek et al. 2013). The burden of care also varies by nativity as children of foreign-born elderly bare greater responsibility for care than children of U.S.-born elderly (Angel et al. 2014).

We know less about social class differences in care work, but the burden of care does appear greater for low-income families. The NAC/AARP study (2009) reports that low-income populations are more likely to rely on unpaid care, act as primary care workers, and live with care recipients. Income differences in caring also vary depending on the level of care. All income groups provide low levels of care, defined as between 1 and 4 hours of care, but this level of care is especially common among high-income families. In contrast, low-income families are twice as likely as moderate or high-income families to provide more than 30 hours of care per month. Low-income care workers face additional burdens when trying to combine unpaid care and employment. Lower-income jobs tend to have fewer options for flexible hours, are less likely to provide paid sick or vacation time, and low-income workers have fewer resources to support unpaid leave (Bianchi, Folbre et al. 2012).

A National Profile of Middle-Aged Care Workers

Several data sources provide broad estimates of care work across the U.S. population (see Folbre and Wolf 2012), but the experience and consequences of caring vary widely across the life course. To better understand the prevalence and distribution of care work among persons during their prime employment years, we turn to data from the 1979 cohort of the National Longitudinal Survey of Youth (NLSY79). The NLSY provides a nationally representative sample of 12,686 U.S. adults born between 1957 and 1964. Respondents were initially surveyed when they were aged 14–22 in 1979 and have continued to be followed through adulthood (U.S. Bureau of Labor Statistics 2015). In 2008, when they were 43–51, they were asked whether they regularly spent time caring for an ill or disabled household member or friend or relative outside the home.

Follow-up questions asked about the number of hours spent providing either type of care. The same set of questions was asked in 2010 and 2012, providing additional information on duration of care.

Descriptive information from the NLSY79 on care work and its distribution by gender, race/ethnicity, and income quartiles is shown in Table 7.1. Data are weighted to provide estimates of U.S. adults born between 1957 and 1964. As seen in Table 7.1, the profile of care work indicated by the NLSY79 is similar to that reported by the NAC/AARP. Between 2008 and 2012, 27 percent of men and women provide some type of care in at least one of the three surveys. Sixteen percent provide care in just one of the three surveys, while 4 percent are care workers in all three waves. Eleven percent of the sample cares for someone inside the household, whereas 19 percent provide care outside the home. Consistent with other care work surveys, the number of hours spent providing care is much greater among those providing care inside the home than it is for care outside the home. Care for persons living inside the home averages 33 hours per week, compared to an average of 11 hours per week for care of persons living outside one's home.

The second and third columns of Table 7.1 compare care work by gender. Midlife women are significantly more likely to provide care than midlife men, 34 percent versus 22 percent. While women are more likely to provide care inside and outside the home, the gender difference is much greater for care outside the home, with twice as many women than men reporting providing care outside the home. Among those caring inside the home, women average 37 hours of care per week, compared to 28 hours per week for men providing care. Among those caring outside the home, on the other hand, there is no difference between men and women in their hours spent caring. Furthermore, 15 percent of women provide care either inside or outside the home in two or more survey waves, but only 7 percent of men are providing care at multiple surveys.

We also find small racial/ethnic variation in unpaid care work. In the NLSY79, 33 percent of blacks report providing care, compared to 26 percent of whites and 29 percent of Hispanics. Blacks are significantly more likely than whites to provide care either inside or outside the home, and blacks are slightly more likely to provide care in multiple survey waves. In contrast to the Evercare (2008) survey discussed above, a slightly smaller percentage of Hispanics than blacks report providing any care, and a similar difference between the two groups is seen both for care inside and outside the home. The slight difference in care work between Hispanics and whites is not statistically significant. Among those providing care either inside or outside the home, there are no racial/ethnic differences in the hours of care reported.

Table 7.1 Descriptive Statistics of Caregiving by Gender, Race, and Income, NLSY79 (Weighted Data)

	Total	Women	Men	Hispanic	Black	White	Income Q1	Income Q2	Income Q3	Income Q4
Observed *N*	6,727	3,432	3,295	1,322	2,027	3,378	1,684	1,703	1,659	1,681
Average age (2008)	47	47	47	47	47	47	47	47	47	47
Any care										
Observed *N*	1,959	1,197	762	395	665	899	619	506	446	388
Percent	27	34[m]	22	29[b]	33[w]	26	36[i]	29[i]	26	23
Inside care										
Observed *N*	831	449	382	182	297	352	335	230	157	109
Percent	11	12[m]	10	13[w]	15[w]	10	20[i]	13[i]	9[i]	6
Hours per week	33	37[m]	28	31	34	33	43[i]	28	28	26
Outside care										
Observed *N*	1,339	901	438	247	455	637	377	331	331	300
Percent	19	26[m]	13	18[b]	23[w]	19	23[i]	19	19	17
Hours per week	11	11	10	13	11	10	13[i]	12[i]	11[i]	7
Years caring (%)										
0	73	66[m]	78	71[b]	67[w]	74	64[i]	71[i]	74	77
1	16	18[m]	14	17[b]	20[w]	15	19[i]	17	15	14
2	7	9	5	8	9[w]	7	11[i]	9[i]	6	5
3	4	6[m]	2	4	5	4	7[i]	3	4	3

– [m] denotes significantly different from men at the .05 level or smaller; [w] denotes significantly different from white at the .05 level or smaller, [b] denotes significantly different from black at the .05 level or smaller, and [i] significantly different from the fourth quartile of income at the .05 level or smaller.

– We pool data from the 2008, 2010, and 2012 waves for information on caregiving.

– The rows labeled "Hours per Week" only include information on individuals who reported providing care at any year, and if the respondent provided multiple years of care, we used their average hours of care.

Far more dramatic differences are found across income quartiles. Thirty-six percent of low-income respondents provide any type of care, while only 23 percent of high-income respondents provide care. Income differences are particularly large for care inside the home, with 20 percent in the lowest income quartile providing care inside the home compared to only 6 percent of those in the highest quartile. Low-income care workers also report spending far more hours of care both inside and outside the home. Among those providing care inside the home, low-income care workers report spending 43 hours on care per week, compared to an average of 26 hours among high-income care workers. Low-income care workers are also more likely than high-income care workers to provide care across multiple survey waves. These differences likely reflect both the poorer health and greater disability of adults in low-income households and the limited resources of low-income adults to pay for care.

Consequences of Care Work

Unpaid care, particularly if it is intense, has a range of effects on the care worker's physical health, well-being, and economic security. The consequences of caring for the care provider's health and well-being have been extensively studied. Following several decades of research on the health effects of care work that use a variety of measures of care work, health outcomes, and sample designs, a series of meta-analyses have evaluated the extent to which care work affects a range of physical and psychological outcomes (Pinquart and Sorensen 2003, Vitaliano, Zhang et al. 2003, Pinquart and Sorensen 2007). In terms of psychological health, the evidence shows that care workers experience more stress, depression, poorer subjective well-being, and lower self-efficacy than those not providing care (Pinquart and Sorensen 2003). Although physical health differences are not as large as they are for psychological outcomes, care providers also have worse physical health than those not providing care, particularly higher levels of stress hormones, antibodies, and worse self-assessed health (Pinquart and Sorensen 2003, Vitaliano, Zhang et al. 2003, Pinquart and Sorensen 2007). However, the magnitude of differences is modest between care workers and non-care workers for both physical and psychological health.

When comparing broad categories of care workers and non-care workers, the modest association between health outcomes and care work should not be a surprise. Care experiences, and thus the effects of those experiences, vary widely. Doing a few household chores or paying bills for an elderly or disabled parent is a different experience than providing medical and personal care for a spouse living in one's home, though both can

be viewed as providing care. For example, health differences between care workers and noncare workers are much greater in studies that focus specifically on dementia care workers or among spousal care workers (Pinquart and Sorensen 2003), which reflects the much greater burden and stress associated with these forms of care. Living with the care recipient is also a factor. Care providers who do not live with the care recipient have better physical health than those who are caring for someone living inside their home. Interestingly, coresidence appears to have more of an impact on physical than mental health, suggesting that living with the care recipient may have a bigger impact on health behaviors such as sleeping, eating, and exercise and may also put the care worker at greater risk of injury from lifting and other physical tasks (Pinquart and Sorensen 2007).

The effects of care work on health and well-being also vary by gender, race, and social class. A meta-analysis of 229 studies finds that women care workers experience higher levels of depression and lower levels of subjective well-being and physical health than male care workers (Pinquart and Sorensen 2006). Again, however, the magnitude of these differences is small. Another meta-analysis found that Asian American, Hispanic, and black care workers all tend to have worse physical health than white care workers but that blacks reported less burden and depression than their white counterparts (Pinquart and Sorensen 2005). There is some evidence that race/ethnicity and income intersect with gender in their consequences for care worker health and well-being. One study, based on a national sample of midlife adults, found that nonwhite men care workers experience smaller increases in depression than non-Hispanic white men, but no racial/ethnic differences exist among women (Marks, Lambert et al. 2008). This study also found that low-income families put daughters providing care at greater risk for health problems than sons providing the same levels of care.

Much of researchers' attention has understandably been given to the negative health consequences of care work, but there are also positive effects of caring. A study of 1,229 care workers for persons with dementia found that study participants list a number of positive experiences, including feeling good about themselves, enabling them to appreciate life more, and strengthening their relationships with others (Tarlow, Wisniewski et al. 2004). Other studies have also found that care workers often feel a sense of personal gratification, appreciate being able to pay back support they may have received in the past, and enjoy a sense of personal growth (Henretta, Hill et al. 1997, Raschick and Ingersoll-Dayton 2004, Chesley and Moen 2006, Lin, Fee et al. 2012). However, as with health risks, the benefits of caring vary for men and women, with men often reporting greater benefits and growth from the experience (Chesley and Moen 2006, Lin, Fee et al. 2012).

While the consequences of care work for health and well-being have been extensively studied, there are still several important but largely unanswered questions about the health consequences of providing care. First, although we know a great deal about the contemporaneous and short-term effects of caring on health and well-being, there are surprisingly few studies examining health changes across the care work career and even fewer examining whether there are long-lasting health effects of providing care. Longitudinal studies do indicate changes in health across the care work career (Aneshensel, Pearlin et al. 1995, Pavalko and Woodbury 2000, Kim, Shaffer et al. 2014) as well as persistent health effects for some care workers even after care ends (Aneshensel, Botticello et al. 2004, Kim, Shaffer et al. 2014). However, we know little about which care experiences or statuses may promote resilience or whether any long-term effects of caring differ across health outcomes. Second, we are only beginning to understand how race, class, and gender may protect care workers or exacerbate the stresses they face. Much more work is needed to examine how experiences and consequences of care work vary across groups, and particularly how race, class, and gender intersect to shape the effects of care work. Finally, few studies examining the consequences of care work take into account the processes that influence who becomes a care worker in the first place, but several studies have found evidence that healthier adults are more likely to become care workers (McCann, Hebert et al. 2004, Roth, Haley et al. 2013). Closer attention to these selection processes is particularly important for clearly distinguishing both the positive and negative effects of providing care (Bianchi, Folbre et al. 2012).

Beyond its effects on health and well-being, a growing body of evidence identifies both short and long-term economic consequences of care work, particularly for women. Although employment does not affect whether or not women begin care work, doing that work increases the likelihood that women will reduce their employment (Pavalko and Artis 1997, Johnson and Lo Sasso 2006, Pavalko and Henderson 2006, Lilly, LaPorte et al. 2007, Berecki-Gisolf, Lucke et al. 2008). For example, Johnson and LoSasso (2006) estimate that women who help their parents over a two-year period reduce their work hours by 367 hours per year, a 41 percent drop. Pavalko and Artis (1997) also found that women who left the labor force to provide care did not immediately return after stopping care work. It is less clear whether similar effects of care work are found for men's employment, especially because much of the research on employment focuses on women. Studies comparing employment effects for men and women have been mixed. Data from the U.S. Health and Retirement Survey found care work did have an effect on employment for women but not men (Lee, Tang et al. 2014), while an Australian study found that

being the primary care worker reduced the probability of employment by approximately 12 percentage points for both males and females (Nguyen and Connelly 2014). This study also found that secondary care workers, whether male or female, did not reduce their employment.

These short-term losses of income have significant long-term effects on lifetime income, as well as social security and pension benefits. Data from the Health and Retirement Survey suggests that a typical woman providing care loses a total of $324,044 due to reductions in work hours. This estimate includes $142,693 in lost wages, $131,351 in Social Security losses, and a conservative estimate of $50,000 in lost pension benefits (MetLife Mature Market Institute 2011). Income losses like these put care workers at an increased risk of poverty later in life. Wakabashi and Donato (2006), for example, found that women who were spending at least 20 hours per week assisting parents with personal care were 25 percent more likely to be living in poverty, 27 percent more likely to be receiving public assistance, and 46 percent more likely to be receiving Medicare eight years later. Although men are less likely than women to leave the labor force early to provide care, those who do also experience a substantial loss in wages and benefits—an average lifetime income loss of $283,716, including $89,107 in lost wages, $144,609 in Social Security, and $50,000 in pension (MetLife Mature Market Institute 2011).

The effects of care work on income are of particular concern for low-income women. Lee et al. (2014) demonstrate the reciprocal effects of income and unpaid care work over time, showing the vicious cycle it can create for low-income women. Unpaid care workers are more likely than noncare workers to experience income losses as a result of caring, and the limited financial resources of low-income families leave few options to hire outside help. Thus, women in low-income families are more likely to be called on to provide unpaid care and more likely to suffer economic loss from providing that care.

Challenges and Solutions for Addressing the Care Workers Dilemma

Given the growth in need for care and the increase in the time families spend at work (Jacobs and Gerson 2004), a major challenge will be to increase the compatibility of employment and unpaid care work. Compared to other industrialized countries, the United States offers relatively few protections that help spouses, sons, and daughters balance paid employment with unpaid care work. Most workplaces in the United States continue to assume that workers match the "ideal worker" norm and can provide full, uninterrupted commitment to paid work throughout their life (Williams 2000). This model assumes that the sometimes extensive

unpaid work required to sustain a worker's own health and well-being as well as that of their family is provided by someone other than the worker, thus allowing them to devote their full energy to work. The problem with this model is that it does not match the reality of most workers' lives. In 2013, 69 percent of families in which at least one person was employed were either dual-earner married or single households (U.S. Bureau of Labor Statistics 2014). If a family member becomes ill or disabled in one of these households, there is no one available to provide unpaid care work without the competing demands of paid employment. That means that most unpaid care workers are employed and many employees are providing unpaid care.

What is the profile of employed care workers? To answer that question, we turn once again to the NLSY79 cohort, which provides nationally representative estimates of midlife men and women. Data are from the 2008–2012 surveys, when respondents were between 43–55 years of age. The first two columns of Table 7.2 compare employment between care workers and noncare workers in 2008. Those who were providing any type of care were slightly less likely to be employed, but 83 percent of middle-aged adults providing care were employed in 2008. Fifty-seven percent of employed care workers work in upper or lower white-collar occupations, and 81 percent are working full time. As we will discuss in more depth below, employee benefits that provide protection for time away from work and options for flexible hours can be particularly valuable for helping employees manage unpaid care demands. While most employed care workers have some paid sick or vacation time, 13 percent do not have any paid protection if they need to take a day away from work for unpaid care, and another 18 percent have fewer than 6 days of paid sick or vacation time per year available to them. Twenty-five percent of employed care workers lack job security if they take unpaid family leave, and only 55 percent have the option of flexible work hours to help manage the demands of care work.

The remaining columns in Table 7.2 compare work situations for men and women care workers and are separated by whether they are providing care to someone living inside or outside their home. One clear message from Table 7.2 is that combining unpaid care work with employment is not limited to any particular set of employees. Among those providing care to someone inside the home, men and women are equally likely to be employed. Employed care workers both inside and outside the home tend to work in a wide range of blue- and white-collar occupations. For both types of employed care workers, women are more likely than men to be working in lower white-collar or service occupations. Male care workers are slightly more likely to be employed full time, but 72 percent of women

Table 7.2 Employment Information by Location of Care and Gender, National Longitudinal Survey, 1979 Cohort (Weighted Data)

			Inside Care		Outside Care	
	No Care	Any Care	Women	Men	Women	Men
Observed *N*	4,767	1,959	449	382	901	438
Employed (%)	90[a]	83	76	81	80[m]	87
Occupation (%)						
Upper white	39[a]	30	26	21	32	34
Lower white	26	27	34[m]	12	39[m]	15
Skilled	11	10	2[m]	29	1[m]	17
Semi-skilled	10	12	8[m]	19	7[m]	21
Service	14[a]	20	31[m]	19	22	12
Employment type (%)						
Part time	13[a]	19	28[m]	12	28[m]	11
Full time	87[a]	81	72[m]	88	72[m]	89
Employee benefits (%)						
Any sick or vacation time	89[a]	87	97	98	95	97
6+ days sick or vacation Time	85[a]	82	96	96	93[m]	96
Family leave	74	75	69	69	77	73
Flexible hours	56	55	52	50	60[m]	61

– [a] significantly different from those who provide any care at the .05 level or smaller.
– [m] significantly different from men at the .05 level or smaller.
– Information on employment and occupation excludes those who are not working.
– Employment information for columns labeled "No Care" and "Any Care" is taken from the 2008 wave.
– Employment information for columns labeled "Inside Care" and "Outside Care" is taken from the first survey a respondent provides inside care.

who are employed care workers are also working full time. Employed men and women care workers tend to have similar levels of access to workplace policies and protections that are useful for juggling unpaid care and employment.

Information from other surveys suggests that the majority of employed care workers make some type of work accommodation to meet care demands, and many report that their unpaid care work affects their work performance (Witters 2011, Feinberg and Choula 2012, National Alliance for Caregiving and AARP 2015). The NAC survey found that 70 percent

of employed care workers report making some work changes to accommodate their care demands. The most common changes are going in late, leaving early, or taking time off, which 66 percent reported, followed by 20 percent taking a leave of absence, 12 percent reducing their hours or taking a less demanding job, and 12 percent stopping work or retiring early (National Alliance for Caregiving and AARP 2009). The Gallup poll reports that 54 percent of employed care workers say that their unpaid care work has some impact on their work, and 19 percent report that it has a great impact, with 30 percent reporting missing six or more days of work in the past year in order to provide care (Witters 2011).

Reductions in work hours or labor force exits to provide care not only negatively impact the short and long-term income security of care workers, but they are also costly for employers. Twenty-four percent of employed care workers reduce hours, take a less demanding job, or stop work, which suggests that today's workplaces are not compatible with the realities of workers' lives. This incompatibility is expensive for employers because of the high cost of employee turnover. In the mid-2000s the Society for Human Resource Management estimated that it cost $3,500 to replace one $8.00 per hour employee and 30–50 percent of the annual salary of entry-level employees, 150 percent of middle-level employees, and up to 400 percent to replace specialized, high-level employees (Blake 2006).

Workplace Solutions

The incompatibility of employment and unpaid care work can be reduced significantly by workplace policies that improve workers' ability to care for family while also remaining employed. There are two categories of workplace policies designed to support care workers. The first includes workplace policies to provide flexibility and paid or unpaid time off from work to allow workers some time and flexibility to provide care. The second includes programs to provide workers with support and information, such as employee assistance programs and community referral services. Both types of programs are useful for helping employees who are caring for an ill or disabled adult, but policies that provide flexibility and time off work are particularly effective for helping workers meet family needs and remain employed. Below we review some of the most common workplace policies available to employed care workers and what we know about whether they are beneficial to employees.

Unpaid family leave. In the United States, unpaid family leave is mandated for eligible employees through the Family and Medical Leave Act (FMLA) of 1993. FMLA requires businesses with 50 or more employees

to provide up to 12 weeks of unpaid leave for the birth or adoption of a child, to care for an ill family member, or for the worker's own health condition without loss of one's job. To be eligible, workers must have worked at that establishment for at least 12 months and have worked for at least 1,250 hours in the year prior to the leave.

While FMLA provides a basic level of protection nationally, some states and some companies provide more coverage than is mandated by law. Shortly after FMLA was enacted, 20–30 percent of private firms either offered more than 12 weeks of unpaid leave or offered leave to employees who had not met the exclusion criteria (Waldfogel 2001). Several states have also extended the family members who allow one to qualify for a leave. FMLA specifies that one can take an unpaid leave to care for one's child, spouse, or parent. Ten states have expanded this range of eligible family members. For example, as of 2012, nine states mandate FMLA protection to care for a partner, eight states include grandparents, in-laws and/or stepparents, and five states mandate FMLA coverage for care of nondependent adult children (Gornick, Howes et al. 2012). Only two states, California and New York, have expanded FMLA coverage to paid leave.

Evidence on the use and effectiveness of FMLA is mixed. Shortly after implementation, most firms reported that it is somewhat or very easy to comply with the law and that implementation did not adversely affect their productivity or profitability (Waldfogel 2001). Although many were covered by some type of family leave policy prior to the passage of the FMLA, its passage extended coverage to more workers. The National Compensation Survey reports that in 1990, 24 percent of private industry workers had access to unpaid family leave, compared to 85 percent with coverage in 2014 (Wiatrowski 2004, U.S. Bureau of Labor Statistics 2014). There is some evidence that unpaid leave may also help workers remain employed. A national study of midlife women found that employed care workers who had access to unpaid leave were more likely to still be employed two years later than those who did not have access (Pavalko and Henderson 2006).

While providing some protection, evidence also suggests that the overall impact of FMLA is modest. Most workers cannot afford to use unpaid leave, or if they do use it, do so for short periods of time. The median length of leave is 10 days, and 90 percent of leaves last 12 weeks or less (Waldfogel 2001). Even when a policy is formally available, informal workplace cultures may discourage its use (Blair-Loy and Wharton 2002). Finally, recent estimates suggest that firm compliance with the law may be lower than originally estimated, with between 23 and 46 percent of eligible firms not complying with the law (Armenia, Gerstel et al. 2014).

Paid leave. Paid leave is likely to be far more valuable to employees and effective for workplaces wishing to reduce turnover costs from employees

who are providing unpaid care. Although there are currently national and local initiatives to expand paid leave, as of early 2015, only two states, California and New York, have extended family leave policies to provide paid leave. Nationally, 12 percent of private industry employees have access to paid family leave (U.S. Bureau of Labor Statistics 2014). Low-wage earners are the least likely to have access to family leave. Among workers earning wages in the lowest income quartile, only 5 percent had access to paid leave, while 22 percent of workers in the top quartile of earnings had access to paid leave (U.S. Bureau of Labor Statistics 2014). Low-income workers are most likely to have a family member needing care and are the least able to afford an unpaid leave, but they are also the least likely to have access to paid leave.

Given the scarcity of paid family leave for most workers, another valuable resource for workers balancing care work and employment is paid sick and vacation time. Several studies have found that women who were providing unpaid care and had access to sick or vacation time were less likely to leave the labor force than those whose jobs did not provide this benefit (Pavalko and Woodbury 2000, Pavalko and Henderson 2006). These benefits have historically been the most commonly available benefit for workers in private industry, with an average of eight days of sick leave a year (U.S. Bureau of Labor Statistics 2014). In 2014, 77 percent of private industry workers had access to paid vacations, 61 percent had paid sick leave, and 38 percent paid personal leave. Thus, while widely available, not all workers have even this minimal level of protection that can be essential for dealing with care emergencies.

Flexible hours. Giving workers more flexibility in when and where they do their work is another workplace strategy that may make it more feasible for care workers to remain employed. The Bureau of Labor Statistics estimates that 27.5 percent of U.S. workers have flexible work schedules, defined as flexibility in when one starts or stops work. Only 11 percent, however, have access to a formal flextime program at work (U.S. Bureau of Labor Statistics 2005). These varying definitions of what it means to have flexible hours makes it difficult to assess whether flextime is beneficial for care workers, but several studies have found modest effects on job turnover and emotional health (Chesley and Moen 2006, Pavalko and Henderson 2006).

However, several factors limit the effectiveness of flextime policies (Perlow and Kelly 2014). In many companies a formal policy may exist, but its implementation is left to the immediate supervisor, who may or may not support the policy. Workers also often face career repercussions and social stigma if they take advantage of flextime, particularly for personal or family needs (Leslie, Manchester et al. 2012, Williams, Blair-Loy et al.

2013). Although not specific to care workers, a growing body of evidence suggests that a more substantial cultural and structural shift in the organization of work time that gives workers control over when and how they get their work done may be more effective in reducing a variety of negative effects of work, including work-family conflict, job turnover, and poor health (Moen, Kelly et al. 2011, Kelly, Moen et al. 2014, Perlow and Kelly 2014).

Employee assistance programs. Employers are also increasingly offering employee assistance programs to provide employees access to referral or counseling services to deal with personal or family problems. Some explicitly include referral services for elder care. In 2008, 76 percent of public sector and 46 percent of private sector employees had an employee assistance program, and prevalence of these programs had roughly doubled since the late 1990s (Stoltzfus 2009). Unfortunately, there has been little to no evaluation of the effectiveness of these services for employees or the organizations that adopt them (Heathfield n.d.). While information and referral to other resources is likely to be useful to employees juggling unpaid care work, a limitation of assistance programs is that they do not address the time challenges faced by employed care workers, and thus may have limited effectiveness for reducing employee turnover.

Conclusions

Unpaid care work is not only essential for individuals and families; it is also a major component of our health-care system, providing more than half of the long-term care for the elderly. With an aging population, even small reductions in adults' ability to provide unpaid care could have major ramifications for the financing of health care. As the demand for care increases and the supply of family members to provide care declines, institutional support that allows adults to provide unpaid care while also maintaining paid work and family lives becomes even more critical. As this chapter has shown, providing unpaid care is most common in midlife, which corresponds to adults' peak years of employment. At any given time, it is estimated that 17 percent of adults are providing unpaid care while employed, and many will do so multiple times. Employees who are providing care to an ill or disabled family member are not isolated to any particular demographic group, as both men and women, and employees at all job levels are likely to provide care.

In this chapter, we have reviewed the implications of this care for the care worker's own health and economic well-being, and also a range of workplace policies that can make it more feasible for workers to remain employed while providing care. However, it is important to note that

workplace policies, while valuable, are a limited solution. Even the most comprehensive workplace policies, such as sick and vacation days, are not uniformly available to all workers. Firms and supervisors adopt and implement these policies unevenly, and often the most vulnerable workers, which often include care workers, are the least likely to have protection. For this reason, truly effective support for care workers will also require reforms beyond the workplace. National policies and programs that provide more uniform and widespread coverage will be essential for assuring that unpaid care can be sustained without risking the care provider's long-term income security. Federal initiatives to make paid leave available to all care workers are one of the most important steps we could take to support them. Protection of paid sick and vacation time for all workers is also essential because they allow those providing care to manage emergencies.

Beyond initiatives to increase the availability of unpaid leave, it is also critical that we broaden forms of community support. The National Caregivers Support Program, a federally funded program to support family care workers, is one such example. This program provides information, assistance, and training for family care workers as well as respite care and other services. Programs and services vary across states, and the program remains underfunded (Wisensale 2008). A 2004 evaluation of the program found that in all states, funding levels were insufficient to meet caregiver needs, and services such as respite care are particularly underfunded (Feinberg et al. 2004). Expansion of this type of community support will become increasingly important as the demand for care increases. Providing multilevel support for care workers will be essential not only for individuals and families, but also for employers and the health-care system.

References

Aneshensel, C. S., et al. (1995). *Profiles in Caregiving: The Unexpected Career*. San Diego, CA, Academic Press.

Aneshensel, C. S., et al. (2004). "When Caregiving Ends: The Course of Depressive Symptoms After Bereavement." *Journal of Health and Social Behavior* 45(December): 422–440.

Angel, J. L., et al. (2014). "Nativity Status and Sources of Care Assistance Among Elderly Mexican-Origin Adults." *Journal of Cross-Cultural Gerontology* 29: 243–258.

Armenia, A., et al. (2014). "Workplace Compliance with the Law: The Case of the Family and Medical Leave Act." *Work and Occupations* 41: 277–304.

Berecki-Gisolf, J., et al. (2008). "Transitions into Informal Caregiving and Out of Paid Employment of Women in their 50s." *Social Science and Medicine* 67: 122–127.

Bianchi, S., et al. (2012). Unpaid Care Work. In *For Love and Money: Care Provision in the United States*. N. Folbre (Ed). New York, Russell Sage Foundation: 40–64.

Blair-Loy, M. and A. S. Wharton (2002). "Employees' Use of Work-Family Policies and the Workplace Social Context." *Social Forces* 80(3): 813–845.

Blake, R. (2006). Employee Retention: What Employer Turnover Really Costs Your Company. *WebProNews*.

Chen, H. and Z. Guo (2008). "Obesity and Functional Disability in Elderly Americans." *Journal of the American Geriatrics Society* 56(4): 689–694.

Chesley, N. and P. Moen (2006). "When Workers Care: Dual-Earner Couples' Caregiving Strategies, Benefit Use, and Psychological Well-Being." *American Behavioral Scientist* 49(9): 1248–1269.

Congressional Budget Office (2013). *Rising Demand for Long-Term Services and Supports for Elderly People*. Washington, DC.

Cynkar, P. and E. Mendes (2011). *More Than One in Six American Workers Also Act as Caregivers*. Washington, DC, Gallup.

Evercare (2008). *Hispanic Family Caregiving in the U.S.: Findings from a National Study*. Bethesda, MD.

Feinberg, L. F. et al. (2004). *The State of the States in Family Caregiver Support: A 50-State Study*. San Francisco: Family Caregiver Alliance and National Conference of State Legislators.

Feinberg, L. F. and R. Choula (2012). Understanding the Impact of Family Caregiving on Work. *Fact Sheet*. Washington, DC, AARP. 271.

Folbre, N. and D. A. Wolf (2012). Appendix: Measuring Care Work. In *For Love and Money: Care Provision in the United States*. N. Folbre (Ed.). New York, Russell Sage: 205–227.

Freedman, V. A., et al. (2004). "Resolving Inconsistencies in Trends in Old-Age Disability: Report from a Technical Working Group." *Demography* 41(3): 417–414.

Glazer, N. Y. (1990). "The Home as a Workshop: Women as Amateur Nurses and Medical Care Providers." *Gender & Society* 4: 479–499.

Gornick, J. C., et al. (2012). The Care Policy Landscape. In *For Love and Money: Care Provision in the United States*. N. Folbre (Ed.). New York, Russell Sage: 112–139.

Harrington Meyer, M., Ed. (2000). *Care Work: Gender, Class, and the Welfare States*. New York, Routledge.

Heathfield, S. M. (n.d.). Do EAP's Work or Just Make Employers Feel Good? About.com.

Henretta, J. C., et al. (1997). "Selection of Children to Provide Care: The Effect of Earlier Parental Transfers." *The Journals of Gerontology, Series B: Social Sciences* 52: 110–119.

Jacobs, J. A. and K. Gerson (2004). *The Time Divide: Work, Family, and Gender Inequality*. Cambridge, MA, Harvard University Press.

Johnson, R. W. and A. T. Lo Sasso (2006). "The Impact of Elder Care on Women's Labor Supply." *Inquiry* 43: 195–210.

Kahn, J. R., et al. (2011). "Help to Family and Friends: Are there Gender Differences at Older Ages?" *Journal of Marriage and the Family* 73(1): 77–92.

Kelly, E. L., et al. (2014). "Changing Work and Work-Family Conflict: Evidence from the Work, Family, and Health Network." *American Sociological Review* 79(3): 485–516.

Kim, Y., et al. (2014). "Prevalence and Predictors of Depressive Symptoms among Cancer Caregivers 5 Years after the Relative's Cancer Diagnosis." *Journal of Consulting and Clinical Psychology* 82: 1–8.

Laditka, J. N. and S. B. Laditka (2001). "Adult Children Helping Older Parents." *Research on Aging* 23(4): 429–456.

Lee, Y., et al. (2015). "The Vicious Cycle of Parental Caregiving and Financial Well-Being: A Longitudinal Study of Women." *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*. 70(3): 425–431.

Leslie, L. M., et al. (2012). "Flexible Work Practices: A Source of Career Premiums or Penalties?" *Academy of Management Journal* 55: 1407–1428.

Lilly, M. B., et al. (2007). "Labor Market Work and Home Care's Unpaid Caregivers: A Systematic Review of Labor Force Participation Rates, Predictors of Labor Market Withdrawal, and Hours of Work." *Milbank Quarterly* 85(4): 641–690.

Lin, I.-F., et al. (2012). "Negative and Positive Caregiving Experiences: A Closer Look at the Intersection of Gender and Relationship." *Family Relations* 61: 343–358.

Markides, K. S., et al. (2013). Aging, Health, and Families in the Hispanic Population. *Kinship and Cohort in an Aging Society*. M. Silverstein and R. Giarusso. Baltimore, MD, Johns Hopkins University: 314–331.

Marks, N. F., et al. (2008). "Psychosocial Moderators of the Effects of Transitioning Into Filial Caregiving on Mental and Physical Health." *Research on Aging* 30(3): 358–389.

Martin, L. G., et al. (2010). "Trends in Health of Older Adults in the United States: Past, Present, Future." *Demography* 47(1): S17-S40.

McCann, J. J., et al. (2004). "Predictors of Beginning and Ending Caregiving During a 3-year Period in a Biracial Community Population of Older Adults." *American Journal of Public Health* 94(10): 1800–1806.

MetLife Mature Market Institute (2011). *The MetLife Study of Caregiving Costs to Working Caregivers: Double Jeopardy for Baby Boomers Caring for Their Parents*. Westport, CT.

Moen, P., et al. (2011). "Does Enhancing Work-Time Control and Flexibility Reduce Turnover? A Naturally Occurring Experiment." *Social Problems* 58(1): 69–98.

Moen, P., et al. (1994). "Women's Work and Caregiving Roles: A Life Course Approach." *The Journals of Gerontology, Series B: Social Sciences* 49(4): S176–S186.

National Alliance for Caregiving and AARP (1997). *Family Caregiving in the U.S.—Findings from a National Survey*. Bethesda, MD, National Alliance for Caregiving and AARP.

National Alliance for Caregiving and AARP (2009). *Caregiving in the U.S. 2009*. Bethesda, MD.

National Alliance for Caregiving and AARP (2015). *Caregiving in the U.S., 2015 Report*.

Nguyen, H. T. and L. B. Connelly (2014). "The Effect of Unpaid Caregiving Intensity on Labour Force Participation: Results from a Multinomial Endogenous Treatment Model." *Social Science and Medicine* 100: 115–122.

Noel-Miller, C. (2011). "Partner Caregiving in Older Cohabitating Couples." *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* 66: 341–353.

Pavalko, E. K. and J. E. Artis (1997). "Women's Caregiving and Paid Work: Causal Relationships in Late Midlife." *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* 52(4): S170–S179.

Pavalko, E. K. and K. A. Henderson (2006). "Combining Care Work and Paid Work: Do Workplace Policies Make a Difference?" *Research on Aging* 28: 359–374.

Pavalko, E. K. and J. D. Wolfe (2015). "Do Women Still Care? Cohort Changes in U.S. Women's Care for the Ill or Disabled." *Social Forces*. Epub.

Pavalko, E. K. and S. Woodbury (2000). "Social Roles as Process: Caregiving Careers and Women's Health." *Journal of Health and Social Behavior* 41(1): 91–105.

Perlow, L. A. and E. L. Kelly (2014). "Toward a Model of Work Redesign for Better Work and Better Life." *Work and Occupations* 41: 111–134.

Pillemer, K. and J. J. Suitor (2014). "Who Provides Care? A Prospective Study of Caregiving Among Adult Siblings." *The Gerontologist* 54(4): 589–598.

Pinquart, M. and S. Sorensen (2003). "Differences between Caregivers and Noncaregivers in Psychological Health and Physical Health: Meta-Analysis." *Psychology and Aging* 18(2): 250–267.

Pinquart, M. and S. Sorensen (2005). "Ethnic Differences in Stressors, Resources, and Psychological Outcomes of Family Caregiving: A Meta-Analysis." *The Gerontologist* 45(1): 90–106.

Pinquart, M. and S. Sorensen (2006). "Gender Differences in Caregiver Stressors, Social Resources, and Health: An Updated Meta-Analysis." *The Journals of Gerontology, Series B: Psychological Sciences* 61B(1): P33–P45.

Pinquart, M. and S. Sorensen (2007). "Correlates of Physical Health of Informal Caregivers: A Meta-Analysis." *The Journals of Gerontology, Series B: Psychological Sciences* 62B(2): P126–P137.

Raschick, M. and B. Ingersoll-Dayton (2004). "The Costs and Rewards of Caregiving among Aging Spouses and Adult Children." *Family Relations* 53: 317–325.

Reinhard, S. C., et al. (2012). Home Alone: Family Caregivers Providing Complex Chronic Care. *Research Report*. A.P.P. Institute. Washington, DC. 2012–10.

Robison, J., et al. (1995). "Women's Caregiving: Changing Profiles and Pathways." *The Journals of Gerontology, Series B: Social Sciences* 50B(6): S362–S373.

Roth, D. L., et al. (2013). "Family Caregiving and All-Cause Mortality: Findings from a Population-Based Propensity-Matched Analysis." *American Journal of Epidemiology* 178(10): 1571–1578.

Sarkisian, N. and N. Gerstel (2004). "Kin Support among Blacks and Whites: Race and Family Organization." *American Sociological Review* 69(4): 812–837.

Spillman, B.C. and K. J. Black (2005). *Staying the Course: Trends in Family Caregiving*. Washington, DC, AARP Public Policy Institute.

Spillman, B.C. and L.E. Pezzin (2000). "Potential and Active Family Caregivers: Changing Networks and the 'Sandwich Generation'." *The Milbank Quarterly* 78(3): 347–374.

Stoltzfus, E.R. (2009). *Access to Wellness and Employee Assistance Programs in the United States*.

Tarlow, B.J., et al. (2004). "Positive Aspects of Caregiving." *Research on Aging* 26(4): 429–453.

U.S. Bureau of Labor Statistics (2005). Workers on Flexible and Shift Schedules in May 2004. *News*.

U.S. Bureau of Labor Statistics (2013). Unpaid Eldercare in the United States—2011–2012. Data From the American Time Use Survey. *USDL-13-1886*.

U.S. Bureau of Labor Statistics (2014). Employment Characteristics of Families—2013. *USDL-14–0658*.

U.S. Bureau of Labor Statistics (2014). *National Compensation Survey: Employee Benefits in Private Industry in the United States, 2014, United States Department of Labor*.

U.S. Bureau of Labor Statistics (2015). "National Longitudinal Surveys." Retrieved February 26, 2015, from http://www.bls.gov/nls/nlsy79.htm.

Uhlenberg, P. and M. Cheuk (2008). Demographic Change and the Future of Informal Caregiving. *Caregiving Contexts: Cultural, Familial, and Societal Implications*. M.E. Szinovacz and A. Davey. New York, Springer: 9–34.

Vitaliano, P.P., et al. (2003). "Is Caregiving Hazardous to One's Physical Health? A Meta-Analysis." *Psychological Bulletin* 129(6): 946–972.

Wakabashi, C. and K.M. Donato (2006). "Does Caregiving Increase Poverty Among Women in Later Life? Evidence from the Health and Retirement Survey." *Journal of Health and Social Behavior* 47: 258–274.

Waldfogel, J. (2001). "Family and Medical Leave: Evidence from the 2000 Surveys." *Monthly Labor Review* 124(9): 17–23.

White-Means, S. and R.M. Rubin (2008). "Parent Caregiving Choices of Middle-Generation Blacks and Whites in the United States." *Journal of Aging and Health* 20: 560–582.

Wiatrowski, W.J. (2004). *Documenting Benefits Coverage for all Workers*. U.S.D. o. Labor, Bureau of Labor Statistics.

Williams, J. (2000). *Unbending Gender*. New York, Oxford University Press.

Williams, J.C., et al. (2013). "Cultural Schemas, Social Class, and the Flexibility Stigma." *Journal of Social Issues* 69: 209–234.

Wisensale, S.K. (2008). Caregiving Policies in the United States: Framing a National Agenda. *Caregiving Contexts: Cultural, Familial, and Societal Implications*. M.E. Szinovacz and A. Davey. New York, Springer: 215–233.

Witters, D. (2011). *Caregiving Costs U.S. Economy $25.2 Billion in Lost Productivity*. Washington, DC, Gallup.

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CHAPTER EIGHT

Elder Abuse

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Changes in life expectancy over the last century are rapidly shifting the face of the global population. By 2050, for example, the number of people aged 65 or older is expected to triple to well over one billion, or 16 percent of the world's population (U.S. Department of Health and Human Services, 2011a). With the number of older adults expected to continue increasing over the coming decades, families and communities will be faced with the growing challenge of caring for the elderly. The majority of older adults will, of course, continue to reside independently in the community, often with the support of family and other community-based caregivers, while some will require more intensive care in the context of long-term care facilities such as nursing homes and assisted living facilities.

Each year 10 percent of independent, community-residing older adults in the United States will experience some form of elder abuse (Acierno et al., 2010). Older adults in both informal, domestic settings and formal settings involving community-based caregivers may be at risk of elder abuse, though each structure is associated with different forms of risk, and hence must employ different risk reduction strategies. In this chapter, we discuss the prevalence of elder abuse in its various forms, providing definitions of and describing risk factors for different types of abuse. We also discuss new strategies relevant to the prevention of elder abuse and highlight international efforts to raise awareness about elder abuse as a human rights issue.

Elder Abuse Research in a Historical Context

Early case reports of "granny battering" (Burston, 1975) first appeared in medical journals in the middle 1970s. In the years that followed, additional cases of "granny battering" were brought to national attention as older adult victims of abuse were invited to testify before a series of congressional subcommittees on aging (Gorbien & Eisenstein, 2005), increasing public awareness of the scope and impact of elder abuse. More than a decade would follow, though, before the first methodologically rigorous research emerged on the incidence of elder abuse in the United States. One of the first studies to report on the prevalence of elder abuse in the United States was conducted by Pillemer and Finkelhor (1988) using a random sample of community-dwelling older adults from the Boston area. Extrapolated results suggested that 32 older adults per 1,000, or 3 percent, experience some form of elder abuse, although the authors did not assess for financial exploitation and other commonly recognized forms of abuse that would likely yield higher estimates. Later, in the 1990s, the National Elder Abuse Incidence Study (NEAIS) was conducted by the American Public Health Services Association's National Center on Elder Abuse, which reported that an estimated 449,924 older adults in the United States aged 60 and over were victims of abuse or neglect in 1996 (Tatara, 1997). The NEAIS based its estimates, however, on Adult Protective Service records and sentinel reports of abuse and, thus, likely underestimated the actual incidence of elder abuse in that many incidents of abuse are never reported to authorities. It was not until the 2000s that the first large-scale efforts were made to explore the prevalence of elder abuse in nationally representative samples of older adults (Acierno et al., 2010; Laumann, Leitsch, & Waite, 2008), and we highlight these efforts in the next section, providing definitions and discussing the prevalence of elder abuse in its various forms.

Problem Definitions and Prevalence

Although elder abuse can take many forms, most widely accepted taxonomies include five categories of mistreatment: emotional/psychological abuse, financial exploitation, neglect, physical abuse, and sexual abuse. In some classification systems, the nature of the relationship between the older adult victim and the perpetrator is a key factor in determining whether these acts of mistreatment can be designated elder abuse in that, to be considered elder abuse, the mistreatment must occur within the context of a trust relationship (Bonnie & Wallace, 2003). Trust relationships are considered relationships where the older adult relies on or is in some

way dependent on another person for care or basic needs and can include family members or professional caregivers. These events, however, can easily come from a nontrusted source, as in cases of assault when speaking of physical or sexual violence, or financial exploitation involving scamming and fraud. Therefore, in this section, we provide definitions of each category of elder abuse used in the National Elder Mistreatment Study (NEMS; Acierno et al., 2010), a large, epidemiological study of mistreatment against community-residing older adults aged 60 and over, perpetrated by individuals both known and unknown to the older adult. For the purposes of this chapter, we use the terms abuse and mistreatment interchangeably, and, of note, the Centers for Disease Control uses the term maltreatment.

The first category of mistreatment, emotional or psychological abuse, includes things like being yelled at, verbally attacked, or scolded in such a way that an older adult felt threatened or concerned about their safety. Emotional abuse can also include repeated acts involving verbal humiliation or embarrassment like calling an older adult stupid or even being ignored for days at a time. In the NEMS, almost 5 percent of older adults reported experiencing at least one severe episode of emotional abuse in the past year, with nearly 14 percent of older adults reporting some form of emotional abuse since reaching age 60. The National Social Life, Health, and Aging Project (NSHAP; Laumann, Leitsch, & Waite, 2008), an epidemiological survey of older adults aged 57 to 85 years, found even higher rates, with a 9 percent past year prevalence rate of emotional abuse in the form of being insulted or put down. These estimates suggest that emotional or psychological abuse may be the most common form of elder abuse, excluding lower-level financial abuse, such as not returning a few dollars change after shopping for groceries for an older relative for which the older relative paid. These figures indicate that older adults may be abused at much higher rates than previously thought.

Evidence suggests that the second most common form of elder abuse is financial exploitation. Older adults frequently have family members or other parties help them manage their finances and other assets, and it is in this context that financial exploitation typically occurs. In the NEMS, Acierno et al. (2010) distinguished between financial abuse by trusted others and financial exploitation by strangers and defined financial abuse as acts in which someone does not ask an older adult permission before spending their money or selling their property, withholds information about important financial decisions from an older adult, forges signatures in order to make important financial decisions without an older adult's consent, uses force or deception to make an older adult sign important financial documents, and/or steals money or property from an older adult.

Older adults can also be targeted by strangers in scams, which can include health insurance fraud, investment schemes, and false sweepstakes. These acts of financial exploitation are estimated to result in roughly $3 billion in annual financial loss (National Committee for the Prevention of Elder Abuse, 2011). Past year prevalence estimates of elder financial abuse range from greater than 3 percent in the NSHAP to 5 percent in the NEMS, excluding stranger fraud.

Elder neglect involves instances in which an older adult has one or more unmet needs of daily living and an identified individual responsible for meeting those needs repeatedly refuses to do so. Distinguish this from the identical situations of unmet needs for which there exists no designated legally or presumably responsible individual. The latter cases are not considered neglect, although one might argue that, in these instances, it is the State that bears the culpability for said abuse. Neglected older adults are those who lack transportation to medical appointments, have difficulty getting food or medicines, or even have difficulty preparing meals and taking medications as prescribed. Neglected older adults may also have difficulty keeping their residence clean and maintaining proper hygiene. Potential elder neglect in community-residing samples where a basic need is evident, and a person is formally or statutorily designated, legal or otherwise, as responsible, appears to be nearly as common as financial exploitation, with a past year prevalence rate of 5 percent in the NEMS.

While less common than other forms of mistreatment, community-residing elder physical and sexual abuse still occur at disturbing frequency when considering the size of the older adult population, with past year prevalence rates of just under 2 percent and 1 percent, respectively (Acierno et al., 2010). Elder physical abuse can include being struck by someone or threatened with a weapon, being physically restrained, or physically hurt in such a way that results in physical injuries. Elder sexual abuse includes acts such as forced, unwanted intercourse, being forced to undress or be photographed in states of undress, and molestation, which can be defined as being forced to touch someone else's breasts or genitals or having someone forcefully touch one's own breasts or genitals. Because of the highly stigmatizing nature of sexual abuse, it is likely that this event is underreported.

An Ecological Model of Elder Abuse

Although elder abuse is typically discussed as it relates to older adult victims of abuse and their abusers, we propose that elder abuse must be considered from a broader, ecological systems perspective (Bronfenbrenner, 1997) in order to maximize the impact of screening and prevention efforts.

That is, it may be artificial to separate out abuse by a trusted other from the same violent act perpetrated by a stranger. They are most certainly associated with different risk factors (Acierno et al., 2010), but the victim being hit on their body absorbing the blows very likely considers both problematic. The fact that risk factors overlap, and that experience of one form of violence increases the risk of the other, suggests that all forms of violence should be studied in an individual-in-the-environment context. The Ecological Model provides just such a framework for studying the individual-in-the-environment context. According to this model, human behavior and development is shaped by the interactions between the person, their immediate settings, and the social and cultural contexts in which these settings are embedded. The Ecological Model conceptualizes elder abuse as existing within these multiple interacting systems both within the community and the broader society (see Figure 8.1) and has been used in the conceptualization of elder abuse by Wolf (2000), the World Report on Violence and Health (Krug et al., 2002), and the 2013 Institute of Medicine (IOM) Workshop *Elder Abuse and its Prevention.* From the ecological

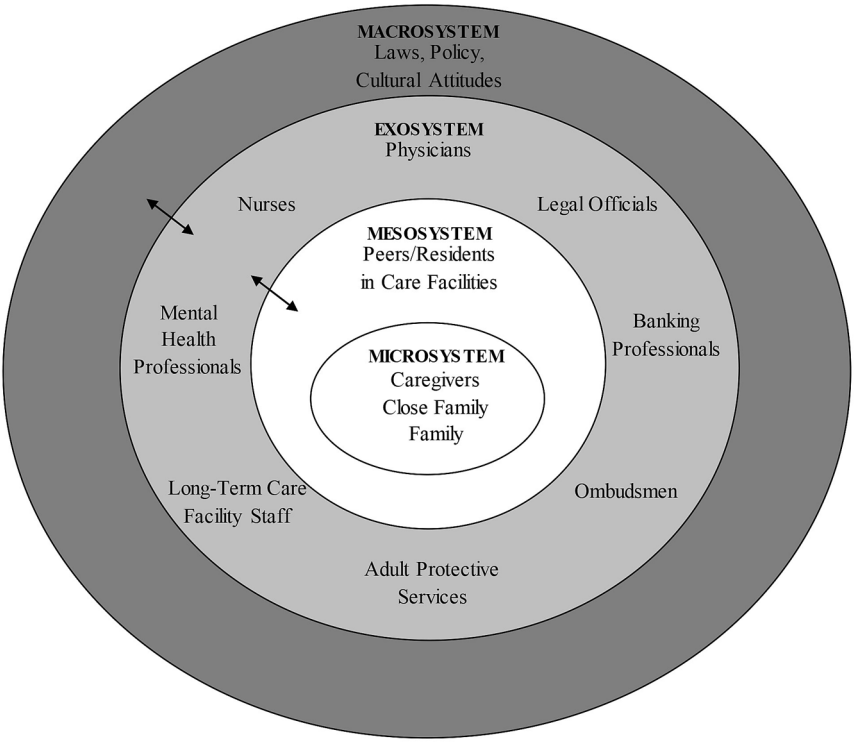


Figure 8.1 Ecological systems model of elder abuse

systems perspective, the microsystem and mesosystem, or contexts closest to the individual, can include such factors as caregivers, family members, or, in the case of long-term care facilities, fellow residents, and this level also includes personal characteristics such as age, gender, race, and health status that may confer risk for abuse. Acts of elder abuse may still be influenced by more distal contexts, or the exosystem, despite little or no direct interaction at this level. Associations between mistreatment and microsystem variables have been of particular interest, given that many of these potential risk factors are proximal and modifiable and, thus, viable targets for preventive intervention. Findings from previous research indicate that microsystem variables such as gender, race, socioeconomic status, psychiatric history, and substance use are associated with elder mistreatment as well as the outcomes of mistreatment, including criminal justice system participation (Bachman, 1994; Biggs et al., 2009; Hanson et al., 1995; Laumann, Leitsch, & Waite, 2008; Norris, 1992). Research on screening, prevention, and policy tend to focus on the exosystem and, to some extent, mesosystem variables. Very little funding and subsequent research has been directed toward these higher-level systems. In the following sections, we discuss these topics in relation to various levels of the older adult's ecological system.

Elder Abuse Risk Factors

In the last section, we noted that microsystem-level variables including age, gender, race, and psychiatric history are associated with elder mistreatment. In the NEMS community sample, for example, lower age was associated with increased risk for experiencing emotional and physical abuse. Lower age was also associated with increased risk for experiencing emotional or verbal abuse in the NSHAP (Laumann, Leitsch, & Waite, 2008)—a finding that the authors partially attribute to respondents possibly referencing routine family arguments in their reports. Although counter to the commonly accepted idea that abuse is more common among the oldest, most physically and psychologically impaired adults, it is important to note that both the NEMS and NSHAP lacked representative samples of institutionalized older adults who are generally older with more serious functional impairment.

Gender was also related to emotional abuse in the NSHAP in that women were found to be at greater risk for experiencing emotionally abusive behavior. The NSHAP also revealed important racial and ethnic differences with regard to financial mistreatment. For instance, in the NSHAP, African American elders reported higher rates of financial exploitation relative to Caucasian elders, while being Latino appears to be protective in that Latino

elders endorsed lower rates of financial exploitation compared to Caucasian elders. One of the most important risk factors for elder abuse, though, appears to be social isolation, which is associated with increased risk for several forms of abuse including emotional abuse, neglect, physical abuse, and sexual abuse. The nature of the relationship between social isolation and elder abuse is certainly complex, but it stands to reason that, as in other forms of domestic violence, abusers may seek to isolate abused elders in order to conceal the abuse, thus creating further opportunities for future violence and limiting opportunities for intervention on behalf of the older adult. In terms of health and psychiatric factors, dementia and cognitive impairment are known risk factors for abuse. Indeed, in one recent study of community-residing older adults, 47 percent of those with dementia were found to have experienced some abusive event in the form of emotional abuse, physical abuse, or neglect (Wiglesworth et al., 2010). One reason for these elevated rates of abuse among adults with dementia is that, ironically, these adults may engage in more psychologically and physically aggressive behaviors toward their caregivers, who, in turn, may use restraints or other forceful methods when dealing with the older adult.

Perpetrator Characteristics

An important part of the process of understanding elder mistreatment is the study of perpetrator characteristics since the type of relationship between both can determine the length and extent of the abuse. For instance, strangers are not commonly the perpetrators, rather the abuser is a person well known by the victim, and in most cases is another family member.

Perpetrators, or those who commit emotional, physical, and sexual abuse, commonly share several characteristics. These include substance abuse around the time of mistreatment, a history of mental illness, unemployment, and social isolation, which is defined by less than three friends. Such aggressors are more often young men and are usually children or spouses of the victim.

According to Acierno et al. (2009) 56 percent of the perpetrators of emotional mistreatment are family members, just under 9 percent are strangers, 41 percent are unemployed, and 39 percent were socially isolated; while in the case of the perpetrators of physical mistreatment, a staggering 76 percent are family members and only 3 percent are strangers, over 51 percent of perpetrators were abusing some substance at the time of the mistreatment, and over 43 percent were socially isolated. With respect to sexual abuse, over 52 percent of the perpetrators were family members compared with only 3 percent strangers, and 53 percent were

socially isolated. In the case of neglect and financial exploitation, a majority of the perpetrators were family members as well. As Pillemer and Finkelhor (1988) have indicated, the fact that high rates of spousal elder abuse occurs, contributes to the conceptualization that this is a crime that is more analogous to domestic violence than child abuse. Statistically, less than 8 percent of emotional abuse is perpetrated by strangers.

This epidemiological data lead us to conclude that treatment should focus not only on addressing the victim but also on considering how to address the perpetrators since the majority are family members, which makes it more difficult for the victim to follow legal pathways to stop the abuse. It is also remarkably noticeable that the perpetrators have issues that may be able to be addressed and produce a positive outcome and a secondary benefit by reducing elder mistreatment.

Health and Economic Impact of Elder Abuse

Elder abuse can have a serious impact on older adults' physical and psychosocial functioning. Abusive acts in and of themselves can result in minor injuries such as bruises and lacerations but are also associated with other, more serious medical problems including fractures, dementia, malnutrition, and death (Dong, 2005; Dong et al., 2009). While the full economic impact of these injuries is unknown, estimates suggest that direct medical costs associated with violent injuries to older adults may add up to as much as $5 billion annually (Mouton et al., 2004). In addition to physical injuries, recent evidence has shown that elder abuse is independently associated with emotional distress even after controlling for other known risk factors including physical health, social support, and prior trauma history (Cisler et al., 2012). This emotional distress is often reflected in higher rates of depression and anxiety among elder abuse victims relative to individuals with no history of abuse (e.g., Dong, Beck, & Simon, 2010; Dyer et al., 2000). The extreme emotional distress experienced in the context of elder abuse is likely to exacerbate other health problems and even increase risk for mortality (Amstadter et al., 2010; Dong et al., 2011), and healthcare providers working with older adults may be in a unique position to screen for and intervene in cases of elder abuse. In other words, they may do very well by their patients to ask questions that, historically, have been off limits because they were considered either disrespectful, or likely to upset patients. Such excuses for nonassessment have been jettisoned with respect to provider behaviors and domestic violence and should similarly be tossed with respect to elder abuse. Aforementioned studies point to the serious physical and emotional impact of elder abuse, but national epidemiological studies on the association between elder abuse and health/

mental health outcomes are needed to more fully understand the extent of this issue. At the time of this writing, there are no program announcements for such studies by any NIH institute, or by the CDC.

Elder Abuse Screening and Prevention—Challenges and Solutions

In 2011, the U.S. National Prevention Council published the National Prevention Strategy (U.S. Department of Health and Human Services, 2011b) with the aim of shifting health care in the United States from a focus on sickness and disease to one based on wellness and prevention. One of the priority areas highlighted in the National Prevention Strategy is the promotion of "Injury and Violence Free Living" across the lifespan, including the prevention of violence against older adults. One of the first steps in any successful prevention or intervention program is recognizing cues that raise suspicion about probable abuse or violence against individuals. In this section, we discuss screening strategies for detecting and identifying elder abuse and also describe intervention strategies relevant to health care and other community settings that serve older adults.

Screening and Assessment

Screening for elder abuse and neglect can be challenging, making routine screening difficult in some health-care settings. Despite these challenges, health-care providers are especially well positioned to identify possible cases of elder abuse in that older adults are frequent consumers of health-care services. Both the American Medical Association (1992) and the American Academy of Neurology (Schulman & Hohler, 2012) have issued position statements recommending that providers screen for elder abuse in clinical practice. In support of these recommendations, several brief assessment tools exist that are designed to be administered directly to an older adult him or herself. One such measure is the Hwalek–Sengstock Elder Abuse Screening Test (H–S/EAST; Neale et al., 1991), a 15-item measure that assesses aspects of abuse including physical abuse, exploitation, and neglect. Some of the questions on the H–S/EAST, however, are not specific to abusive behavior, such as often feeling sad and lonely, and clinicians using the H–S/EAST or any other screening measure, for that matter, must be sure to follow-up with more in-depth questioning if an older adult endorses a question that raises suspicion of probable abuse. Another screening measure designed to be administered directly to older adults is the Elder Abuse Suspicion Index (EASI; Yaffe et al., 2008). The EASI is a six-item measure that includes five items assessing for physical, emotional, and sexual abuse, financial exploitation, and neglect experienced during the 12 months prior to screening. The

sixth item is intended to be completed directly by a clinician and prompts the clinician to document any visible signs of abuse, such as poor hygiene, bruises, or medication compliance issues.

Despite the clinical utility of brief screening measures like the H–S/EAST and the EASI, there are often significant barriers to directly screening older adults for elder abuse. Older adults with physical impairments, for example, may lack access to health-care providers or other individuals to whom they can potentially report the abuse, while older adults with cognitive impairments such as dementia may have memory impairments that limit their ability to recall abusive episodes. In response to such barriers, clinicians and health-care providers working with older adults may wish to obtain collateral information about possible abusive behaviors directly from an older adult's caregiver or other family members. While perhaps counterintuitive, several studies suggest that family and professional caregivers of older adults are often willing to report their own abusive behaviors when directly asked about such behaviors (Ben Natan, Matthews, & Lowenstein, 2010; Pillemer & Suitor, 1992). So, in addition to screening measures intended to be completed by older adults, researchers have also developed measures intended to be completed by caregivers that assess for potentially abusive caregiver behavior. The Caregiver Abuse Screen (CASE; Reis & Nahmiash, 1995), for example, is an eight-item measure for caregivers that assesses caregiver experiences such as "feeling that you are forced to be rough with" an older adult and "feeling you have to reject or ignore" an older adult. Although evidence suggests that abusers tend to score higher on the CASE than nonabusers, clearly not all abusive caregivers will be willing to disclose their own abusive behaviors, especially when such disclosure may have immediate, negative consequences, such as job loss or criminal prosecution (Acierno, 2003). Moreover, not all cognitively intact older adults may be willing to disclose their own victimization history. Thus, clinicians and health-care providers screening for elder abuse should consider several contextual factors beyond just older adult and caregiver self-reports of abuse.

One useful source of information to consider when assessing for possible elder abuse is the older adult's medical history. Elder abuse victims with dementia may have a history of multiple hospitalizations with irregular medical follow-up (Hansberry, Chen, & Gorbien, 2005) and may present to health-care settings with characteristic signs and injuries associated with specific types of abuse. For example, clinicians may notice malnutrition or dehydration in the case of neglected older adults (Dyer, Connolly, & McFeeley, 2003). Relatedly, physically abused older adults may present to emergency departments or acute care settings with injuries such as head injuries, bruises, and/or fractures (Clarke & Pierson, 1999; Jones et al., 1988) that can sometimes be distinguished from nonabusive injuries like

fall-related injuries by location and injury type. That is, injuries sustained in the context of physical abuse that require medical treatment are more likely to be in the head and neck as a result of being choked or punched (Ziminski et al., 2013), while fall-related injuries are more likely to involve upper body injuries such as upper limb dislocation and breast contusions (Ziminski, Phillips, & Woods, 2012). So, considering an elder's medical history can be a useful adjunct to self and caregiver reports when screening for abuse.

Prevention and Intervention

Once a case of elder abuse is identified, there are several routes of intervention that can be considered. If the victim of elder abuse is determined to be vulnerable in the sense of having physical or cognitive impairments that limit their ability to protect themselves from further abuse, clinicians or other providers may need to report the abuse to Adult Protective Services in order to facilitate emergency intervention to keep the adult safe. However, state reporting laws should be consulted here, with respect to specific age and vulnerability parameters mandating report. For the most part, physicians, nurses, mental health professionals, professional caregivers, and others in the helping professions are typically subject to mandated reporting laws requiring them to report any suspected or confirmed case of elder abuse against a vulnerable adult. Laws on mandated reporting of abuse of demented, disabled, or obviously vulnerable older adults are akin to child abuse models where violence is perpetrated by an independent adult family member or caregiver against a dependent person, and, like Child Protective Services, Adult Protective Services may in serious cases of abuse remove an older adult victim of abuse from the custody of an abusive caregiver. By contrast, when both the victim and the perpetrator are independent, community-residing adults, a 69-year-old man and a 68-year-old woman, for example, intervention will in many ways depend on the wishes of the older adult victim, who may have legal rights to confidentiality. In other words, mandated reporting statutes for elder abuse are not consistent across all states, and one must be aware of state laws. An easy resolution to this issue is to place a call to Adult Protective Services, describe the situation without revealing any patient identifying information, and ask if you are a mandated reporter. In this sense, intervention with independent, community-residing adults is more akin to a domestic violence model, with the priorities of intervention often being to provide the older adult with information and referral about family violence and referrals for domestic violence shelters and counseling.

In line with the National Prevention Strategy, there is also an emerging interest in designing and evaluating programs geared toward the prevention

of elder abuse—that is, preventing abusive acts against older adults before they happen or preventing further abuse in cases of repeat victimization. To this end, the IOM's Forum on Global Violence Prevention held a two-day public workshop on elder abuse and prevention (IOM and National Research Council (NRC), 2014) in April 2013. The goal of this workshop was to facilitate interdisciplinary dialogue on the causes of elder abuse and evidence-based prevention approaches, highlighting promising global prevention efforts. One approach to elder abuse prevention involves caregiver support interventions/respite care (see Pillemer et al., 2007) intended to reduce the stress of caregiving, a potentially important factor in elder abuse against dependent older adults. Caregiver stress appears, however, to be more related to the intensity of abuse once it occurs, rather than perpetration risk per se. In a preliminary evaluation of one such caregiver support intervention, Reay and Browne (2002) studied an education and anger management intervention program with 19 caregivers who either physically abused or neglected an elderly dependent. The education component of the program consisted of providing caregivers with information about local services, including adult day care services and caregiver support groups, as well as information about common caregiver stress reactions. Completing the program was associated with reductions in caregiver strain as well as caregiver depression and anxiety symptoms, with changes maintained at six-month follow-up.

Although caregiver interventions like the one just described show considerable promise in helping to address elder abuse, such interventions are limited in scope in that many caregivers will not receive these more structured types of programs. To increase the scope of prevention strategies, researchers and clinicians may be able to draw on prevention approaches used in related fields of interpersonal violence prevention, such as bystander-based interventions (see Banyard, 2011, for a discussion of bystander interventions applied in the context of sexual violence). Indeed, this makes sense when considering that social isolation and lack of social support is predictive of elder abuse, even after controlling for other risk factors (Acierno et al., 2010). The reason that bystander-based interventions may be especially appealing in the prevention of elder abuse is that such interventions move beyond a narrow focus on victim and perpetrator-specific behaviors previously conceptualized as microsystem-level variables and attempt to appeal to third party, mesosytem-level witnesses of potentially abusive events as allies in the effort to end elder abuse. In cases of elder abuse, potential third party witnesses might include individuals such as neighbors, local business people, health-care receptionists, public transportation personnel, and so on. In addition, education and motivation of noncaregiving family members, staff members at long-term

care facilities, or even people like the older adult's banker who are distal parts of victims' microsystems may be able to detect situations, and once empowered, act where an older adult appears to be at risk of abuse.

In fact, the bystander intervention model has received recent attention from elder abuse researchers. Proposing a professional bystander intervention model for the detection of elder financial exploitation, Gilhooly et al. (2013) described five stages for bystander intervention that may be relevant for many types of elder abuse. These stages of intervention include: (a) noticing relevant cues suggestive of probable abuse, (b) construing the situation as abuse, (c) deciding the situation is a personal responsibility, (d) knowing how to deal with the situation, and (e) deciding to intervene. In practice, bystander-oriented programs can provide information and skills training relevant to each stage of intervention. For example, per stage a, bystander intervention programs for nursing home staff might teach staff members to recognize signs of physical abuse. Per stages d and e, the same program could help the staff members acquire skills necessary to intervene in high-risk situations where, say, an older adult resident appears to be at immanent risk of abuse or is actually being abused. As an illustration, such training could prepare staff members to safely intervene when a visibly upset patient with dementia is being yelled at by a fellow staff member. While no bystander intervention programs for elder abuse have been developed and evaluated to date, we encourage clinicians and researchers to consider this approach to prevention, as bystander intervention may play an important role in future efforts to prevent the mistreatment of elders.

Responding to Elder Abuse—Policy and Change

The issue of elder abuse has come to the attention of policy makers both nationally and internationally, with the result being increased public awareness and increased access to services for victims. In the United States, legislative efforts including the Older American Act and the Violence against Women Act (VAWA) have sought to expand funding for elder abuse services, education, and training (Dong & Simon, 2011). The Older American Act, for example, funds the National Center on Elder Abuse (http://www.ncea.aoa.gov/), a resource center that is part of the Department of Health and Human Services Administration on Aging that aims to provide information and resources on elder abuse to professionals and the general public and improve elder abuse research. In addition, the NCEA provides a listing of state reporting numbers for those needing to report a case of elder abuse or neglect. The Older American Act also establishes long-term care ombudsman programs intended to help provide

advocates for residents in long-term care settings and help them resolve any reported issues related to elder mistreatment. Similarly, VAWA funds grants and services relevant to ending violence against women, including older women. In 2010, President Obama also signed into law the Elder Justice Act as part of the Affordable Care Act. Like the Older American Act and VAWA, the Elder Justice Act provides funds for state and local agencies to increase capacity to investigate and prosecute suspected cases of elder abuse as well as increase training for local ombudsmen programs to ensure timely and systematic response to cases of elder abuse (National Health Policy Forum, 2010).

Internationally, efforts to establish collaboration among leaders in the field of elder abuse and globally disseminate information regarding elder abuse prevention and practice have led to several major accomplishments. In 1997, representatives from several different countries established the International Network for the Prevention of Elder Abuse (INPEA), with the mission of promoting public awareness of elder abuse, promoting education and training of professionals working on behalf of elder abuse victims, and promoting advocacy and research on issues of elder abuse and neglect (Podnieks et al., 2010). To achieve this effort, INPEA has representatives from 32 countries worldwide and a representative to the United Nations (UN) and has launched several research activities with the World Health Organization and other organizations to better understand elder abuse in an international context. INPEA also worked to designate June 15 as World Elder Abuse Awareness Day, an event that is gaining popularity around the world as a means of increasing awareness about the prevalence and impact of elder abuse.

Discussion

The proportion of adults aged 60 and over is increasing rapidly across the world. With this increase in numbers comes increased relevance of the needs and issues confronting older adults, as well as associated needs and issues of their future caregivers. One area demanding immediate attention is elder abuse and mistreatment. Elder abuse can take the form of psychological, physical, sexual, neglectful, or financial mistreatment. Although older adults are the group least at risk of mistreatment by strangers, with probably the exception of financial mistreatment, the *past year* prevalence of elder abuse of community-residing older adults by known assailants is surprisingly high, at about 10 percent.

An Ecological Model to frame elder abuse helps to identify risk and protective factors and to direct screening and preventative measures toward those factors. For instance, the Ecological Model frames risk factors according to proximal spheres in a victim's life so that attention can

be directed toward family and caretaker characteristics, community and provider characteristics, policies and legal frameworks, and ultimately the nation as a whole. To date, most focus has been on microsystem factors, or those factors in an individual's immediate environment, with one risk factor, social isolation and lack of social support, standing out among many others such as mental health needs of caretakers. Future work that also focuses on determining the health and mental health outcomes of elder mistreatment will help further prioritize intervention efforts; however, very little resources have been allocated to this area.

Given that research on elder abuse, particularly abuse of community-residing elders, is in its early stages, very little specific direction is available with respect to intervention. Nonetheless, screening and assessment, the first steps in any effort to intervene, are warranted. It is very likely that the most trusted professional group, health-care providers are in the best position to screen for elder abuse. Indeed, increased health services utilization associated with aging indicates that most victims will be in contact with providers at some point during their cycle of abuse. Several specific elder abuse measures were covered in this chapter. Not covered were techniques useful in persuading health-care providers to accept elder abuse screening as part of their clinical responsibility, as has been done for child abuse, and more recently domestic violence.

Hopefully, this chapter will bring increased awareness of the extent of the problem of elder abuse. Recent policy efforts at the national level certainly highlight increased public awareness of this problem and suggest that, in the coming years, there will be greater support for developing and disseminating evidence-based screening and intervention strategies for elder abuse. Even so, additional knowledge of the parameters of abuse, its effects on the elderly, and effective components necessary for intervention are badly needed in order to fully address this preventable problem of aging.

References

Acierno, R. (2003). Elder mistreatment: Epidemiological assessment methodology. In R. J. Bonnie & R. B. Wallace (Eds.), *Elder mistreatment: Abuse, neglect, and exploitation in an aging America* (pp. 261–302). Washington, DC: National Academies Press.

Acierno, R., Hernandez, M. A., Amstadter, A. B., Resnick, H. S., Steve, K., Muzzy, W., & Kilpatrick, D. G. (2010). Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: The National Elder Mistreatment Study. *American Journal of Public Health, 100*, 292–297.

Acierno, R., Hernandez-Tejada, M.A., Muzzy, W., Steve, K. (2009). *National Elder Mistreatment Study* (final report to NIJ for grant 2007-WG-BX-0009). Retrieved from https://www.ncjrs.gov/pdffiles1/nij/grants/226456.pdf

American Medical Association. (1992). *AMA Council on scientific affairs: Diagnostic and treatment guidelines on elder abuse and neglect*. Chicago, IL: Author.

Amstadter, A.B., Begle, A.M., Cisler, J.M., Hernandez, M.A., Muzzy, W., & Acierno, R. (2010). Prevalence and correlates of poor self-rated health in the United States: The National Elder Mistreatment Study. *American Journal of Geriatric Psychiatry, 18*, 615–623.

Bachman, R. (1994). *Violence against women: A national crime victimization survey report*. (DOJ Publication No. NCJ 145325). Washington, DC: U.S. Government Printing Office.

Banyard, V.L. (2011). Who will help prevent sexual violence: Creating an ecological model of bystander intervention. *Psychology of Violence, 1*, 216–229.

Ben Natan, M., Matthews, P., & Lowenstein, A. (2010). Study of factors that affect abuse of older people in nursing homes. *Nursing Management, 17*(8), 20–24.

Biggs, S., Manthorpe, J., Tinker, A., Doyle, M., & Erens, B. (2009). Mistreatment of older people in the United Kingdom: Findings from the first national prevalence study. *Journal of Elder Abuse & Neglect, 21*, 1–14.

Bonnie, R.J., & Wallace, R.B. (Eds.). (2003). *Elder mistreatment: Abuse, neglect, and exploitation in an aging America*. Washington, DC: National Academies Press.

Bronfenbrenner, U. (1997). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22*, 723–742.

Burston, G.R. (1975). Granny-battering. *British Medical Journal, 3*(5983), 592.

Clarke, M.E., & Pierson, W. (1999). Management of elder abuse in the emergency department. *Emergency Medicine Clinics of North America, 17*, 631–644.

Cisler, J.M., Begle, A.M., Amstadter, A.B., & Acierno, R. (2012). Mistreatment and self-reported emotional symptoms: Results from the National Elder Mistreatment Study. *Journal of Elder Abuse & Neglect, 24*, 216–230.

Dong, X. (2005). Medical implications of elder abuse and neglect. *Clinics in Geriatric Medicine, 21*, 293–313.

Dong, X.Q., Beck, T., & Simon, M. (2010). The associations of gender, depression, and elder mistreatment in a community-dwelling Chinese population: The modifying effect of social support. *Archives of Gerontology and Geriatrics, 50*, 202–208.

Dong, X., & Simon, M.A. (2011). Enhancing national policy and programs to address elder abuse. *JAMA, 305*, 2460–2461.

Dong, X.Q., Simon, M., Beck, T.T., Farran, C., McCann, J.J., Mendes de Leon, C., . . . Evans, D.A. (2011). Elder abuse and mortality: The role of psychological and social wellbeing. *Gerontology, 57*, 549–558.

Dong, X.Q., Simon, M., Mendes de Leon, C., Fulmer, T., Beck, T., Hebert, L., . . . Evans, D. (2009). Elder self-neglect and abuse and mortality risk in a community-dwelling population. *Journal of the American Medical Association, 302*(5), 517–526.

Dyer, C. B., Connolly, M. T., & McFeeley, P. (2003). The clinical and medical forensics of elder abuse and neglect. In R. J. Bonnie & R. B. Wallace (Eds.), *Elder mistreatment: Abuse, neglect, and exploitation in an aging America* (pp. 339–381). Washington, DC: National Academies Press.

Dyer, C. B., Pavlik, V. N., Murphy, K. P., & Hyman, D. J. (2000). The high prevalence of depression and dementia in elder abuse or neglect. *Journal of the American Geriatrics Society, 48*, 205–208.

Gilhooly, M. L. M., Cairns, D., Davies, M., Harries, P., Gilhooly, K. J., & Notley, E. (2013). Framing the detection of financial elder abuse as bystander intervention: Decision cues, pathways to detection and barriers to action. *Journal of Adult Protection, 15*, 54–68.

Gorbien, M. J., & Eisenstein, A. R. (2005). Elder abuse and neglect: An overview. *Clinics in Geriatric Medicine, 21*, 279–292.

Hansberry, M. R., Chen, E., & Gorbien, M. J. (2005). Dementia and elder abuse. *Clinics in Geriatric Medicine, 21*, 315–332.

Hanson, R. F., Kilpatrick, D. G., Falsetti, S. A., & Resnick, H. S. (1995). Violent crime and mental health. In J. R. Freedy & S. E. Hobfoll (Eds.), *Traumatic stress: From theory to practice* (pp. 129–161). New York: Plenum Press.

Institute of Medicine (IOM) and National Research Council (NRC). (2014). *Elder abuse and its prevention: Workshop summary*. Washington, DC: The National Academies Press.

Jones, J., Dougherty, J., Schelble, D., & Cunningham, W. (1988). Emergency department protocol for the diagnosis and evaluation of geriatric abuse. *Annals of Emergency Medicine, 17*, 1006–1015.

Krug, E., Mercy, J., Dahlberg, L., & Zwi, A. (2002). The world report on violence and health. *The Lancet*, *360*, 1083–1088.

Laumann, E. O., Leitsch, S. A., & Waite, L. J. (2008). Elder mistreatment in the United States: Prevalence estimates from a nationally representative study. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 63*, S248–S254.

Mouton, C. P., Rodabough, R. J., Rovi, S. L., Hunt, J. L, Talamantes, M. A., Brzyski, R. G., & Burge, S. K. (2004). Prevalence and 3-year incidence of abuse among postmenopausal women. *American Journal of Public Health, 94*(4), 605–612.

National Committee for the Prevention of Elder Abuse, Virginia Tech, MetLife Mature Market Institute. (2011). *The MetLife study of elder financial abuse: Crimes of occasion, desperation and predation against America's elders*. Westport, CT: Authors.

National Health Policy Forum. (2010). The Elder Justice Act: Addressing elder abuse, neglect, and exploitation. Retrieved from https://www.nhpf.org/uploads/announcements/Basics_ElderJustice_11-30-10.pdf

Neale, A. V., Hwalek, M. A., Scott, R. O., Sengstock, M. C., & Stahl, C. (1991). Validation of the Hwalek–Sengstock Elder Abuse Screening Test. *Journal of Applied Gerontology, 10*, 417–429.

Norris, F. H. (1992). Epidemiology of trauma: Frequency and impact of different potentially traumatic events on different demographic groups. *Journal of Clinical and Consulting Psychology, 60*, 409–418.

Pillemer, K., & Finkelhor, D. (1988). The prevalence of elder abuse: A random sample survey. *Gerontologist, 28*, 51–57.

Pillemer, K.A., Mueller-Johnson, K.U., Mock, S.E., Suitor, J.J., & Lachs, M.S. (2007). Interventions to prevent elder mistreatment. In L.S. Doll, S.E. Bonzo, D.A. Sleet, & J.A. Mercy (Eds.), *Handbook of injury and violence prevention* (pp. 241–254). New York: Springer.

Pillemer, K.A., & Suitor, J.J. (1992). Violence and violent feelings: What causes them among family caregivers? *Journal of Gerontology, 47*, S165–S172.

Podnieks, E., Penhale, B., Goergen, T., Biggs, S., & Han, D. (2010). Elder mistreatment: An international narrative. *Journal of Elder Abuse & Neglect, 22*, 131–163.

Reay, A.M., & Browne, K.D. (2002). The effectiveness of psychological interventions with individuals who physically abuse or neglect their elderly dependents. *Journal of Interpersonal Violence, 17*, 416–431.

Reis, M., & Nahmiash, D. (1995). Validation of the caregiver abuse screen (CASE). *Canadian Journal on Aging, 14*, 45–60.

Schulman, E.A., & Hohler, A.D. (2012). The American Academy of Neurology position statement on abuse and violence. *Neurology, 78*, 433–435.

Tatara, T. (1997). *The National Elder Abuse Incidence Study: Executive summary*. New York, NY: Human Services Press.

U.S. Department of Health and Human Services, National Institutes of Health, National Institute on Aging. (2011a). *Global health and aging* (NIH Publication No. 11-7737). Retrieved from http://www.who.int/ageing/publications/global_health.pdf

U.S. Department of Health and Human Services, Office of the Surgeon General, National Prevention Council. (2011b). *National Prevention Strategy*. Washington, DC: Author.

Wiglesworth, A., Mosqueda, L., Mulnard, R., Liao, S., Gibbs, L., & Fitzgerald, W. (2010). Screening for abuse and neglect of people with dementia. *Journal of the American Geriatrics Society, 58*, 493–500.

Wolf, R.S. (2000). The nature and scope of elder abuse: Changes in perspective and response over the past 25 years. *Generations, 24*, 6–12.

Yaffe, M.J., Wolfson, C., Lithwick, M., & Weiss, D. (2008). Development and validation of a tool to improve physician identification of elder abuse: The Elder Abuse Suspicion Index (EASI). *Journal of Elder Abuse & Neglect, 20*, 276–300.

Ziminski, C.E., Phillips, L.R., & Woods, D.L. (2012). Raising the index of suspicion for elder abuse: Cognitive impairment, falls, and injury patterns in the emergency department. *Geriatric Nursing, 33*, 105–112.

Ziminski, C.E., Wiglesworth, A., Austin, R., Phillips, L.R., & Mosqueda, L. (2013). Injury patterns and causal mechanisms of bruising in physical elder abuse. *Journal of Forensic Nursing, 9*, 84–91.

CHAPTER NINE

Nursing Homes and the Continuum of Care

Stephanie W. Burge

Like most of the industrialized world, the United States is undergoing an unprecedented demographic shift characterized by considerable population aging. Nearly 43.1 million Americans, approximately 14.1 percent of the population, exceed the age of 65, and American population aging will continue to accelerate in the 21st century, as baby boomers are now reaching ages that have historically been defined as elderly. In addition to general improvements in life expectancy—currently 81 for women and 76 for men (National Center for Health Statistics, 2014)—strides in medical diagnoses, treatment, and technology have significantly increased life expectancy for Americans already in their elder years. For example, women who reach the age of 65 can now expect to live an additional 20 years and men who reach commensurate ages have life expectancies of almost 18 more years (National Center for Health Statistics, 2014). While life expectancy has increased considerably, these years are also characterized by chronic conditions such as diabetes, chronic obstructive pulmonary disease (COPD), and arthritis, as well as increased risk of dementia and/or Alzheimer's disease and other functional impairments (Hung et al., 2011). As a result, the delivery and provision of long-term care—as well as its cost, quality, and fit with elders' needs—is centrally important to policy makers and scholars alike.

Discussions about delivery of long-term care tend to focus on residential long-term care, such as assisted living and nursing homes. Out of the

nearly 6.3 million American elders needing long-term care, approximately 1.3 million reside in nursing homes (Harris-Kojetin et al., 2013). Long-term residential care offers a minority of long-term care services to the elderly population—nearly 80 percent of long-term care is unpaid, informal provision of care by family members (Congressional Budget Office, 2013; Levine et al., 2010). However, nursing homes have been a focal point for political discussion as well as scholarly interest for several reasons. First, costs associated with nursing home care are far higher than other types of long-term care service arrangements, especially when compared to home and community-based services (Kaye, Harrington, & LaPlante, 2010). For example, per-person costs associated with nursing home care expenditures are approximately five times as high when compared to elders residing in the community who receive home and community-based services, and differences in level of need for assistance account for only a small part of the difference in costs between institutional and noninstitutional care (Kaye, Harrington, & LaPlante, 2010). Collectively, nursing home-related expenditures totaled almost $156 billion in 2013, roughly 5 percent of all health-care spending in the United States for the year (Medicare Payment Advisory Commission, 2015). Second, in spite of the high costs of nursing home care, persistent questions about quality of care and culture continue to nag this venue of long-term care. Debates about nursing home quality and culture have ranged from how to best provide appropriate medical care in a less institutional, more home-like environment, to whether improvements in nursing home culture have measurable effects on resident outcomes (Shier et al., 2014; Zimmerman, Shier, & Saliba, 2014). Third, while nursing homes have historically housed elderly residents, contemporary portraits of nursing home residents represent a particularly vulnerable, frail, and impaired resident population (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013), which makes quality of care an even more pertinent issue.

In this chapter, I review recent literature pertaining to the continuum of care offered in nursing homes and the resident populations they serve. First, I consider trends in nursing home utilization. Second, I briefly discuss literature that reviews predictors of nursing home placement. Next, I examine how nursing home residents fare with respect to functional health and cognitive status. To provide a frame of reference, I compare residents of nursing homes to elderly who live in residential care facilities, an often healthier and wealthier population. Then, I discuss the racial/ethnic composition of nursing home residents, with specific focus on barriers to nursing home access for minority elders. To better understand challenges in delivery of nursing home care, I conclude by reviewing literature on the history, purpose, and meaning of the culture change

movement in nursing homes, as well as recent evidence on its efficacy with respect to improving resident outcomes.

Trends in Nursing Home Admission and Utilization

By nearly any measured outcome, both nursing home utilization rates and capacity have decreased considerably in the past two decades. First, in spite of increases in both the percentage of elderly and the absolute number of elderly in the United States, the actual number of nursing homes has declined considerably (Wiener, Anderson, & Brown, 2009). For example, in 1995, there were approximately 16,700 nursing homes operating in the United States (Strahan, 1997). By 2012, that number had shrunk by more than 1,000, with only 15,652 licensed and operating nursing homes (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013). Between 1999 and 2008 approximately 16 percent of Medicaid and Medicare certified nursing homes closed (Feng et al., 2011), the majority of which were concentrated in communities with predominantly poor and minority populations. Another indicator of nursing home capacity, number of nursing home beds, tells a similar story (Strahan, 1997). In 1995, the nation's nursing homes housed approximately 1.8 million beds; however, by 2012, there were approximately 1.7 million nursing home beds (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013). After standardizing the number of beds by population over the age of 65, which takes into account our increasing aging population, declines in nursing home capacity appear more stark. There were approximately 53 nursing home beds per 1,000 people over the age of 65 in 1995, but by 2012, that figure had declined to nearly 39 beds per 1,000. Even as capacity has declined, occupancy rates have also fallen in the same period, from approximately 87 percent in 1995 to 83 percent in 2012 (Strahan, 1997; U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013).

Another trend in nursing home utilization is the growing tendency for nursing homes to offer more medicalized nursing services. In particular, nursing homes are increasingly offering short-term stays to Medicare beneficiaries who need intense medical assistance for a brief period. The overwhelming majority of nursing homes are dually licensed as both nursing homes as well as skilled nursing facilities (Medicare Payment Advisory Commission, 2015). With a license to perform skilled nursing, nursing homes are eligible to admit short-term residents who have been recently discharged from a hospital, but who still need intensive medical services and care, as in the case of rehabilitation from an operation such as hip

replacement. Under Medicare Part A, individuals who had a three day, medically required hospital stay and who are ready for discharge, but unable to return home, are eligible for up to 100 days of skilled nursing care. Approximately one in five of eligible Medicare beneficiaries seek short-term stays in skilled nursing facilities and nursing homes following discharge from the hospital (Carter, Garrett, & Wissoker, 2015).

Short-term skilled nursing residents represent a small, but growing portion of the nursing home population, accounting for 12 percent of all nursing home days in free-standing skilled nursing facilities in 2013 (Medicare Payment Advisory Commission, 2015). Undoubtedly, some of the growth in the short-term nursing home population reflects the higher reimbursement rate that Medicare pays for rehabilitative care, as compared to the reimbursement Medicaid offers for long-term nursing home residents, perhaps because short-term residents more frequently require additional services such as physical therapy (Medicare Payment Advisory Commission, 2015).

Although these short-term residents may not reside permanently in nursing homes, they still represent a more frail population than the larger pool of Medicare beneficiaries and thus are more comparable in health to the general long-term nursing home population than they are to community-dwelling elderly. For example, Medicare beneficiaries who are discharged from the hospital to skilled nursing facilities are over three times more likely to be over the age of 85, over twice as likely to report poor health, and over twice as likely to report at least some limitation in physical function with respect to activities of daily living (ADLs), as compared to the broader pool of Medicare beneficiaries (Medicare Payment Advisory Commission, 2015). Furthermore, as Mor et al. (2010) note, there is some cycling between short-term nursing home stays and hospitalization, which also suggests a fair amount of frailty in the population that temporarily resides in a nursing home following hospital discharge.

Undoubtedly, part of the decline in nursing home utilization has stemmed from increasing alternatives to nursing home care for elders who are less frail and exhibit greater physical function. In an endeavor to make long-term care both more affordable as well as to provide a better array of residential options to elders as they age, policy makers and scholars have emphasized the need to move away from institutionalized long-term care settings such as nursing homes and offer greater home and community-based services via Medicaid and Medicare (Wiener, Anderson, & Brown, 2009). Efforts to make other long-term care alternatives more feasible for elders capable of using such services are reflected in the changing patterns of allocated resources. For example, in 1995, only 19 percent of Medicaid long-term care spending focused on home and community-based services

(Feng et al., 2011). However, by 2008, approximately 42 percent of such spending was allocated to these services (Feng et al., 2011), and it is likely that with provisions outlined in the Affordable Care Act of 2010 this trend will continue (Shugarman, 2010).

Despite increased spending dedicated toward home and community-based services, historically, there has been a strong bias toward provision of long-term care in nursing homes rather than supplementing home care with other services, as reflected by the majority of nursing home residents who receive Medicaid benefits to cover at least part of costs associated with their care (Kaye, Harrington, & LaPlante, 2010; U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013). In large part, the bias toward institutional—rather than home-based—care has stemmed from state-to-state variation in Medicaid provision and benefits. Although Medicaid is a federal program, the administration of Medicaid to citizens is state governed. Consequently, there is significant difference in what Medicaid covers with respect to home and community-based services for long-term care from state to state. By contrast, provision of nursing home access to frail elders is a federally mandated function of Medicaid (Kaiser Commission on Medicaid and the Uninsured, 2013). Even though nursing home access is an entitlement under the Medicaid program, a large body of literature documents that nursing home quality varies according to the proportion of Medicaid residents, largely due to the fact that Medicaid reimbursement tends to be lower than fees paid by privately paying residents (Harrington, Swan, & Carrillo, 2007; Kelly, Liebig, & Edwards, 2008; Mor et al., 2011; Smith et al., 2007). In particular, the bias toward institutional care, as well as socioeconomic variation in nursing home access and quality, is likely to reinforce inequality in access to workable long-term care options. It seems likely that elders who have limited socioeconomic resources may be relegated to nursing home care rather than being able to bring in home and community-based support that might enable one to remain within the community, even as care needs increase. Moreover, needy elders may have fewer and poorer options when it comes to quality nursing home care, due to Medicaid's lower rate of reimbursement than other forms of payment such as private pay and long-term care insurance.

Growth of Residential Care Facilities

Concurrent with trends toward increasing availability of home and community-based services, there has been growth in the desirability, offerings, and capacity of residential care facilities, which are often called assisted living. These facilities offer what might be best viewed as an intermediary

type of long-term care between home and community-based services and nursing homes. Residential care facilities generally offer a residential care setting as opposed to an institutionalized, medical environment, and provide minimal services including meals, supportive services, and 24-hour on-site supervision. Under the umbrella of assisted living, facilities may have state-granted specialty licenses that allow additional levels of care to populations with greater health and/or mental health needs, potentially allowing frail elders to age in place at a residential care facility for a longer period of time (Street, Burge, & Quadagno, 2009). However, these facilities generally have far fewer licensed nurses on staff than nursing homes, reflecting their less medical, more supervisory form of care. For example, in 2012, a full one-third of nursing home staff was licensed or registered nurses, as compared to fewer than 18 percent of staff in residential care facilities (Harris-Kojetin et al., 2013). Thus, it is possible that residential care facilities may have limited capacity to properly assist elders as their care needs intensify. In spite of the more limited medical offerings, for many elders, residing in assisted living is preferable to a nursing home (Ball et al., 2000; Street & Quadagno, 2004).

Although estimating growth in this type of long-term care facility has been difficult due to issues of varying definition and measurement (Mollica, Sims-Kastelein, & O'Keefe, 2008; Stevenson & Grabowski, 2010), evidence suggests that there was substantial growth in residential care facilities during the 1990s and early 2000s (Mollica, Johnson-Larmarche, & O'Keefe, 2005) although growth has flattened since the mid-2000s (Park-Lee et al., 2011). Using data from the 2012 National Survey of Long-Term Care Providers, a recent report from the National Center for Health Statistics estimates that there were nearly 22,200 residential care facilities in 2012, which represented approximately 1.4 times the number of licensed nursing homes at the time (Harris-Kojetin et al., 2013). Collectively, these facilities had capacity to serve nearly 851,400 residents, which is approximately half of the capacity that nursing homes offered in the same year (Harris-Kojetin et al., 2013). Consequently, capacity in a typical residential care facility is significantly smaller than the average nursing home; on average, a residential care facility can serve approximately 38 residents as compared to the 106 residents that may be served by the average nursing home (Harris-Kojetin et al., 2013).

Predictors of Nursing Home Admission

Given the diversity in long-term care arrangements, ranging from more institutional settings such as nursing homes to more intermediate arrangements such as residential care facilities and use of home and

community-based services, there has been growing interest in factors that are associated with nursing home placement. Gerontologists have investigated myriad factors associated with nursing home institutionalization, some of which focus on physical and mental health status, medical intervention such as drugs designed to slow dementia progression, and family resources such as the availability of caregivers, economic resources, and sociodemographic characteristics.

Individuals who reside within nursing homes do so because their health requires care beyond what is available in a typical home environment within the community. Consequently, it is not surprising that physical limitations are associated with nursing home placement, and a variety of studies have linked increased physical impairment with nursing home admission among elders (Andel, Hyer, & Slack, 2007; Banaszak-Holl et al., 2004; Bharucha et al., 2004). Even limitation in instrumental ADL such as managing of finances, grocery shopping, and managing medications, which tends to precede inability to perform ADL, is also associated with enhanced odds of nursing home placement among elders who do not face cognitive impairment (Andel, Hyer, & Slack, 2007). However, it is worth noting that not all impairments are necessarily associated with nursing home admission. For example, recent meta-analyses investigating associations between physical health and nursing home placement have shown the relationship between incontinence and nursing home admission to be inconsistent (Luppa et al., 2010; Gaugler et al., 2009). Furthermore, low levels of physical impairment do not necessarily lead to nursing home placement, particularly since both residents and families tend to view nursing homes as the least preferred alternative in a spectrum of long-term care options (Ball et al., 2000). In a recent meta-analysis of predictors of nursing home placement, Gaugler et al. (2007) found that low levels of physical impairment—requiring assistance with one activity of daily living—were associated with only a slight increase in the odds of nursing home institutionalization among elders. However, elders who have more substantial physical impairment—requiring assistance with three or more ADLs—were over three times more likely to be placed in a nursing home than their less impaired counterparts.

While studies consistently demonstrate an association between decreased physical function and nursing home placement, cognitive impairment and/or onset of dementia are among the strongest predictors of nursing home placement. In fact, a recent meta-analysis of studies investigating nursing home institutionalization found that a dementia diagnosis, which tends to be linked to decreased ability to perform both instrumental and daily activities of living, was the most important predictor of nursing home placement (Luppa et al., 2010). In addition, greater levels of cognitive

impairment—rather than the simple presence or absence of a dementia diagnosis—further increase the odds of nursing home placement among the elderly (Luppa et al., 2010). This relationship may intensify in part because of concomitant behaviors such as aggression and hallucinations, as well as accompanying physical function declines, which grow more prevalent in the later stages of dementia (Gaugler, Fang, Krichbaum & Wyman, 2009; Wattmo et al., 2011). Furthermore, increases in such behaviors and caregiving burden can leave family caregivers ill-equipped to manage such behaviors, which may in turn increase likelihood of nursing home placement (Gaugler et al., 2011). Other studies have linked mental health conditions such as depression (Harris, 2007) and mental illness such as schizophrenia with enhanced risk of nursing home placement, even after controlling for factors such as age, physical health and function, and socioeconomic status. Moreover, there is some evidence that nursing homes increasingly serve populations who are jointly diagnosed with dementia and mental health issues such as depression (Fullerton et al., 2009), which underscores these two conditions as risk factors that independently increase risk of nursing home admission.

While physical frailty, cognitive impairment, and mental health conditions are all significant predictors of nursing home placement among the elderly, each of these are associated with an individual's health status. However, what about social resources that may mitigate the need for nursing home care? Some studies have investigated living arrangements of frail elders and availability of familial care as factors that may delay onset of nursing admission. Past research has generally shown that living alone increases the risk that frail elders will be institutionalized (Gaugler et al., 2007; Wattmo et al., 2011), although part of this effect may be due to the fact that individuals living alone are not likely to be married and thus lack a spouse to be a caregiver. Family caregivers tend to promote longer times to nursing home entry among frail elders who have cognitive and physical limitations. For example, several studies have shown that being married delays entry into nursing home, although there has been some variation in the size of the effect depending on the data source considered (Freedman, 1996; Freedman et al., 1994; Gaugler et al., 2007; Miller & Weissert, 2000). In particular, some studies demonstrate that caregiving benefits conferred by spouses may be gendered, with men receiving greater benefit than women in terms of delayed transition to nursing home care (Noel-Miller, 2010; Stoller et al., 2008). Adult children, who may serve as caregivers, may also buffer the elderly from nursing home admission in the context of declining health (Bianchi et al., 2008; Choi et al., 2014; Wolff & Kasper, 2006). Furthermore, some evidence suggests that children may prove an even more valuable resource to women than men,

who are more able to rely upon their wives for care as health may fail (Noel-Miller, 2010; Bianchi et al., 2008; Katz, Kabeto, & Langa, 2000). Of course, family caregiving is a resource that may be expended over time, as caregiver burnout may ensue, which may hasten the use of institutional care such as nursing homes for family members (Spilman & Long, 2009). Particularly in the case of adult children who are serving as caregivers, resources such as adult day care may lessen family caregiver burden and lower caregiver stress, which may delay nursing home placement for elderly parents (Cho, Zarit, & Chiriboga, 2009).

Nursing Home Resident Populations: Physical Function and Cognitive Impairment

In addition to declining utilization of nursing homes as a form of long-term care, nursing homes are increasingly a long-term care measure of last resort, as reflected by much higher rates of nursing home institutionalization among the oldest elder age groups as compared to younger elderly individuals. For example, in 2012, nearly 3 percent of the overall elderly population resided in nursing homes, but approximately 10 percent of those aged 85 and older lived in a nursing home (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013). Interestingly, when comparing the age composition of long-term care facilities, residential care facilities such as assisted living serve significantly older populations than do nursing homes. Over half of residents in residential care facilities are over the age of 85 and almost one-third are between the ages of 75 and 84, as compared to 42 percent and 28 percent of nursing home residents, respectively (Harris-Kojetin et al., 2013). However, the age composition of residents tells only one side of the story, as nursing home resident populations experience significantly more frailty and functional limitations than residents in any other long-term care arrangement, including other residential care facilities such as assisted living (Harris-Kojetin et al., 2013).

Scholars and policy makers trying to understand resident profiles of physical function and frailty use a variety of measures including the extent to which residents need assistance performing ADLs such as eating, dressing, bathing, toileting, and transferring. Underscoring the relative frailty of nursing home residents relative to other long-term care populations, nearly two-thirds of nursing home residents required at least some assistance with three or more ADLs (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013), as compared to just under 40 percent of residents who required similar levels of assistance in residential care facilities (Caffrey et al., 2012). There is also a positive relationship between ADL impairment and age in the nursing home

population, with nursing home residents being successively more likely to suffer ADL impairment at each of the following age groups: young-old (65–74), middle-old (75–84), and oldest-old (85 or older) (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013). For the more difficult physical tasks related to ADLs such as bathing or dressing, receiving some form of assistance is nearly ubiquitous among nursing home residents, as over 95 percent needed at least some assistance with bathing, while 9 out of 10 residents required at least some help with dressing in 2012 (CDC/NCHS, National Study of Long-Term Care Providers and Table 4 in Appendix B). By contrast, slightly less than three-quarters of residential care facility residents required assistance with bathing, and only about half required dressing assistance (Caffrey et al., 2012). Even for ADLs that are less physically intensive such as eating, nursing home residents are over three times more likely to need assistance compared to residential care facility residents, 56 percent vs. 18 percent, respectively (Harris-Kojetin et al., 2013). Measures related to other functional limitations such as incontinence also reveal that nursing homes currently serve a much more frail population than residential care facilities. Approximately 58 percent of nursing home residents experience either urinary or bowel incontinence, as compared to 39 percent of individuals who live in residential care facilities (Gorina et al., 2014).

Indicators related to cognitive impairment such as diagnoses of Alzheimer's disease and/or dementia, as well as diagnoses of depression also give insight into the extent to which nursing home residents differ from other types of long-term care residents in their need for care related to cognitive and mental health. Data from the National Study of Long-term Care Providers suggests that just less than 40 percent of individuals in residential care facilities have been diagnosed with Alzheimer's and/or related dementia, as compared to almost half of nursing home residents (Harris-Kojetin et al., 2013). When definitions of cognitive impairment are more inclusive and not restricted to formal diagnoses, some studies suggest that nearly two-thirds of nursing home residents experience at least some level of cognitive impairment (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013). Although most data suggest that rates of elder cognitive impairment is greater in nursing homes than residential care facilities, one recent study suggests that assisted living may have a proportion of elders with cognitive impairment more similar to that of nursing homes (Zimmerman, Sloane, & Reed, 2014). In addition to high rates of cognitive impairment among nursing homes, a large proportion of nursing home residents have additional mental health diagnoses. For example, rates of diagnosed depression among nursing home residents are nearly twice that of residents in residential care

facilities, 49 percent and 25 percent, respectively (Harris-Kojetin et al., 2013). Besides depression, other studies point to small, but significant proportions of nursing home residents who exhibit other mental illnesses including bipolar disorder and schizophrenia (Grabowski et al., 2009).

Nursing Home Populations: Racial/Ethnic Disparities in Access

Scholars investigating racial/ethnic inequality in access to nursing home care could use three different comparisons to investigate elder nursing home access by race/ethnic background. The first of these would be to compare relative proportions of racial/ethnic groups in nursing homes to the racial/ethnic composition of the broader population of elders. However, such a comparison assumes general equilibrium in physical and cognitive health impairments, an assumption which is questionable given other racial/ethnic disparities in access to health care (Nelson, Smedley, & Stith, 2009). A second comparison would be to compare racial/ethnic representation in nursing homes to the broader population of individuals needing long-term care, since evidence suggests that minority elders may have higher rates of illness, as well as physical and cognitive impairments that precipitate entry to long-term care (Ayse et al., 2012; Cooper et al., 2010; Haas, Krueger, & Rohlfsen, 2012; Warner & Brown, 2011). In fact, a recent study using data from the Health and Retirement Study showed that African American and Latino elderly have 1.5 times the level of ADL impairment and over 1.2 times the level of cognitive impairment compared to non-Hispanic white elders, which likely underscores their greater need for long-term care (Thomeer, Mudrazija, & Angel, 2015). A third comparison would be to compare racial/ethnic variation in nursing home access to other forms of long-term care, such as residential care facilities, which many elders view as preferable to nursing home care. In general, minority elders have fewer economic resources upon which to draw (DeNavas-Walt, Proctor, & Smith, 2009), a factor that may necessitate nursing home entry relative to other forms of long-term care that are less likely to be paid for via Medicaid.

Generally speaking, past literature on racial/ethnic variation in access to nursing homes has shown that minority elders experience lower levels of access (Akamigbo & Wolinsky, 2007; Angel et al., 2004; Smith et al., 2007) although some studies suggest this inequality may be eroding (Ness, Ahmed, & Aronow, 2004; Smith et al., 2008). In particular, the downward trend in nursing home utilization of the past few decades has been more characteristic of non-Hispanic white elders' use of nursing homes than it has been the case for minority elders. For example, a recent study by Feng et al. (2011), which used the National Minimum Data Set of nursing

home admissions to investigate changes in the racial/ethnic composition of nursing home residents between 1999 and 2008, shows that nursing home admission decreased significantly for non-Hispanic white elders, but increased among Asian, Latino, and black elders, with rates of increase in admission ranging from approximately 54 percent for Asian and Latino elders to nearly 11 percent for black elders. Recent increases in the proportion of minority elderly residents in nursing homes do not necessarily suggest racial/ethnic equality in nursing home access, however. To further examine this issue, I draw upon data from the racial/ethnic composition of the overall elderly population, the resident population in nursing homes, and the resident population in residential care facilities.

In 2011, the racial/ethnic composition of the general elderly population was comprised of 79 percent of non-Hispanic white elders, 9 percent non-Hispanic black elders, 7 percent Hispanic elders, and 4 percent Asian elders (Administration on Aging, 2012). Initial comparisons to the nursing home population do not look that dissimilar from the general elderly population in terms of race/ethnic composition, with what appears to be slightly higher proportions of African American elders and slight underrepresentation of Hispanic elders in nursing homes than the general elder population. For example, in the same year, almost 79 percent of nursing home residents were non-Hispanic white, nearly 14 percent were black, approximately 5 percent were Hispanic, and nearly 2 percent were Asian (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013). However, comparisons that account for disproportionate need for long-term care among elderly minority populations tell a different story. Using data from the Health and Retirement Study, a recent study finds that black elders and Hispanic elders have lower nursing home usage and these racial/ethnic disparities remain even after controlling for covariates such as ADL, IADL, and cognitive impairment, as well as disability, socioeconomic status, and family relationships (Thomeer, Mudrazija, & Angel, 2014). In fact, Thomeer et al. (2015) note that estimates of racial/ethnic variation in nursing home populations which fail to take into account levels of physical and cognitive impairment likely underestimate the level of racial/ethnic disparity in nursing home access.

Examining racial/ethnic diversity in residential care facilities is also suggestive of poorer access to workable, affordable, and quality long-term care arrangement for minority elders. Residential care facilities are generally viewed as preferable to nursing homes by elders, but tend to be paid for with private economic resources while nursing homes are far more likely to be paid for by Medicaid. Only one in five residential care facility residents use Medicaid for costs of services, as compared to nearly two-thirds of nursing home residents (Reeves & Musumeci, 2014; Kaye,

Harrington, & LaPlante, 2010). The resident population of residential care facilities is even more skewed toward overrepresentation of non-Hispanic white elders and underrepresentation of black elders and Latino elders. For example, over 87 percent of residential care facility residents are non-Hispanic white, as compared to 4 percent of non-Hispanic black residents and approximately 2 percent of Hispanic residents. The even greater underrepresentation of minority elders in residential care facilities relative to nursing home care is also suggestive that minority elders may face less access to good long-term care options than do non-Hispanic white elders.

Of course, as Thomeer et al. (2015) point out, it is difficult to ascertain the extent to which elderly minorities are underrepresented in nursing due to socioeconomic barriers as compared to racial/ethnic variation in cultural preferences for institutional and medical settings for long-term care in lieu of family provision of such care. On the one hand, past research demonstrates that Hispanic and black families are more likely to emphasize familial responsibility for eldercare than are non-Hispanic white families, which may underlie Hispanic and black elders' lower levels of nursing home utilization (Angel et al., 2004; Burton et al., 2010). However, on the other hand, a substantial body of research demonstrates racial/ethnic inequality with respect to health care over the life course (Conley, Strully, & Bennett, 2003; Haas, Krueger, & Rohlfsen, 2012), and there is also evidence that suggests the minority elders may face additional barriers in access to long-term care. For example, some studies suggest processes of institutional discrimination in access to nursing homes for minority elders (Falcone & Broyles, 1995; Fennell et al., 2012). For example, nursing homes continue to be both racially and socioeconomically segregated (Mor et al., 2004; Smith et al., 2007), and patterns of nursing home closures have been disproportionately located in communities with a higher proportion of poor and minority elders (Feng et al., 2011), suggesting that minority elders may have fewer options when it comes to long-term care.

Even among the nursing home options that are available to disadvantaged and minority elders, there is evidence that quality of care may be poorer in nursing homes that serve minority elders. Nursing homes located in communities characterized by high levels of poverty, residential race segregation, and other indicators of neighborhood disadvantage may offer inferior care relative to nursing homes in communities characterized by more socioeconomic advantage (Fennell et al., 2012; Mor et al., 2004). Some recent studies have linked the racial composition of nursing home residents to the quality of long-term care, finding that nursing homes with a higher proportion of minority residents having greater financial difficulty provide poorer quality of care than those with a smaller proportion of minority elders (Mor et al., 2004; Smith et al., 2007). In addition,

other studies have found that Hispanic elders and black elders are disproportionately likely to reside within nursing homes that have poorer care quality relative to their non-Hispanic white peers (Fennell et al., 2010; Grabowski, 2004; Smith et al., 2007). There is also evidence which suggests that minority elders receive inferior preventative care in nursing homes as compared to their non-Hispanic white peers. For example, using data from the National Nursing Home Surveys, Luo et al. (2014) found that white residents had better outcomes with respect to pain management and key preventative vaccinations such as pneumococcal and influenza relative to their black peers. Studies that focus on other dimensions of preventative health care such as antidiabetic medications and anticoagulant medications, which are prescribed for those at risk for stroke, have found similar racial/ethnic disparities among nursing home residents (Allsworth et al., 2005; Christian, Lapane, & Toppa, 2003). Thus, continued attention is needed with respect to issues of both nursing home access, as well as quality of care for minority elders.

Nursing Homes: Culture Change, Implementation, and Prospects for Resident Outcomes

In the past two decades, there has been substantial scholarly and political emphasis on shifting culture within nursing homes from one that views nursing homes as an institutional and medical care setting to a culture that promotes a more home-like, residential setting that supports developmental growth at the later phases of the life course. Scholars studying the history of the culture change movement link the beginning of the movement to efforts by political and bureaucratic agencies, such as the Centers for Medicare and Medicaid Services and the Institute of Medicaid, and consumer advocacy groups, such as the National Citizen's Coalition for Nursing Home Reform, to bring greater public awareness to the issue of poor care quality in nursing homes (Koren, 2010). Passage of the Nursing Home Reform Act, via the Omnibus Budget Reconciliation Act of 1987, signified a considerable milestone in the movement, as this legislation instituted a shift in the legal definition of resident care from one that was primarily focused on medical intervention to a more holistic view of the residents' subjective well-being, including physical, mental, and psychosocial health (Koren, 2010). In the mid-1990s, a group of innovative providers, along with researchers, consumer advocacy groups, and regulators banded together to form the Pioneer Network. This network viewed its task as providing the groundwork for implementing person-centered care in nursing homes that focused holistically on the resident and reconceptualizing the nursing home as a residential space for long-term care to occur rather than a medicalized, institutional setting (Rahman & Schnelle, 2008).

Culture change advocates have argued that the provision of nursing home care should be resident-centered, and nursing homes that make greater efforts to focus on resident care holistically will not only promote physical health outcomes, but also improve resident quality of life and subjective well-being (Housen et al., 2009; Saliba & Schnelle, 2002). From the culture change movement, several different models of person-centered nursing home care developed during the latter part of the 1990s, each emphasizing different aspects of nursing home culture (Zimmerman, Shier, & Saliba, 2014), including the Eden Alternative, the Wellspring Model, and the Green House Model. The Eden Alternative focused on changing the institutional, nursing home environment in which elders reside into an age-integrated residential setting that more parallels community living via interaction with children, spaces that are green and lively with plant life, and interaction with animals. Proponents of the Eden Alterative view human growth and development in elders as best supported by an environment that is less like a medical setting and more like home (Zimmerman, Shier, & Saliba, 2014). By contrast, the Wellspring Model tackled a different component of nursing home culture, emphasizing the relationship between staff empowerment and resident care outcomes. In particular, the Wellspring Model emphasizes training and empowering direct care staff to aid in making decisions regarding resident care and the workplace environment, an approach viewed as critical to retaining quality staff (Rahman & Schnelle, 2008; Reinhard & Stone, 2001). Furthermore, the Wellspring approach highlighted the necessity to share best practices via a consortium of nursing homes with similar goals of culture change (Rahman & Schnelle, 2008). Finally, the Green House Model focused on scaling down nursing home care to a much more intimate environment, creating care communities of approximately 15 residents who coreside in small group homes, with a common care staff who provide assistance with both ADLs such as dressing and bathing, as well as instrumental ADLs such as cooking and cleaning. In an effort to promote person-centered care, the Green House Model also emphasizes resident direction in care and decision-making (Zimmerman, Shier, & Saliba, 2014).

In 2005, the Centers for Medicaid and Medicare instituted state-based government agencies called Quality Improvement Organizations to help address nursing home culture change, and in 2006, introduced a questionnaire, entitled Artifacts of Culture Change Tool, which was designed to help nursing homes perform self-assessments of their movement toward person-centered care (Rahman & Schnelle, 2008). To some extent, the 2010 Affordable Care Act has further reinforced the emphasis on nursing home culture change, as this piece of legislation took to task revision of long-term care delivered in nursing homes to be more person-centered

and attached additional requirements of reporting of nursing home quality to better improve transparency related to quality of care so that consumers could be more informed about their long-term care choices (Grabowski et al., 2014b). Because such a large proportion of nursing homes depend on reimbursement from Medicare and Medicaid, it is possible that such efforts may help hasten the movement of nursing homes to institute culture change.

Besides trying to promote person-oriented care, advocates of nursing home culture change have focused on particular dimensions of nursing homes for which improvement is merited. In particular, nursing home culture activists and advocates have argued that person-oriented care needs to be multifaceted in order to be most effective and that a broad sweeping cultural shift in this form of long-term care will result in better resident outcomes (Grabowski et al., 2014; Koren, 2010; Shier et al., 2014). First, advocates argue that residents need greater input into their care, their living arrangements and environment, and schedule. For example, resident choice and self-direction in daily activities, food choices, and schedule are focal points for tailoring care to the resident. A second focal point emphasizes making the nursing home environment more home-like and less institutional. In this respect, nursing home culture movement leaders have argued that the nursing home setting needs to transform from a medical care setting to a more community-oriented residence. Third, advocates of culture change argue that relationships between residents, staff, family members, and the community need to be close and characterized by open exchange to best promote resident well-being. To some extent, the movement has also emphasized efforts to decentralize some aspects of decision making, especially as it relates to resident care by direct care staff, as a basis for empowering staff to better allocate their efforts with residents. As an extension of this, the culture change movement has argued that—to the extent possible—management and direct care staff need to engage in collaborative efforts to make decisions about both resident care and workplace culture. Lastly, advocates have argued that a necessary condition for culture change is measurement of progress to change, and as such have recommended data collection to assess nursing homes' relative progress on these initiatives.

While the culture change movement had its birth in the 1980s and 1990s, its implementation and studies endeavoring to collect evidence of its efficacy remain a 21st-century phenomenon. First, a relatively small proportion of nursing homes have undergone extensive restructuring to promote culture change by any definition or model (Grabowski et al., 2014a). For example, only about one-third of nursing homes are classified as implementing any version of culture change, and fewer than 15 percent

have executed far-reaching measures to broadly shift nursing home culture to be more person-centered (Miller et al., 2014). Furthermore, the nursing homes which have engaged in greater efforts to improve nursing home culture and care are socially patterned: they are disproportionately nonprofit, have a higher proportion of private-pay residents, more and better trained staff, and better baseline quality before implementing these changes (Grabowski et al. 2014; Miller et al., 2014). So, to some extent, it is possible that while culture change in nursing homes may improve the lives of some residents, this movement may reinforce preexisting inequalities in nursing home experiences (Mor et al., 2004).

Several barriers have plagued nursing home efforts with respect to culture change, even for facilities that desire to engage in the process. For example, implementing culture change in facilities characterized by high levels of physical frailty and cognitive impairment may be quite difficult (Zimmerman, Shier, & Saliba, 2014), and nursing homes serve populations that are among the most frail (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013). Consequently, the ability for resident care to be self-directed may be somewhat compromised by either physical or cognitive limitations. Indeed, many of implemented culture change efforts tend to refocus on either top-down changes or changes within staff, rather than incorporating the abilities and preferences of residents (Shura, Siders, & Dannefer, 2011). Second, many of the prescriptions for culture change indirectly imply increases in staffing levels, in an industry already characterized by high levels of staff turnover and job burnout (Collier & Harrington, 2008). Third, culture change requires significant monetary investment at the start of the process (Jenkens et al., 2011) and for many nursing homes the monetary investment needed to generate culture change seems too great for organizations that are both underresourced (Mor et al., 2004) and unsure about measures that have limited proven efficacy (Shier et al., 2014). Perhaps for this reason, relatively few nursing homes have gone through holistic processes of reorganization to implement culture change, instead favoring a more selective approach that picks and chooses between strategies that are tailored to the organization's specific concerns (Chapin, 2006; Elliot et al., 2014). Furthermore, because culture change may be thought of as a continual process rather than a dichotomous outcome, nursing homes that have been engaged in culture change longer tend to have made greater strides relative to those that have newly begun the process, underscoring the substantial investment of resources that culture change requires (Sterns, Miller, & Allen, 2010).

Theoretically, advocates of nursing home culture change argue that improved, person-centered care should have tangible payoffs in the form

of improved and measurable resident outcomes. Such outcomes could be conceptualized as encompassing physical health, as well as subjective mental and cognitive well-being (Shier et al., 2014). However, identifying which resident outcomes to investigate, as well as figuring out how to appropriately measure such outcomes among frail and often impaired populations has been a difficult task for scholars, industry leaders, and political organizations (Castle & Ferguson, 2010; Shier et al., 2014). For example, some studies suggest that assessments of quality of life tend to diverge between residents, family, and staff (Crespo et al., 2012). Furthermore, given the high proportion of nursing home residents who experience cognitive impairment, adopting instruments for measuring resident outcomes related to culture change has also proven challenging. The Centers for Medicare and Medicaid Services, in an effort to better assess nursing home quality, provides a series of health-related measures that are designed to tap resident experiences in the aggregate. However, many of these focus on medical indicators—such as percent of residents experiencing a fall, percent reporting pain, percent given the flu vaccine, percent who had a catheter inserted, percent who were physically restrained—rather than assessing delivery of person-centered care and subjective satisfaction and well-being among residents (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2013). Furthermore, though culture change is not required by Medicare and Medicaid, assessments of quality using health-focused measures are regularly required. Consequently, some scholars have grown concerned that nursing homes may actively seek out healthier, low-care populations in an effort to improve quality ratings, perhaps at the expense of making legitimate efforts at culture change (Mukamel et al., 2009).

Figuring out how to measure practices that have been implemented to change nursing home culture has also proved problematic for scholars, since organizations have executed varied approaches to resident-centered care and culture change (Zimmerman, Shier, & Saliba, 2014). Conceptualization and measurement issues aside, studies often rely upon case studies, or small samples to demonstrate efficacy of a particular implementation strategy of culture change, which leaves the question of generalizability unanswered (Shier et al., 2014). In spite of these limitations, early studies suggest that at its best, culture change may positively affect residents' care and well-being (Grabowski et al., 2014b; Leedahl, Chapin, & Little, 2015; Sullivan et al., 2013; Kane et al., 2007; Ransom, 2000), and at its worst, culture change may have insignificant effects on resident outcomes (Coleman et al., 2002; Hill et al., 2011). Thus, while culture change may not always lead to improved resident outcomes, such changes are unlikely to result in poorer care. However, what is apparent is that these studies are far

from underscoring the efficacy of nursing home culture change, which has the potential to undermine the strength of the movement, if industry leaders and government actors do not see evidence that the benefits of culture change outweigh the costs (Shier et al., 2014).

While it may be difficult to assess the efficacy of culture change on nursing home quality and resident quality of life and subjective well-being, some evidence suggests that various domains of organizational culture that tend to be focal points of the culture change movement may be associated with resident well-being. For example, residents' social integration within the nursing home environment is positively associated with both health and well-being. Residents who have close social ties with staff and other coresidents tend to report better physical and mental health outcomes (Leedahl, Chapin, & Little, 2015). Furthermore, while coresidents in nursing homes may not replace long-cherished and trusted friends from the community, these relationships are meaningful to residents' health and well-being to the extent that they promote a sense of belonging within the new residential environment of the nursing home (Leedahl, Chapin, & Little, 2015). The organizational culture and climate of nursing homes has also been shown to be associated with changes in residents' depressive symptoms. Cassie and Cassie (2012) found that residents who live in nursing homes that have implemented policies designed to promote more resident-centered care tend to have lower levels of depressive symptoms over time relative to their peers who are in less responsive and proficient nursing homes. However, it is important to note that approximately half of nursing home residents have cognitive impairment and cognitive impairment alone has important intersections with resident reports of quality of life (Abrahamson et al., 2012). Consequently, findings that generalize about the efficacy of various interventions may or may not apply to residents with high levels of cognitive impairment in the same way that they apply to residents with less cognitive impairment.

Discussion

In the past few decades, elders have shifted away from using nursing homes as a form of long-term care, even in the face of considerable population aging. Scholars and policy makers might make the argument that lower usage of nursing homes is a positive step in efforts to provide more balanced offerings of long-term care that better fit the constraints, needs, and desires of an aging American population. While there has been a significant increase in services rendered by home and community-based programs, as well as concurrent growth in elders served by residential care facilities, such services are unlikely to fill an important gap in the American

long-term care solution, one that caters to the portion of the elderly population with substantial cognitive and physical impairment. Given trends in rates of cognitive impairment in the elderly and the expected increase in Alzheimer's disease and other dementias likely to accompany population aging, it is likely that nursing homes will remain significant to the long-term care system, even if relegated to the last phase of long-term care.

In this chapter, I have identified several critical issues that are likely to continue to characterize future discussions regarding the state of nursing homes in the future. First, issues regarding racial/ethnic inequality in access to nursing home care seem likely to be of continued interest for future study. With a growing percentage of minority elders, many of whom have experienced significant health inequality over the life course, inequality in access to affordable nursing home care will likely be a pressing issue for scholars and policy makers, as well as for families who seek workable solutions for long-term care of frail relatives. By nearly any account, minority elders have less access to nursing home care than levels of physical and cognitive impairment in this population suggest is needed. Bridging the racial/ethnic gap in access to nursing home care will require far more than merely moving admission rates, however. While increasing access to nursing home care may result in altered admission rates by race/ethnic groups, a more fundamental source of this inequality lies in the nursing home experience itself. Minority elders are disproportionately served by nursing homes with poorer quality, greater numbers of deficiencies, fewer mental health services, and poorer resident to staff ratios. Consequently, efforts to bring about greater equity of nursing home care will need to broadly redress these forms of inequality.

Second, given the vulnerable elder population that nursing homes serve, as well as the significant public expense associated with nursing home care, it seems inevitable that issues regarding nursing home quality will continue to be raised by policy makers, scholars, and American citizens. In recent years, advocates of the nursing home culture change movement have argued that moving to person-centered care in nursing homes will result in a more residential—rather than medical—experience for frail residents, improved care quality, and measurable change in resident health and well-being outcomes. However, progress toward nursing home culture change has been slow and only a small minority of nursing homes has undergone systematic culture change processes due to the considerable expense and effort required for such institutional upheaval. Furthermore, data showing nursing home culture change to significantly improve residents' health and well-being are scant, an issue that is further complicated by the fact that culture change has predominantly occurred in nursing homes already characterized by greater resources and better care

quality. Inevitably, future research will continue to focus on the efficacy of culture change for resident outcomes, especially as it relates to extremely impaired and frail residents. Moreover, scholars and policy makers alike will likely seek effective ways to institutionalize culture change in a way that is sensitive to costs, given the already high expense of delivering long-term care within nursing homes. Consequently, it seems probable that the movement to resident-centered care will continue to be at the forefront of both scholarly and policy interest in the future.

References

Abrahamson, K., Clark, D., Perkins, A., & Arling, G. (2012). Does cognitive impairment influence quality of life among nursing home residents? *The Gerontologist, 52*, 632–640.

Administration on Aging. (2012). *A profile of older Americans, 2012*. U.S. Department of Health and Human Services. Washington, DC.

Akamigbo, A. B., & Wolinsky, F. D. (2007). New evidence of racial differences in access and their effects on the use of nursing homes among older adults. *Medical Care, 45*, 672–679.

Allsworth, J. E., Toppa, R., Palin, N. C., & Lapane, K. L. (2005). Racial and ethnic disparities in the pharmacologic management of diabetes mellitus among long-term care facility residents. *Ethnic Disparity, 15*, 205–212.

Andel, R., Hyer, K., & Slack, A. (2007). Risk factors for nursing home placement in older adults with and without dementia. *Journal of Aging and Health, 19*, 213–228.

Angel, J. L., Angel, R. J., Aranda, M. P., & Miles, T. P. (2004). Can the family still cope? Social support and health as determinants of nursing home use in the older Mexican-origin population. *Journal of Aging and Health, 16*, 338–354.

Ayse, A., Olfson, M., Siegel, M., Zurlo, K. A., Walkup, J. T., & Crystal, S. (2012). Racial and ethnic disparities in depression care in community-dwelling elderly in the United States. *American Journal of Public Health, 102*, 319–328.

Ball, M. M., Whittington, F. J., Perkins, M. M., Patterson, V. L., Hollingsworth, C., King, S. V., & Combs, B. L. (2000). Quality of life in assisted living facilities: Viewpoints of residents. *Journal of Applied Gerontology, 19*, 304–325.

Banaszak-Holl, J., Fendrick, A. M., Foster, N. L., Herzog, A. R., Kabeto, M. U., Kent, D. M., et al. (2004). Predicting nursing home admission: Estimates from a 7-year follow-up of a nationally representative sample of older Americans. *Alzheimer Disease and Associated Disorders, 18*(2), 83–89.

Bharucha, A. J., Pandav, R., Shen, C., Dodge, H. H., & Ganguli, M. (2004). Predictors of nursing facility admission: A 12-year epidemiological study in the United States. *Journal of the American Geriatrics Society, 52*, 434–439.

Bianchi, S. M., Hotz, J., McGarry, K., & Seltzer, J. A. (2008). *Intergenerational ties: Theories, trends, and challenges intergenerational caregiving*. Washington, DC: Urban Institute.

Burton, L. M., Bonilla-Silva, E., Ray, V., Buckelew, R., & Hordge Freeman, E. (2010). Critical race theories, colorism, and the decade's research on families of color. *Journal of Marriage and Family, 3*, 440–459.

Caffrey, C., Sengupta, M., Park-Lee E., et al. (2012). *Residents living in residential care facilities: United States, 2010*. NCHS data brief, no 91. Hyattsville, MD: National Center for Health.

Carter, C., Garret, B., & Wissoker, D. (2015). *Medicare's payments to skilled nursing facilities is as strong as ever*. Washington, DC: Medicare Payment Advisory Commission and Urban Institute.

Cassie, K. M., & Cassie, W. E. (2012). Organizational and individual conditions associated with depressive symptoms among nursing home residents over time. *The Gerontologist, 52*(6), 812–821.

Castle, N. G., & Ferguson, J. C. (2010). What is nursing home quality and how is it measured? *The Gerontologist, 50*, 426–442.

Chapin, M. (2006). *Creating innovative places: Organizational and architectural case studies of the culture change movement in long-term care* (Doctoral dissertation). Milwaukee, WI: University of Wisconsin-Milwaukee.

Cho, S., Zarit, S. H., & Chiriboga, D. A. (2009). Wives and daughters: The differential role of day care use in the nursing home placement of cognitively impaired family members. *The Gerontologist, 49*, 57–67.

Choi, H. J., Schoeni, R. F., Langa, K. M., & Heisler, M. M. (2014). Spouse and child availability for newly disabled older adults: Socioeconomic differences and potential role of residential proximity. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, doi:10.1093/geronb/gbu015

Christian, J. B., Lapane, K. L., & Toppa, R. S. (2003). Racial disparities in receipt of secondary stroke prevention agents among US nursing home residents. *Stroke, 34*, 2693–2697.

Coleman, M. T., Looney, S., O'Brien, J., Ziegler, C., Pastorino, C. A., & Turner, C. (2002). The Eden Alternative: Findings after 1 year of implementation. *The Journals of Gerontology, Series A: Medical Sciences, 57*, M422–M427.

Collier, E. (2008). Staffing characteristics, turnover rates, and quality of resident care in nursing facilities. *Research in Gerontological Nursing, 1*, 157–170.

Congressional Budget Office. (2013). *Rising demand for long-term services and supports for elderly people*. Washington, DC.

Conley, D., Strully, K. W., & Bennett, N. G. (2003). *The starting gate: Birth weight and life chances*. Berkeley, CA: University of California Press.

Cooper, C., Tandy, A. R., Balamurali, T. B., & Livingston, G. (2010). A systematic review and meta-analysis of ethnic differences in use of dementia treatment, care, and research. *The American Journal of Geriatric Psychiatry, 18*, 193–203.

Crespo, M., de Quirós, M. B., Gómez, M. M., & Hornillos, C. (2012). Quality of life of nursing home residents with dementia: A comparison of perspectives of residents, family, and staff. *The Gerontologist, 52*, 56–65.

DeNavas-Walt, C., Proctor, B. D., & Smith, J. (2009). Income, poverty, and health insurance coverage in the United States: 2003. Washington (DC): US Census Bureau; 2004. *Population Reports*, 60–226.

Elliot, A., Cohen, L. W., Reed, D., Nolet, K., & Zimmerman, S. (2014). A "recipe" for culture change? Findings from the THRIVE survey of culture change adopters. *The Gerontologist, 54*(Suppl. 1), S17–S24.

Falcone, D., & Broyles, R. (1994). Access to long-term care: Race as a barrier. *Journal of Health Politics, Policy and Law, 19*, 583–595.

Feng, Z., Fennell, M. L., Tyler, D. A., Clark, M., & Mor, V. (2011). Growth of racial and ethnic minorities in US nursing homes driven by demographics and possible disparities in options. *Health Affairs, 30*, 1358–1365.

Fennell, M., Clark, M., Feng, Z., Mor, V., Smith, D. B., & Tyler, D. A. (2012). Separate and unequal access and quality of care in nursing homes: Transformations of the research program for aging Hispanics. In J. L. Angel, F. Torres-Gil, & K. Markides (Eds.), *Aging, health and longevity in the Mexican-origin population* (pp. 207–225). New York: Springer.

Fennell, M. L., Feng, Z., Clark, M. A., & Mor, V. (2010). Elderly Hispanics more likely to reside in poor-quality nursing homes. *Health Affairs, 29*, 65–73.

Freedman, V. A. (1996). Family structure and the risk of nursing home admission. *The Journals of Gerontology, Series B: Social Sciences, 51*, S61–S69.

Freedman, V. A., Berkman, L. F., Rapp, S. R., & Ostfeld, A. M. (1994). Family networks: Predictors of nursing home entry. *American Journal of Public Health, 84*, 843–845.

Fullerton, C. A., McGuire, T. G., Feng, Z., Mor, V., & Grabowski, D. C. (2009). Trends in mental health admissions to nursing homes, 1999-2005. *Psychiatric Services, 60*, 965–971.

Gaugler, J. E., Duval, S., Anderson, K. A., & Kane, R. L. (2007). Predicting nursing home admission in the U.S.: A meta-analysis. *BMC Geriatrics, 7*, 13.

Gaugler, J. E., Fang, Y., Krichbaum, K., & Wyman, J. F. (2009). Predictors of nursing home admission for persons with dementia. *Medical Care, 47*, 191–198.

Gaugler, J. E., Wall, M. M., Kane, R. L., Menk, J. S., Sarsour, K., Johnston, J. A., . . . & Newcomer, R. (2011). Does caregiver burden mediate the effects of behavioral disturbances on nursing home admission? *The American Journal of Geriatric Psychiatry, 19*(6), 497–506.

Gorina Y., Schappert S., Bercovitz A., et al. (2014). Prevalence of incontinence among older Americans. National Center for Health Statistics. *Vital Health Statistics, 3*, 36.

Grabowski, D. C. (2004). The admission of blacks to high-deficiency nursing homes. *Medical Care, 42*, 456–464.

Grabowski, D. C., Aschbrenner, K. A., Feng, Z., & Mor, V. (2009). Mental illness in nursing homes: Variations across States. *Health Affairs, 28*, 689–700.

Grabowski, D. C., Elliot, A., Leitzell, B., Cohen, L. W., & Zimmerman, S. (2014a). Who are the innovators? Nursing homes implementing culture change. *The Gerontologist, 54*(Suppl. 1), S65–S75.

Grabowski, D. C., O'Malley, A. J., Afendulis, C. C., Caudry, D. J., Elliot, A., & Zimmerman, S. (2014b). Culture change and nursing home quality of care. *The Gerontologist*, *54*(Suppl. 1), S35–S45.

Haas, S. A., Krueger, P. M., & Rohlfsen, L. (2012). Race/ethnic and nativity disparities in later life physical performance: The role of health and socioeconomic

status over the life course. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 67*(2), 238–248.

Harrington, C., Swan, J.H., & Carrillo, H. (2007). Nurse staffing levels and Medicaid reimbursement rates in nursing facilities. *Health Services Research, 42*(3p1), 1105–1129.

Harris, Y. (2007). Depression as a risk factor for nursing home admission among older individuals. *Journal of the American Medical Directors Association, 8*, 14-20.

Harris-Kojetin, L., Sengupta, M., Park-Lee, E., & Valverde, R. (2013). *Long-term care services in the United States: 2013 overview*. National health care statistics reports, no. 1. Hyattsville, MD: National Center for Health Statistics.

Hill, N.L., Kolanowski, A.M., Milone-Nuzzo, P., & Yevchak, A. (2011). Culture change models and resident health outcomes in long-term care. *Journal of Nursing Scholarship, 43*(1), 30–40.

Housen, P., Shannon, G.R., Simon, B., Edelen, M.O., Cadogan, M.P., Jones, M., Saliba, D. (2009). Why not just ask the resident? Refinement of a preference assessment tool (PAT) for nursing homes. *Journal of Gerontological Nursing, 35*, 40–49.

Hung., W.H., Ross, J.S., Boockvar, K.S., & Siu, A.L. (2011). Recent trends in chronic disease, impairment and disability among older adults in the United States. *BMC Geriatrics, 11*, 47.

Jenkens, R., Sult, T., Lessell, N., Hammer, D., & Ortigara, A. (2011). Financial implications of the Green House Model, *Senior Housing and Care Journal, 19*, 3–22.

Kaiser Commission on Medicaid and the Uninsured. (2013). Medicaid, a primer: Key information on the nation's health coverage program for low-income people (Report #7334-05). Washington, DC.

Kane, R.A., Lum, T.Y., Cutler, L.J., Degenholtz, H.B., & Yu, T.C. (2007). Resident outcomes in small-house nursing homes: A longitudinal evaluation of the initial green house program. *Journal of the American Geriatrics Society, 55*(6), 832–839.

Katz, S.J., Kabeto, M., & Langa, K.M. (2000). Gender disparities in the receipt of home care for elderly people with disability in the United States. *Journal of the American Medical Association, 284*, 3022–3027.

Kaye, H.S., Harrington, C., & LaPlante, M.P. (2010). Long-term care: Who gets it, who provides it, who pays, and how much? *Health Affairs, 29*(1), 11–21.

Kelly, C.M., Liebig, P.S., & Edwards, L.J. (2008). Nursing home deficiencies: An exploratory study of interstate variations in regulatory activity. *Journal of Aging & Social Policy, 20*(4), 398–413.

Koren, M.J. (2010). Person-centered care for nursing home residents: The culture-change movement. *Health Affairs, 29*(2), 312–317.

Leedahl, S.N., Chapin, R.K., & Little, T.D. (2015). Multilevel examination of facility characteristics, social integration, and health for older adults living in nursing homes. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 70*(1), 111–122.

Levine, C., Halper, D., Peist, A., & Gould, D.A. (2010). Bridging troubled waters: Family caregivers, transitions, and long-term care. *Health Affairs, 29*, 116–124.

Luo, H., Zhang, X., Cook, B., Wu, B., & Wilson, M. R., (2014). Racial/ethnic disparities in preventative practice among US nursing home residents. *Journal of aging and health, 26*, 519–539.

Luppa, M., Luck, T., Weyerer, S., König, H., Brähler, E., Riedel-Heller, S. G. (2010). Prediction of institutionalization in the elderly. A systematic review. *Age and Ageing, 39*, 31–38.

Medicare Payment Advisory Commission. (2015). *Report to the Congress: Medicare payment policy*. March 2015, Washington, DC.

Miller, E. A., & Weissert, W. G. (2000). Predicting elderly people's risk for nursing home placement, hospitalization, functional impairment, and mortality: A synthesis. *Medical Care Research and Review, 57*, 259–297.

Miller, S. C., Cohen, N., Lima, J. C., & Mor, V. (2014). Medicaid capital reimbursement policy and environmental artifacts of nursing home culture change. *The Gerontologist, 54*(Suppl. 1), S76–S86.

Miller, S. C., Looze, J., Shield, R., Clark, M. A., Lepore, M., Tyler, D., . . . & Mor, V. (2014). Culture change practice in US nursing homes: Prevalence and variation by state Medicaid reimbursement policies. *The Gerontologist, 54*(3), 434–445.

Mollica, R., Johnson-Lamarche, H., & O'Keefe, J. (2005). *State residential care and assisted living policy*. Portland, ME: National Academy for State Health Policy.

Mollica, R. Sims-Kastelein K., & O'Keefe, J. (2008). *Assisted living and resident care policy compendium, 2007 update*. Portland, ME: National Academy for State Health Policy.

Mor, V., Gruneir, A., Feng, Z., Grabowski, D. C., Intrator, O., & Zinn, J. (2011). The effect of state policies on nursing home resident outcomes. *Journal of the American Geriatrics Society, 59*(1), 3–9.

Mor, V., Intrator, O., Feng, Z., & Grabowski, D. C. (2010). The revolving door of rehospitalization from skilled nursing facilities. *Health Affairs, 29*, 57–64.

Mor, V., Zinn, J., Angelelli, J., Teno, J. M., & Miller, S. C. (2004). Driven to tiers: Socioeconomic and racial disparities in the quality of nursing home care. *Millbank Quarterly, 82*, 227–256.

Mukamel, D. B., Ladd, H., Weimer, D. L., Spector, W. D., & Zinn, J. S. (2009). Is there evidence of cream skimming among nursing homes following the publication of the nursing home compare report card? *The Gerontologist, 49*, 793–802.

National Center for Health Statistics. (2014). *Health, United States, 2013: With special feature on prescription drugs*. Hyattsville, MD.

Nelson, A. R., Smedley, B. D., & Stith, A. Y. (Eds.). (2009). *Unequal treatment: Confronting racial and ethnic disparities in health care* (Vol. 1). Washington, DC: National Academies Press.

Ness, J., Ahmed, A., & Aronow, W. S. (2004). Demographics and payment characteristics of nursing home residents in the United States: A 23-year trend. *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences, 59*, 1213–1217.

Noel-Miller, C. (2010). Spousal loss, children, and the risk of nursing home admission. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 65B*, 370–380.

Park-Lee, E., Caffrey, C., Sengupta, M., Moss, A. J., Rosenoff, E., & Harris-Kojetin, L. D. (2011). *Residential care facilities: A key sector in the spectrum of long-term care providers in the United States* (NCHS data brief, No. 78). Hyattsville, MD: National Center for Health Statistics.

Rahman, A. N., & Schnelle, J. F. (2008). The nursing home culture-change movement: Recent past, present, and future directions for research. *The Gerontologist, 48*, 142–148.

Ransom, S. Eden Alternative: The Texas Project. (2000). *Faculty publications—School of Health Administration*. Retrieved from https://digital.library.txstate.edu/handle/10877/4087

Reeves, E., & Musumeci, M. B. (2014). *Medicaid and long-term service supports: A primer.* The Kaiser Commission on Medicaid and the Uninsured, July 2014. Menlo Park: CA.

Reinhard, S., & Stone, R., (2001). Promoting quality in nursing homes. Washington, DC: American Association of Homes and Services for the Aging.

Saliba, D., & Schnelle, J. F. (2002). Indicators of the quality of nursing home residential care. *Journal of the American Geriatrics Society, 50*, 1421–1430.

Shier, V., Khodyakov, D., Cohen, L. W., Zimmerman, S., & Saliba, D. (2014). What does the evidence really say about culture change in nursing homes? *The Gerontologist 54, S1*, S6–S16.

Shugarman, L. R. (2010). Health care reform and long-term care: The whole is greater than the sum of its parts. *Public Policy & Aging Report, 20*, 3–7.

Shura, R., Siders, R. A., & Dannefer, D. (2011). Culture change in long-term care: Participatory action research and the role of the resident. *The Gerontologist, 51,* 212–225.

Smith, D. B., Feng, Z., Fennell, M. L., Zinn, J. S., & Mor, V. (2007). Separate and unequal: Racial segregation and disparities in quality across U.S. nursing homes. *Health Affairs, 26*, 1448–1458.

Smith, D. B., Feng, Z., Fennell, M. L., Zinn, J., & Mor, V. (2008). Racial disparities in access to long-term care: The illusive pursuit of equity. *Journal of Health Politics, Policy and Law, 33*, 861–881.

Spilman, B. C., & Long, S. K. (2009). Does high caregiver stress predict nursing home entry? *Inquiry, 46*, 140–161.

Sterns, S., Miller, S. C., & Allen, S. (2010). The complexity of implementing culture change practices in nursing homes. *Journal of the American Medical Directors Association, 11*, 511–518.

Stevenson, D. G., & Grabowski, D. C. (2010). Sizing up the market for assisted living. *Health Affairs, 29*, 35–43.

Stoller, E. P., & Miklowski, C. S. (2008). Spouses caring for spouses: Untangling the influences of relationship and gender. In M. E. Szinovacz, & A. Davey (Eds.), *Caregiving contexts: Cultural, familial, and societal implications* (pp. 115–131). New York: Springer.

Strahan, G. W. (1997). *An overview of the nursing homes and their residents: Data from the 1995 National Nursing Home Survey* (Advance Data from Vital and Health Statistics, No. 280). Hyattsville, MD: National Center for Health Statistics.

Street, D., Burge, S., & Quadagno, J. (2009). The effect of licensure type on the policies, practices, and resident composition of Florida assisted living facilities. *The Gerontologist, 49*, 211–223.

Street, D., & Quadagno, J. (2004). *Nursing home to assisted living transitions: An evaluation of the Medicaid NHTP pilot project and its implications for policy-makers*. Final report. Tallahassee: Pepper Institute on Aging, Florida State University.

Sullivan, J. L., Shwartz, M., Burgess, J. F., Jr., Peköz, E. A., Christiansen, C. L., Gerena-Melia, M., & Berlowitz, D. (2013). Person-centered care practices and quality in Department of Veterans Affairs nursing homes: Is there a relationship? *Medical Care, 51*, 165–171.

Thomeer, M. B., Mudrazija, S., & Angel, J. L. (2015). How do race and Hispanic ethnicity affect nursing home admission? Evidence from the Health and Retirement Study. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *70*, 628–638.

U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services. (2013). *Nursing home data compendium, 2013 edition*.

Warner, D. F., & Brown, T. H. (2011). Understanding how race/ethnicity and gender define age-trajectories of disability: An intersectionality approach. *Social Science & Medicine, 72*, 1236–1248.

Wattmo, C. Wallin, A. K., Londos, E., & Minthon, L. (2011). Risk factors for nursing home placement in Alzheimer's disease: A longitudinal study of cognition, ADL, service utilization, and cholinesterase inhibitor treatment. *The Gerontologist, 51*, 17–27.

Wiener, J., Anderson, W. L., & Brown, D. (2009). *Why are nursing home utilization rates declining?* Centers for Medicare and Medicaid Services. Washington, DC.

Wolff, J. L., & Kasper, J. D. (2006). Caregivers of frail elders: Updating a national profile. *The Gerontologist, 46*, 344–356.

Zimmerman, S., Shier, V., & Saliba, D. (2014). Transforming nursing home culture: Evidence for practice and policy. *The Gerontologist, 54*(Suppl. 1), S1–S5.

Zimmerman, S., Sloane, P. D., & Reed, D. (2014). Dementia prevalence and care in assisted living. *Health Affairs, 33*, 658–666.

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CHAPTER TEN

End-of-Life and End-of-Life Planning

Megumi Inoue, Sara Keary, and Sara M. Moorman

The circumstances surrounding death and dying have changed dramatically for Americans in the past century. In the past, death was a meaningful risk for persons of all ages, especially young children. In 1900, 12 percent of infants did not survive their first year, and half of the population had died by the age of 58 (Arias, 2014). Over the course of the century the risk of premature death declined; between 1935 and 2010, mortality risk dropped by over 50 percent for every age group except persons aged 85 and older (Hoyert, 2012). This statistic means that today, most decedents in the United States are among the oldest-old, and they die from the chronic diseases of old age—heart disease, cancer, and stroke—rather than infectious diseases or injuries.

These demographic changes have wrought changes in the medical treatment of dying persons, as well as in cultural understandings of the meaning of dying and death. Death is something to be staved off rather than something to be accepted as an inevitable fact of human existence (Zimmerman, 2007, 2012). Few people have spent time with a dying person, have witnessed a death, or have much personal or professional experience with loss of life (Christakis, 1999; Timmermans, 2005). In this respect, Americans are privileged compared to persons who live in parts of the world that experience armed conflict and socioeconomic underdevelopment. However, Americans' profound inexperience with death means that they often face difficulty making decisions about care for the dying.

Beyond the personal and familial difficulty of making end-of-life decisions, there are also societal concerns. Since the late 1970s, patients in their last year of life have consumed a quarter of annual Medicare costs, despite the fact that only 5 percent of Medicare beneficiaries die each year (Riley & Lubitz, 2010). In 2012, net federal spending on Medicare amounted to $466 billion (Congressional Budget Office, 2013). Medicare spending is projected to increase, given that members of the Baby Boom cohort, persons born between 1946 and 1964, will continue to age into eligibility for the program. Therefore, decisions about care for the dying lie in the public interest because they are decisions that taxpayers fund.

In this chapter, we frame these challenges and their potential solutions around three concepts: good death, bad death, and planned death. Good deaths are deaths that are as physically and psychologically comfortable as possible for patients and observers, while bad deaths are deaths that involve suffering and are disturbing to survivors. Increasingly, some form of planning occurs so as to reduce the likelihood of a bad death.

Natural Death, Good Death

Natural death, as defined by the National Association of Medical Examiners, is death that is "due solely or nearly totally to disease and/or the aging process" (Department of Health and Human Services, Centers for Disease Control and Prevention & National Center for Health Statistics, 2003, p. 21). What makes a death natural is that an illness has taken its course and individuals die of causes related directly to the disease process, rather than to, for example, medication used to treat the disease or its symptoms. Yet the layperson's definition of a natural death is quite different (Seymour, 1999). People imagine a natural death occurring at home, where the dying person can be surrounded by loved ones, with minimal medical intervention as needed to mitigate symptoms, and a balance between autonomous decisions among the patient and his or her family and the staff who are responsible for monitoring pain levels (Seymour, 1999). Scholars describe this type of death as *good*, or what is most desirable given that everyone must die (Steinhauser et al., 2000a, 2000b).

Good deaths can be had via (a) passive euthanasia, and/or (b) palliative care and hospice. Often these good deaths can also be correctly labeled natural deaths, so long as the progression of an illness is what ultimately caused the patient to die. However, although patients and families may invoke the term natural, they are typically referring to the quality rather than the cause of the death.

Passive Euthanasia

One of the fundamental ethical principles in medicine in the United States is respect for patient autonomy, which is a patient's right to direct his or her medical treatment. In the 1990 case *Cruzan v. Director, Missouri Department of Health* the Supreme Court of the United States upheld "a constitutional right to refuse life-sustaining medical treatment" (Larson & Eaton, 1997, p. 225). This right is known as *voluntary passive euthanasia*. The word *euthanasia* is from the Greek language and refers to a good and painless death, although it has come to be known as the intentional ending of life in order to relieve pain and suffering (Gordijn, 2004). Voluntary passive euthanasia implies allowing death by refusing or withdrawing life-sustaining treatment. Choosing to stop eating and drinking, disconnecting a respirator, or failing to perform cardiopulmonary resuscitation (CPR) all constitute different types of voluntary passive euthanasia (Gordijn, 2004).

Nonvoluntary passive euthanasia is also legal in the United States. The term refers to cases in which a patient is unable to communicate treatment preferences or lacks the capacity to express a choice for or against medical intervention (Ardelt, 2003). Among dying patients who require a medical decision, approximately 70 percent are incapacitated (Silveira, Kim, & Langa, 2010). In the case of nonvoluntary euthanasia, a physician decides to forego treatment after consulting a patient's family to determine that the

Table 10.1 Types of Euthanasia

	Passive	Active
Voluntary	Legal in the United States. Individuals have the constitutional right to refuse life-sustaining treatment (*Cruzan v. Director, Missouri Department of Health,* 1990).	Illegal in the United States. A physician is not permitted to administer a lethal dose of medication to a patient in an effort to end the patient's life, regardless of the patient's request (Rubin & Bernat, 2014).
Nonvoluntary	Legal in the United States. Treatment is forgone when a patient's wishes are unknown, and a terminal illness has progressed so that he or she cannot communicate a preference.	Illegal in the United States. An action is taken to cause death when a patient's wishes are unknown, and a terminal illness has progressed so that he or she cannot communicate a preference.

Note. Active forms of euthanasia are described in the section "Active Death" below.

patient would have chosen to forego treatment if he or she had the capacity. Choosing what the patient would have chosen if able is known as substituted judgment, and it is the legal standard because it has been deemed the best method to meet legal definitions of autonomy.

Palliative Care and Hospice

Passive euthanasia is commonly accompanied by palliative care. *Palliative care* is both a medical approach and a philosophical approach to care. Medically, its aims are to reduce distressing symptoms, to maximize quality of life and functional health, and to "neither hasten nor postpone death," although it may be used alongside medical interventions designed to prolong life (World Health Organization, 2014). The philosophy of palliative care is to "affirm life and regard dying as a normal process" (World Health Organization, 2014). Functionally, this philosophy means that care is provided by a team including professionals who can address the psychological and spiritual needs of both the patient and the family. Hospice care for the family may continue after the patient's death through bereavement counseling.

Therefore, there is a continuum of palliative care: It can occur concurrent with life-sustaining treatment for critically ill and/or dying patients. In cases of critical illness, palliative care includes management of symptoms such as insomnia, pain, and anxiety, as well as helping the patient and family to cope with the psychological, spiritual, and social consequences of critical illness. Starting palliative care early in the course of a serious illness may improve patients' quality of life, mood, and length of survival (Temel et al., 2010). However, this chapter primarily concerns *hospice*, one of the programs within the scope of palliative care. Hospices are organizations that provide palliative care at the end of life. In the United States, patients are eligible for Medicare reimbursement of hospice services when they have a prognosis of six months or less to live and have foregone treatment aimed at curing their illness or prolonging their life (National Hospice and Palliative Care Organization, 2014).

The primary benefits of hospice concern the clinical outcomes of patients and their families. Randomized, controlled trials—the gold standard in medical research—have demonstrated that patients receiving hospice care experience benefits including better mood, improved quality of life (Bakitas et al., 2009), greater satisfaction with their care experience, and fewer ICU admissions (Gade et al., 2008). Scores of additional studies demonstrate improvements in symptoms such as pain, in survival, in caregiver well-being, and other such outcomes (e.g., Meier, 2011). No studies have documented drawbacks to hospice care such as accelerated death.

In fact, for people dying of certain illnesses, hospice may *increase* survival time (Connor et al., 2007).

Of secondary benefit is that hospice may save money (Smith et al., 2014). One estimate is that a hospice stay of two weeks to one month saves Medicare $6,430 per patient (Kelley et al., 2013). Although savings may not be evident in all contexts (see Meng et al., 2013), hospice does not cost more than standard care.

Bad Death

Although good deaths can be had, most decedents do not have them. The prevalence of physical pain and other symptoms at the end of life has increased since the late 1990s (Singer et al., 2015). In a study of the family members of persons who died from dementia with a feeding tube inserted, 14 percent said that their consent to the tube was not sought, and 42 percent were consulted about this invasive treatment for fewer than 15 minutes (Teno et al., 2011). Although 61 percent of Americans aged 50 and older support legislation that would extend Medicare reimbursement to physicians who discuss end-of-life with their patients (Wilson & Crowley, 2014), and although patients who have such discussions report greater trust in their doctors (Keary & Moorman, 2015), this legislation has been stalled multiple times in Congress. Two major factors behind this alarming state of affairs are challenges in hospice care and the development and widespread use of life-sustaining technologies.

Challenges in Hospice Care

Hospice care has brought great relief and solace to many patients and families at the end of life. However, the U.S. health-care system does not use hospice to its fullest extent. In 2011, only 45 percent of U.S. decedents were under the care of hospice at the time of their death (NHPCO, 2014). In the same year, 70 percent of members of the public rated themselves as "not at all knowledgeable" about palliative care (Center to Advance Palliative Care, 2011a). Indeed, the extent of misunderstanding is such that over half of palliative care physicians have been accused of euthanasia or murder when providing palliative care, either by the family member of a patient or by another health-care provider (Goldstein et al., 2012). Three root problems include inequality of use, late initiation of services, and the dearth of palliative care education programs.

First, there are troubling disparities, most notably by race/ethnicity, in who benefits from hospice care. Patients of color are less likely to use hospice than white patients, and when they do use hospice, they receive

services for a shorter time (Chung, Essex, & Samson, 2008; Connor et al., 2008). The disparity is not due to differences in cause of death by race or ethnicity (Connor et al., 2008), nor is it due to unavailability of hospice care in places where persons of color live (Silveira et al., 2011). Instead, persons of color are less likely than whites to be aware and recognize the benefits of hospice (Johnson, Kuchibhatla, & Tulsky, 2009). This cause suggests that the disparity may be preventable with improvements in education and outreach.

A second problem is also preventable: Patients often receive hospice only very late in the course of their illness. The median duration of hospice care is 19 days, and 35 percent of patients receive hospice care for less than a week (NHPCO, 2014). Even short durations of hospice save money (Kelley et al., 2013) and improve quality of life (Teno et al., 2007), but longer stays offer more benefits. Patients spend such short times in hospice because of overly optimistic prognoses on the part of physicians, patients, and families (Casarett et al., 2006; Christakis, 1999; Ford et al., 2008). Medicare will not reimburse for hospice services until a patient has agreed to forgo curative care, a decision that many are unwilling to make. However, Medicare is experimenting with reimbursement for palliative care alongside curative care, a move that could increase the amount of time patients receive palliative services (Centers for Medicare & Medicaid Services, 2014).

Well-trained health-care professionals can recognize terminal decline and the benefits of palliative care, leading to timely referral to and enrollment in a hospice (Welch et al., 2008). However, training and education are difficult to find. In 2011, there were only 2,887 physicians board-certified in palliative medicine in the United States (Center to Advance Palliative Care, 2011b). One estimate is that only 30 percent of U.S. medical schools require a course in palliative and hospice care, and that only 19 percent require students to complete a rotation (Van Aalst-Cohen, Riggs, & Byock, 2008). Notably, these figures concern only doctors, although nurses and other direct care workers also require training.

Life-Sustaining Technologies

In the 21st century, health-care systems in developed countries possess an unprecedented ability to sustain life among terminally ill patients using medical technologies. Many such technologies can maintain vital bodily functions, but they do not cure underlying illnesses, and they rarely restore the patient's quality of life. In fact, aggressive interventions often fail, and the patient dies or the interventions drastically lower the patient's quality of life. Nevertheless, life-sustaining treatments have become increasingly

common since the mid-1980s: Among patients who died in the hospital in 1999, 30 percent had one or more life-sustaining treatments during their final hospitalization, compared to 18 percent in 1985 (Barnato et al., 2004).

As an example, consider one of the life-sustaining treatments with which the general public is most familiar: CPR. A mere 20 percent of patients who undergo CPR in a U.S. hospital survive to be discharged (Morrison et al., 2013). The figure is lower still for patients whose CPR occurs without the technology a hospital offers. Nor do survival-to-discharge figures account for the permanent cognitive and physical disabilities that often result from oxygen deprivation during cardiac arrest and physical trauma during chest compressions.

Yet nearly 4 in 10 members of the general public believe that 75 percent of patients who undergo CPR survive to be discharged from the hospital (Donohoe, Haefeli, & Moore, 2006). This mistaken belief is due in part to popular media. A U.K. study found that newspapers report disproportionately on cases in which patients survive to be discharged from the hospital (Field et al., 2011). A U.S. study found that in 90 percent of instances of CPR on television medical dramas, patients either explicitly survive to be discharged from the hospital or the show implies that they do (Diem, Lantos, & Tulsky, 1996). Once patients are accurately informed about their prognosis were they to undergo CPR, many who previously wanted CPR opt to complete a do-not-resuscitate (DNR) order, which requests that health-care professionals withhold CPR (Thorevska et al., 2005). Other life-sustaining treatments, including intubation and mechanical ventilation, artificial nutrition and hydration (i.e., a feeding tube), and dialysis, also have low success rates and are administered to patients who are unaware of the risks.

Thus, many life-sustaining treatments are futile. One working definition of *futile* reads:

> Any treatment that has no realistic chance of providing an effect that the patient would ever have the capacity to appreciate as a benefit, such as merely preserving the physiologic functions of a permanently unconscious patient, or has no realistic chance of achieving the medical goal of returning the patient to a level of health that permits survival outside the acute care setting of the medical center.
>
> (Schneiderman, 2011, p. 130)

Because identifying instances of futile care is both medically and ethically contentious, the amount and expense of futile care administered in the United States is difficult to determine. Nonetheless, health-care

professionals provide life-sustaining treatments they believe to be futile. They do so for complex reasons, including inability to accept failure to save the patient; requests from the family to do all that is possible; institutional and legal delays to prevent malpractice lawsuits; miscommunication; and prognostic uncertainty (Jox et al., 2012; Palda et al., 2005).

Insufficiencies with hospice services and extensive use of life-sustaining technologies pose a number of problems to patients within the modern health-care system, as well as problems for society and the economy. Of course, solutions could be structural, population-level, public health approaches, such as expansion of funding for and education about hospice, and strict regulations on the use of aggressive treatments at the end of life. However, the solution actually pursued has been a much more individual-level fix: planning death, either via advance care planning (ACP) or via an active process such as physician-assisted suicide (PAS).

Planned Death

Advance Care Planning

ACP is the process of planning for future medical care in the event that (a) a person is no longer able to make or communicate his or her own medical decisions and (b) a medical doctor has declared the person's condition to be terminal or irreversible. ACP is an opportunity for individuals to identify and express which treatments they do or do not want for their end-of-life care so that health-care providers can give appropriate care. This process is especially critical in the practice of person-centered care, which ensures a person's needs, goals, values, family situation, and cultural preferences and traditions are respected and reflected in health service delivery (Feinberg, 2014; Greenlee, 2014).

ACP has three types: a living will, a durable power of attorney for health-care (DPAHC), and informal discussion. A living will specifies in writing the types of medical care a person does or does not want to receive under certain circumstances. For example, individuals can specify whether they would want to have life-sustaining treatment if they are in a coma and not expected to recover. A DPAHC is a designated individual permitted to make health-care decisions for an incapacitated person should decisions arise that are not covered in the living will. A living will and DPAHC are both legal documents, and together they are called an advance directive.

Health-care providers also encourage patients to hold informal discussions with their family members and health-care providers. Although informal discussions are not legally binding, they are still helpful for informing the family members or health-care providers who carry out a

person's wishes (Mack et al., 2010). Talking about one's thoughts, values, and preferences for end-of-life care may help one's surrogate decision makers understand the values and preferences of a person so that they can make the right decisions when needed.

Because persons who have ACP are more likely than those without to express a desire to withhold or withdraw life-sustaining interventions and to receive palliative care, the completion of ACP can lower health-care costs in terminally ill patients' final days of life and offer patients opportunities to avoid unwanted treatment (Snyder, 2012; Emanuel, 1996). In fact, previous research has found that ACP specifying limited care is significantly associated with lower levels of Medicare spending, and persons who expressed a desire for limited treatment are less likely to die in a hospital and more likely to use hospice services (Nicholas et al., 2011). Receiving hospice care and dying at home can provide quality of life during individuals' final days that extensive life-sustaining care cannot provide.

Despite the value of ACP, there remain concerns and challenges. These include low rates of completion, accessibility of completed advance directives at the time of decision-making, effectiveness of advance directives in increasing surrogates' knowledge of a dying person's preferences, and levels of health literacy advance directives require.

In an attempt to encourage citizens to plan their end-of-life care to protect their autonomy, Congress passed the Patient Self-Determination Act (PSDA) in 1990. Under the PSDA, all Medicare and Medicaid funded facilities, such as hospitals, nursing homes, hospice agencies, home health agencies, and HMOs, are required to provide patients with written information on advance directives at the time of enrollment (Baker, 2002). Research findings indicate that the PSDA seems to have been successful at increasing public awareness and the use of advanced care planning, particularly among certain high-risk populations, such as older adults and persons in declining health (e.g., Resnick et al., 2009). However, while ACP has been conceptualized as a process that occurs over time that "seeks to discern an individual's evolving priorities, values, and goals of care, and to engage a proxy and others who may participate in future healthcare decisions" (Sabatino, 2014, p. 107), it typically occurs only after patients have been diagnosed with a terminal illness. Many patients die less than a month after having had their first conversation about ACP with a physician (Lopez-Acevedo et al., 2013; Mack et al., 2012).

Further, rates of ACP completion are alarmingly low in the general population. A recent estimate is that slightly over a quarter of U.S. adults aged 18 or older have an advance directive (Rao et al., 2014). Most people believe that they are too young and/or healthy to need plans for themselves (Pollack, Morhaim, & Williams, 2010) or that ACP would be upsetting to

themselves or to family members (Schickedanz et al., 2009). White race, older age, higher educational attainment, and higher income have been repeatedly reported as robust predictors of having an informal discussion and advance directive (e.g., Alano et al., 2010; Carr & Khodyakov, 2007; Moorman & Inoue, 2013a). Findings on the effects of gender are inconclusive; some research has found that women are more likely than men to complete advance directives, but another study has found the opposite although women are more likely to engage in an informal discussion (e.g., Alano et al., 2010; Carr & Khodyakov, 2007).

Even when ACPs exist, they are not always available when they are needed. One study found that only 31 percent of patients who completed advance directives had them on their medical charts (Douglas & Brown, 2002). Patients often stow advance directives in safe deposit boxes along with wills and estate planning documents, or give them to geographically distant loved ones who cannot promptly alert doctors in an emergency.

ACP completers also fail to ensure that their appointed surrogate decision makers understand their care preferences. Surrogate decision makers' lack of knowledge of a dying person's treatment preferences is frequently found in research (e.g., Shalowitz, Garrett-Meyer, & Wendler, 2006). However, patients and surrogates *believe* that surrogates understand what patients want (Moorman, 2011). Ironically, the mismatch between what patients want and what surrogates believe that they want only increases with higher relationship quality (Moorman & Inoue, 2013b).

The last concern involves the level of health literacy that is required to execute advance directives (Fagerlin & Schneider, 2004). The average person does not know enough about illnesses, treatment options, and prognoses in order to specify care preferences. Many advance directives allow individuals to describe their personal values and to define quality of life, but someone must convert these general preferences into decisions about whether to administer specific treatments.

Active Death

Ironically, at the same time that technology has allowed for unprecedented ability to sustain life, it has also allowed for complex and contested ways of actively ending life. These include active euthanasia, PAS, and palliative sedation (PS). *Active euthanasia* refers to intentionally taking steps to end someone's life (Hooyman & Kiyak, 2010), primarily through the administration of a lethal dose of medication that is intended to cause death (Gordijn, 2004). Active euthanasia is different from passive euthanasia in that its goal is to directly result in death, whereas the goal in passive euthanasia is to stop preventing death (see Table 10.1).

Nonvoluntary active euthanasia is illegal in all countries and is viewed as murder. The only country that permits any form of nonvoluntary active euthanasia is the Netherlands, as outlined in the Groningen Protocol (Verhagen & Sauer, 2005). The Protocol permits physicians, with the agreement of a second physician and both parents, to euthanize newborns whose prognosis is certain and who are suffering unbearably. Some bioethicists support the Protocol (e.g., Lindemann & Verkerk, 2008; Manninen, 2006), while others oppose it (e.g., Jotkowitz, Glick, & Gesundheit, 2008; Kon, 2007). Little is available—at least in English—regarding public opinion. In the first five years of the Protocol, two babies, both of whom had epidermolysis bullosa, were euthanized (Verhagen, 2013). Additional cases may have gone unreported because the physician classified them as death during palliative care rather than euthanasia, as when pain medications or paralyzing medications were administered to ease symptoms (Verhagen, 2013).

Voluntary active euthanasia refers to when patients request euthanasia in order to end their life (Bergman Levy et al., 2013). Usually people who request euthanasia are experiencing unbearable pain and suffering. In the United States, no one is legally permitted to administer a lethal dose of medication to another person in an effort to relieve the suffering of the patient, regardless of the patient's request (Rubin & Bernat, 2014). Since the early 1990s, however, approximately 70 percent of Americans have said that in the case of terminal illness, physicians should be permitted to "end a patient's life by some painless means if the patient and his or her family request it" (McCarthy, 2014). Even when asked a more laden question, such as whether doctors should be permitted to "assist the patient to commit suicide if the patient requests it," approximately 60 percent approve (McCarthy, 2014).

Physician-assisted suicide is a form of voluntary active euthanasia that occurs when a "person helps another to actively end his or her life. It can include anything from providing a potentially lethal dose of medicine all the way to fully participating in a suicide" (Morhaim, 2012, p. 19). The term is usually used to mean instances in which a physician prescribes a patient a lethal dose of medication knowing that the patient intends to self-administer it (Hooyman & Kiyak, 2010). PAS is not a constitutionally protected right; the decision to legalize the practice is left to individual states (*Vacco v. Quill*, 1997; *Washington v. Glucksberg*, 1997). As of this writing, there are five states in the United States that allow a legal means through which people can choose PAS: Oregon, Washington, Montana, Vermont, and New Mexico (Ganzini, 2014; Eckholm, 2014). Oregon has had the law in place the longest, since 1997. Between 1997 and January 2015, 1,327 people received prescriptions to commit PAS, and

859 died by ingesting those medications (Oregon Public Health Division, 2015). Of those who died of PAS, roughly half were men and half were women, the median age was 71, 97 percent were white, and 46 percent had a college education or more (Oregon Public Health Division, 2015). There is no evidence that vulnerable persons, such as the uninsured or the mentally ill, were more likely to die than other persons (Battin et al., 2007). Interestingly, 90 percent of PAS decedents were enrolled in hospices, and nearly 80 percent were cancer patients (Oregon Public Health Division, 2015).

Palliative sedation, also known as "continuous deep sedation," is an intervention at the end of life that involves "the use of sedative medications to relieve intolerable and refractory distress by reduction in patient consciousness" (Morita et al., 2002, p. 452). The goal of PS is to achieve unconsciousness because "as far as is known, only such deep sedation is certain to prevent and treat the patient's physical and psychological suffering" (Billings, 2014, p. 213).

Perhaps the most controversial aspect of palliative sedation concerns the risk of sedating someone to the point of death. The *doctrine of double effect* suggests that intention is the most important aspect of the intervention. Even though there may be a known possibility of death, alleviating suffering and pain is the main intention of palliative sedation (Higgins & Altilio, 2008). An ethical consideration related to double effect is the concept of *proportionality*, which means that the benefits of an intervention should outweigh its burdens (Kirk & Mahon, 2010). This means that even though someone may suffer the burden of unconsciousness due to sedation, the benefit of pain alleviation is a more important result. When considering palliative sedation as a treatment for refractory distress, the idea of *imminence* is always considered. There is a general consensus that palliative sedation should be reserved as an intervention only when a physician has determined that a person has a very short period of time to left live, such as a few days (Billings, 2014).

PS was introduced in the mid- to late-1980s, and as a result of its novelty there remains a lack of conceptual understanding, clarity, protocol, and guidelines for its practice (Morita et al., 2002; Billings, 2014). In 1997, the Supreme Court indicated support for the use of PS. Justice Sandra Day O'Connor stated that "a patient who is suffering from a terminal illness and who is experiencing great pain has no legal barriers to obtaining medication, from qualified physicians, to alleviate that suffering, even to the point of causing unconsciousness and hastening death" (AMA, 2008, p. 3). Professional organizations waited another decade to weigh in. In 2008, the American Medical Association (2008, p. 2) along with the American Academy of Hospice and Palliative Medicine, came out in

support of "the use of palliative sedation to the level of unconsciousness to relieve otherwise intractable suffering." In 2010, the National Hospice and Palliative Care Organization also indicated its support for palliative sedation as long as the terminal illness and imminence criteria were met (Kirk & Mahon, 2010). However, there is no single document outlining the implementation of PS practice guidelines on a national scale. Decisions regarding PS are ultimately left up to individual hospitals and hospices, although the practice does require informed consent from the patient or surrogate decision maker.

Physician and public attitudes about active euthanasia, PAS, and palliative sedation in the United States are, and will remain, contested. Physicians may face legal, personal, professional, and public conflict in agreeing to these options for their patients (Bergman Levy et al., 2013). Patients may also experience great turmoil, distress, and confusion about whether or not to pursue an active ending to the suffering caused by terminal illness. Further, terminally ill patients may not be cognizant of their conditions, and therefore may be unable to participate in medical decision making. Another layer of complexity is added to the challenges of ways of dying when surrogate decision makers are called upon to make choices about a loved one's end-of-life treatment approaches. Without clear clinical recommendations or consistent legal standards, these ways of dying remain complicated and controversial.

Discussion

In an era in which machines can sustain basic bodily functions such as circulation and respiration, dying persons—and we will all someday be dying persons—have important decisions to make. What quality of life do we desire? How much suffering are we willing to endure? Although individual patients have the autonomy to select treatment, these issues are societal as well as personal. Because taxpayers, via Medicare and Medicaid, bear part of the high financial cost of end-of-life care, they ought to have some say over what kinds of treatments are standard and to whom they are accessible. Further, societal debates about ethical and moral issues determine which types of death are legally permitted, and which constitute murder or manslaughter. Few Americans have experience with death and dying, yet they must become informed about the issues for their own well-being, often in the absence of accurate and thorough knowledge of the options. Educating Americans on these issues is necessary to ensure that we all have as much information as possible when the time comes for us to make decisions regarding our own ways of experiencing dying and death.

References

Alano, G. J., Pekmezaris, R., Tai, J. Y., Hussain, M. J., Jeune, J., Louis, B., . . . Wolf-Klein, G. P. (2010). Factors influencing older adults to complete advance directives. *Palliative and Supportive Care, 8*, 267–275. doi: 10.1017/S1478951510000064

American Medical Association (AMA). (2008). Sedation to unconsciousness in end-of-life care. *Report of the Council on Ethical and Judicial Affairs.* Report 5-A-08.

Ardelt, M. (2003). Physician-assisted death. In C. D. Bryant (Ed.) *Handbook of death and dying* (pp. 424–434). Thousand Oaks, CA: Sage Publications, Inc.

Arias, Elizabeth. (2014). *United States life tables, 2009*. Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_07.pdf

Baker, M. E. (2002). Economic, political, and ethnic influences on end-of-life decision making: A decade in review. *Journal of Health and Social Policy, 14*, 27–39. doi: 10.1300/J045v14n03_02

Bakitas, M., Lyons, K. D., Hegel, M. T., Balan, S., Brokaw, F. C., Seville, J., . . . & Ahles, T. A. (2009). Effects of a palliative care intervention on clinical outcomes in patients with advanced cancer. *Journal of the American Medical Association, 302*, 741–749. doi:10.1001/jama.2009.1198

Barnato, A. E., McClellan, M. B., Kagay, C. R., & Garber, A. M. (2004). Trends in inpatient treatment intensity among Medicare beneficiaries at the end of life. *Health Services Research, 39*, 363–375. doi: 10.1111/j.1475-6773.2004.00232.x

Battin, M. P., van der Heide, A., Ganzini, L., van der Wal, G., & Onwuteaka-Philipsen, B. D. (2007). Legal physician-assisted dying in Oregon and the Netherlands: Evidence concerning the impact on patients in "vulnerable" groups. *Journal of Medical Ethics, 33*, 591–597. doi:10.1136/jme.2007.022335

Bergman Levy, T., Azar, S. Huberfeld, R., Siegel, A. M., & Strous, R. D. (2013). Attitudes toward euthanasia and assisted suicide: A comparison between psychiatrists and other physicians. *Bioethics, 27*(7), 402–408. doi:10.1111/j.1467-8519.2012.01968.x

Billings, J. A. (2014). Palliative sedation. In T. E. Quill & F. G. Miller (Eds.), *Palliative care and ethics* (pp. 209–230). New York, NY: Oxford University Press.

Carr, D., & Khodyakov, D. (2007). End-of-life health care planning among young-old adults: An assessment of psychosocial influences. *The Journals of Gerontology, Series B: Social Sciences, 62B*(2), 135–S141. doi: 10.1093/geronb/62.2.S135

Casarett, D., van Ness, P. H., O'Leary, J. R., & Fried, T. R. (2006). Are patient preferences for life sustaining treatment really a barrier to hospice enrollment for older adults with serious illness? *Journal of the American Geriatrics Society, 54*, 472–478. doi: 10.1111/j.1532-5415.2005.00628.x

Centers for Medicare & Medicaid Services. (2014). *Fact sheet: Medicare care choices model*. Retrieved from http://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2014-Fact-sheets-items/2014–03–18.html

Center to Advance Palliative Care. (2011a). *2011 public opinion research on palliative care*. Retrieved from https://www.capc.org/media/filer_public/18/ab/18ab708c-f835–4380–921d-fbf729702e36/2011-public-opinion-research-on-palliative-care.pdf

Center to Advance Palliative Care. (2011b). *America's care of serious illness: A state-by-state report card on access to palliative care in our nation's hospitals*. Retrieved from www.capc.org/reportcard

Christakis, N. A. (1999). *Death foretold: Prophecy and prognosis in medical care*. Chicago: University of Chicago Press.

Chung, K., Essex, E., & Samson, L. F. (2008). Ethnic variation in timing of hospice referral: Does having no informal caregiver matter? *Journal of Palliative Medicine, 11*, 484–491. doi: 10.1089/jpm.2007.0149

Congressional Budget Office. (2013). *The 2013 long-term budget outlook*. Retrieved from http://www.cbo.gov/sites/default/files/cbofiles/attachments/44521-LTBO2013_0.pdf

Connor, S. R., Elwert, F., Spence, C., & Christakis, N. A. (2008). Racial disparity in hospice use in the United States in 2002. *Palliative Medicine, 22*, 205–213. doi: 10.1177/0269216308089305

Connor, S. R., Pyenson, B., Fitch, K., Spence, C., & Iwasaki, K. (2007). Comparing hospice and nonhospice patient survival among patients who die within a three-year window. *Journal of Pain and Symptom Management, 33*(3), 238–246. doi:10.1016/j.jpainsymman.2006.10.010

Cruzan v. Director, Missouri Department of Health, (88–1503), 497 U.S. 261 (1990)

Department of Health and Human Services, Centers for Disease Control and Prevention & National Center for Health Statistics. (2003). *Medical examiners' and coroners' handbook on death registration and fetal death reporting*. Retrieved from http://www.cdc.gov/nchs/data/misc/hb_me.pdf

Diem, S. J., Lantos, J. D., & Tulsky, J. A. (1996). Cardiopulmonary resuscitation on television: Miracles and misinformation. *New England Journal of Medicine, 334*, 1578–1582. doi: 10.1056/NEJM199606133342406

Douglas, R., & Brown, H. N. (2002). Patients' attitudes toward advance directives. *Journal of Nursing Scholarship, 34*(1), 61–65. doi: 10.1111/j.1547-5069.2002.00061.x

Donohoe, R. T., Haefeli, K., & Moore, F. (2006). Public perceptions and experiences of myocardial infarction, cardiac arrest, and CPR in London. *Resuscitation, 71*, 70–79. doi: 10.1016/j.resuscitation.2006.03.003

Eckholm, E. (2014, February 7). Aid in dying movement takes hold in some states. *The New York Times*. Retrieved from http://www.nytimes.com/2014/02/08/us/easing-terminal-patients-path-to-death-legally.html?_r=0

Emanuel, E. J. (1996). Cost savings at the end of life: What do the data show? *JAMA, 275*(24), 1907–1914. doi: 10.1001/jama.1996.03530480049040

Fagerlin, A., & Schneider, C. E. (2004). Enough: The failure of the living will. *Hastings Center Report, 34*(2), 30–42. doi: 10.2307/3527683

Feinberg, L. F. (2014). Moving toward person- and family-centered care. *Public Policy & Aging Report, 24*, 97–101. doi: 10.1093/ppar/pru027

Field, R. A., Soar, J., Nolan, J. P., & Perkins, G. D. (2011). Epidemiology and outcome of cardiac arrests reported in the lay press: An observational study. *Journal of the Royal Society of Medicine, 104*, 525–531. doi: 10.1258/jrsm.2011.110228

Ford, D. W., Nietert, P. J., Zapka, J., Zoller, J. S., & Silvestri, G. A., (2008). Barriers to hospice enrollment among lung cancer patients: A survey of family members

and physicians. *Palliative and Supportive Care, 6*, 357–362. doi: 10.1017/S1478951508000564

Gade, G., Venohr, I., Conner, D., McGrady, K., Beane, J., Richardson, R. H., . . . & della Penna, R. (2008). Impact of an inpatient palliative care team: A randomized controlled trial. *Journal of Palliative Medicine, 11*, 180–190. doi:10.1089/jpm.2007.0055

Ganzini, L. (2014). Lessons learned from legalized physician-assisted death in Oregon and Washington. In T. E. Quill & F. G. Miller (Eds.), *Palliative care and ethics* (pp. 266–280). New York, NY: Oxford University Press.

Goldstein, N. E., Cohen, L. M., Arnold, R. M., Goy, E., Arons, S., & Ganzini, L. (2012). Prevalence of formal accusations of murder and euthanasia against physicians. *Journal of Palliative Medicine, 15*, 334–339. doi: 10.1089/jpm.2011.0234

Gordijn, B. (2004). Alzheimer disease and euthanasia. In R. B. Purtilo & H. A. M. J. ten Have (Eds.), *Ethical foundations of palliative care for Alzheimer disease* (pp. 218–225). Baltimore, MD: The Johns Hopkins University Press.

Greenlee, K. (2014). Making our own decisions about serious illness. *Public Policy & Aging Report, 24*, 81–85. doi: 10.1093/ppar/pru026

Higgins, P., & Altilio, T. (2008). Palliative sedation: An essential place for clinical excellence. *Journal of Social Work in End-Of-Life & Palliative Care, 3*(4), 3–30. doi:10.1080/15524250802003240

Hooyman, N. R., & Kiyak, H. A. (2010). *Social gerontology: A multidisciplinary perspective* (9th ed.). Boston, MA: Allyn and Bacon.

Hoyert, D. L. (2012). *75 years of mortality in the United States, 1935–2010*. Retrieved from http://www.cdc.gov/nchs/data/databriefs/db88.pdf

Johnson, K. S., Kuchibhatla, M., & Tulsky, J. A. (2009). Racial differences in self-reported exposure to information about hospice care. *Journal of Palliative Medicine, 12*, 921–927. doi: 10.1089/jpm.2009.0066

Jotkowitz, A., Glick, S., & Gesundheit, B. (2008). A case against justified non-voluntary active euthanasia (The Groningen Protocol). *The American Journal of Bioethics,* 8, 23–26. doi: 10.1080/15265160802513085

Jox, R. J., Schaider, A., Marckmann, G., & Borasio, G. D. (2012). Medical futility at the end of life: The perspectives of intensive care and palliative care clinicians. *Journal of Medical Ethics, 38,* 540–545. doi: 10.1136/medethics-2011-100479

Keary, S., & Moorman, S. M. (2015). Patient-physician end-of-life discussions in the routine care of Medicare beneficiaries. *Journal of Aging & Health*. Online before print. doi: 10.1177/0898264315569458

Kelley, A. S., Deb, P., Du, Q., Carlson, M. D. A., & Morrison, R. S. (2013). Hospice enrollment saves money for Medicare and improves care quality across a number of different lengths-of-stay. *Health Affairs, 32*, 552–561. doi: 10.1377/hlthaff.2012.0851

Kirk, T., & Mahon, M. (2010). NHPCO position statement and commentary on the use of palliative sedation in imminently dying terminally ill patients. *Journal of Pain and Symptom Management, 39*(5), 914–923. doi: 10.1016/j.jpainsymman.2010.01.009

Kon, A. A. (2007). Neonatal euthanasia is unsupportable: The Groningen Protocol should be abandoned. *Theoretical Medicine and Bioethics,* 5, 453–463. doi: 10.1007/s11017-007-9047-8

Larson, E. J., & Eaton, T. A. (1997). The limits of advance directives: A history and assessment of the patient self-determination act. *Scholarly Works.* Paper 260. Retrieved from http://digitalcommons.law.uga.edu/fac_artchop/260

Lindemann, H., & Verkerk, M. (2008). Ending the life of a newborn: The Groningen Protocol. *Hastings Center Report, 38*, 42–51.

Lopez-Acevedo, M., Havrilesky, L. J., Broadwater, G., Kamal, A. H., Aberneth, A. P., Berchuck, A., . . . Lee, P. S. (2013). Timing of end-of-life care discussion with performance of end-of-life quality indicators in ovarian cancer. *Gynecologic Oncology, 30*(1), 156–161. doi: 10.1016/j.ygyno.2013.04.010

Mack, J. W., Cronin, A., Taback, N., Huskamp, H. A., Keating, N. L., Malin, J. L., . . . Weeks, J. C. (2012). End-of-life care discussions among patients with advanced cancer: A cohort study. *Annals of Internal Medicine, 156*, 204–210. doi: 10.7326/0003-4819-156-3-201202070-00008

Mack, J. W., Weeks, J. C., Wright, A. A., Block, S. D., & Prigerson, H. G. (2010). End-of-life discussions, goal attainment, and distress at the end-of-life: Predictors and outcomes of receipt of care consistent with preferences. *Journal of Clinical Oncology, 28*(7), 1203–1208. doi: 10.1200/JCO.2009.25.4672

Manninen, B. A. (2006). A case for justified non-voluntary active euthanasia: Exploring the ethics of the Groningen Protocol. *Journal of Medical Ethics, 32*, 643–651. doi: 10.1136/jme.2005.014845

McCarthy, J. (2014). *Seven in 10 Americans back euthanasia*. Retrieved from http://www.gallup.com/poll/171704/seven-americans-back-euthanasia.aspx

Meier, D. E. (2011). Increased access to palliative care and hospice services: Opportunities to improve value in health care. *Milbank Quarterly, 89*, 343–380. doi: 10.1111/j.1468-0009.2011.00632.x

Meng, H., Dobbs, D., Weng, S., & Hyer, K. (2013). Hospice use and public expenditures at the end of life in assisted living residents in a Florida Medicaid waiver program. *Journal of the American Geriatrics Society, 61*(10), 1777–1781. doi: 10.1111/jgs.12459

Moorman, S. M. (2011). The importance of feeling understood in marital conversations about end-of-life health care. *Journal of Social and Personal Relationships, 28*(1), 100–116. doi: 10.1177/0265407510386137

Moorman, S. M., & Inoue, M. (2013a). Persistent problems in end-of-life planning among young and middle-aged American couples. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 68*(1): 97–106. doi: 10.1093/geronb/gbs103

Moorman, S. M., & Inoue, M. (2013b). Predicting a partner's end-of-life preferences, or substituting one's own? *Journal of Marriage and Family, 75*(3), 734–745. doi: 10.1111/jomf.12030

Morhaim, D. (2012). *The better end: Surviving (and dying) on your own terms in today's modern medical world.* Baltimore, MD: The Johns Hopkins University Press.

Morita, T., Tsuneto, S., & Shima, Y. (2002). Definition of sedation for symptom relief: A systematic literature review and a proposal of operational criteria. *Journal of Pain and Symptom Management, 24*(4), 447–453. doi: 10.1016/S0885-3924(02)00499-2

Morrison, L. J., Neumar, R. W., Zimmerman, J. L., Link, M. S., Newby, K., McMullan, P. W., . . . & Edelson, D. P. (2013). Strategies for improving survival after in-hospital cardiac arrest in the United States: 2013 consensus recommendations. *Circulation, 127*, 1538–1563. doi: 10.1161/CIR.0b013e31828b2770

National Hospice and Palliative Care Organization. (2014). *The Medicare hospice benefit.* Retrieved from http://hospiceactionnetwork.org/linked_documents/get_informed/policy_resources/Medicare_Hospice_Benefit_print.pdf

Nicholas, L. H., Langa, K. M., Iwashyna, T. J., & Weir, D. R. (2011). Regional variation in the association between advance directives and end-of-life Medicare expenditures. *Journal of the American Medical Association, 306*(13), 1447–1453. doi: 10.1001/jama.2011.1410

Oregon Public Health Division. (2015). *Oregon's death with dignity act: 2014*. Retrieved from http://public.health.oregon.gov/ProviderPartnerResources/EvaluationResearch/DeathwithDignityAct/Documents/year17.pdf

Palda, V. A., Bowman, K. W., McLean, R. F., & Chapman, M. G. (2005). "Futile" care: Do we provide it? Why? *Journal of Critical Care, 20,* 207–213. doi: 10.1016/j.jcrc.2005.05.006

Pollack, K. M., Morhaim, D., & Williams, M. A. (2010). The public's perspectives on advance directives: Implications for state legislative and regulatory policy. *Health Policy, 96*, 57–63. doi: 10.1016/j.healthpol.2010.01.004

Rao, J. K., Anderson, L. A., Lin, F. C., & Laux, J. P. (2014). Completion of advance directives among U.S. consumers. *American Journal of Preventive Medicine, 46*(1), 46–70. doi: 10.1016/j.amepre.2013.09.008

Resnick, H. E., Schuur, J. D., Heineman, J., Stone, R., & Weissman, J. S. (2009). Advance directives in nursing home residents ≥65 years: United States 2004. *American Journal of Hospice and Palliative Medicine, 25*(6), 476–482. doi: 10.1177/1049909108322295

Riley, G. F., & Lubitz, J. D. (2010). Long-term trends in Medicare payments in the last year of life. *Health Services Research, 45,* 565–576. doi: 10.1111/j.1475-6773.2010.01082.x

Rubin, E. B., & Bernat, J. L. (2014). Voluntarily stopping eating and drinking. In T. E. Quill & F. G. Miller (Eds.), *Palliative care and ethics* (pp. 231–246). New York, NY: Oxford University Press.

Sabatino, C. P. (2014). Advance care planning tools that educate, engage, and empower. *Public Policy & Aging Report, 24*, 107–111. doi: 10.1093/ppar/pru018

Schickedanz, A. D., Schillinger, D., Landefeld, C. S., Knight, S. J., Williams, B. A., & Sudore, R. L. (2009). A clinical framework for improving the advance care planning process: Start with patients' self-identified barriers. *Journal of the American Geriatrics Society, 57*, 31–39. doi: 10.1111/j.1532-5415.2008.02093.x

Schneiderman, L. J. (2011). Defining medical futility and improving medical care. *Bioethical Inquiry, 8*, 123–131. doi: 10.1007/s11673-011–9293-3

Seymour, J. E. (1999). Revisiting medicalisation and "natural" death. *Social Science & Medicine, 49*, 691–704.

Shalowitz, D. I., Garrett-Mayer, E., & Wendler, D. (2006). The accuracy of surrogate decision makers. *Archives of Internal Medicine, 166*(5), 493–497. doi: 10.1001/archinte.166.5.493

Silveira, M. J., Connor, S. R., Goold, S. D., McMahon, L. F., & Feudtner, C. (2011). Community supply of hospice: Does wealth play a role? *Journal of Pain and Symptom Management, 42,* 76–82. doi: 10.1016/j.jpainsymman.2010.09.016

Silveira, M. J., Kim, S. Y. H., & Langa, K. M. (2010). Advance directives and outcomes of surrogate decision making before death. *New England Journal of Medicine, 362*, 1211–1218. doi: 10.1056/NEJMsa0907901

Singer, A. E., Meeker, D., Teno, J. M., Lynn, J., Lunney, J. R., & Lorenz, K. A. (2015). Symptom trends in the last year of life from 1998 to 2010: A cohort study. *Annals of Internal Medicine, 162*(3), 175–183. doi: 10.7326/M13-1609

Smith, S., Brick, A., O'Hara, S., & Normand, C. (2014). Evidence on the cost and cost-effectiveness of palliative care: A literature review. *Palliative Medicine, 28*, 130–150. doi: 10.1177/0269216313493466

Snyder, L. (2012). American College of Physicians ethics manual: Sixth edition. *Annals of Internal Medicine, 156,* 73–104.

Steinhauser, K. E., Christakis, N. A., Clipp, E. C., McNeilly, M., McIntyre, L. M., & Tulsky, J. A. (2000a). Factors considered important at the end of life by patients, families, physicians, and other care providers. *Journal of the American Medical Association, 284*(19), 2476–2482. doi:10.1001/jama.284.19.2476

Steinhauser, K. E., Clipp, E. C., McNeilly, M., Christakis, N. A., McIntyre, L. M., & Tulsky, J. A. (2000b). In search of a good death: Observations of patients, families, and providers. *Annals of Internal Medicine, 132*(10), 825–832. doi: 10.7326/0003-4819-132-10-200005160-00011

Temel, J. S., Greer, J. A., Muzikansky, A., Gallagher, E. R., Admane, S., Jackson, V. A., . . . & Lynch, T. J. (2010). Early palliative care for patients with metastatic non-small-cell lung cancer. *The New England Journal of Medicine, 363*, 733–742. doi: 10.1056/NEJMoa1000678

Teno, J. M., Mitchell, S. L., Kuo, S. K., Gozalo, P. L., Rhodes, R. L., Lima, J. C., & Mor, V. (2011). Decision-making and outcomes of feeding tube insertion: A five-state study. *Journal of the American Geriatrics Society, 59*(5), 881–886. doi: 10.1111/j.1532-5415.2011.03385.x

Teno, J. M., Shu, J. E., Casarett, D., Spence, C., Rhodes, R., & Connor, S. (2007). Timing of referral to hospice and quality of care: Length of stay and bereaved family members' perceptions of the timing of hospice referral. *Journal of Pain and Symptom Management, 34*, 120–125. doi: 10.1016/j.jpainsymman.2007.04.014

Thorevska, N., Tilluckdharry, L., Tickoo, S., Havasi, A., Amoateng-Adjepong, Y., & Manthous, C. A. (2005). Patients' understanding of advance directives and cardiopulmonary resuscitation. *Journal of Critical Care, 20*, 26–34. doi: 10.1016/j.jcrc.2004.11.002

Timmermans, S. (2005). Death brokering: Constructing culturally appropriate death. *Sociology of Health and Illness, 27*, 993–1013. doi: 10.1111/j.1467-9566.2005.00467.x

Vacco v. Quill, 117S.Ct. 2293; 138 L.Ed.2d 834 (U.S. 1997).

Van Aalst-Cohen, E. S., Riggs, R., & Byock, I. R. (2008). Palliative care in medical school curricula: A survey of United States medical schools. *Journal of Palliative Medicine, 11*, 1200–1202. doi:10.1089/jpm.2008.0118

Verhagen, E. (2013). The Groningen Protocol for newborn euthanasia: Which way did the slippery slope tilt? *Journal of Medical Ethics, 39*, 293–295. doi: 10.1136/medethics-2013-101402

Verhagen, E., & Sauer, P. J. J. (2005). The Groningen Protocol: Euthanasia in severely ill newborns. *The New England Journal of Medicine, 352*, 959–962. doi: 10.1056/NEJMp058026

Washington v. Glucksberg, 117S.Ct. 2258; 138 L.Ed.2d 772 (U.S. 1997).

Welch, L. C., Miller, S. C., Martin, E. W., & Nanda, A. (2008). Referral and timing of referral to hospice care in nursing homes: The significant role of staff members. *The Gerontologist, 48*, 477–484. doi: 10.1093/geront/48.4.477

Wilson, D. R., & Crowley, C. (2014). What patients and their families think about unwanted medical treatment. *Public Policy & Aging Report, 24*, 124–125. doi: 10.1093/ppar/pru033

World Health Organization. (2014). *WHO definition of palliative care*. Retrieved from http://www.who.int/cancer/palliative/definition/en/

Zimmerman, C. (2007). Death denial: Obstacle or instrument for palliative care? An analysis of clinical literature. *Sociology of Health and Illness, 29*, 297–314. doi: 10.1111/j.1467-9566.2007.00495.x

Zimmerman, C. (2012). Acceptance of dying: A discourse analysis of palliative care literature. *Social Science & Medicine, 75*, 217–224. doi: 10.1016/j.socscimed.2012.02.047

CHAPTER ELEVEN

Grief and Bereavement

Deborah Carr

Death is one of life's few certainties. All persons will die, and nearly all will survive the death of a loved one. Although death is universal, the timing, cause, and context of death vary widely over the life course (Carr, 2012). Consequently, the experience of bereavement, or losing a loved one through death, also varies widely over the life course and by gender. Grief is a typical reaction to the loss of a loved one, where survivors experience psychological and physical symptoms in the weeks and months that follow, and in some cases precede, the death (Rando, 1986; Weiss, 2008). The extent to which a bereaved person grieves, and the duration, nature and intensity of one's emotional distress is closely linked to the larger context of the death, one's relationship to the decedent, concurrent stressors, and one's coping resources (Bonanno et al., 2002; Carr, 2012). Survivors' reactions to loss vary widely, with some suffering from prolonged and even debilitating grief (Boelen & Prigerson, 2013), whereas others recover quickly, experiencing only short-lived symptoms of sadness (Bonanno et al., 2002).

In this chapter, I provide a brief overview of the nature of death and dying in the contemporary United States, which sets the stage for understanding the personal meaning and context of late-life bereavement. I then describe classic and contemporary work on grief and its subtypes. I then summarize research on distinctive types of family bereavement in late life, and show how and why the deaths of one's spouse, sibling(s), parent(s), and adult children affect the lives of older adults. Next, I focus in depth on the demographic, psychosocial, and contextual factors that shape grief in the face of one particular type of late-life bereavement: The loss of one's spouse/partner. This particular focus reflects the fact that the vast

majority of research on late-life bereavement focuses on the specific case of widow(er)hood. Finally, I highlight unanswered questions regarding loss and bereavement among older adults and suggest avenues for future research.

Death and Dying in the United States: A Brief Historical Overview

In order to understand late-life bereavement, a brief overview of mortality patterns is necessary. When, how, and of which causes older adults die carry important implications for their survivors' emotional, physical, and financial well-being. An epidemiologic transition occurred over the past two centuries, in which infant and child deaths were replaced by late-life deaths, and infectious diseases were replaced by lifestyle-related chronic diseases as the leading causes of death (Olshansky & Ault, 1986; Omran, 1971). In the 19th and early 20th centuries, deaths occurred primarily due to infectious diseases, such as diphtheria and pneumonia; death occurred relatively quickly after the initial onset of symptoms. Throughout the 20th century, improved sanitation and nutrition, immunization for communicable diseases, effective treatments for infections, and other medical advances dramatically reduced mortality among younger persons, and increased life expectancy (IOM, 2014). While median life expectancy in 1900 was just 46 years old, it approached 80 years old in 2009 (Arias, 2014).

Today, death is largely a late-life phenomenon. Roughly three-quarters of the 2.4 million deaths in the United States in 2010 were to persons aged 65 and older (Federal Interagency Forum on Aging-Related Statistics, 2012). The leading causes of death among older adults are chronic and progressive illnesses including heart disease, cancer, chronic lower respiratory diseases, stroke, Alzheimer's disease, and diabetes (Federal Interagency Forum on Aging-Related Statistics, 2012). Late-life deaths today typically occur months or even years after the initial onset of chronic illness, thus the prolonged "living-dying interval" (Pattison, 1977) between diagnosis and death is typically marked by compromised quality of life, comorbid conditions, functional impairment, mobility limitations, impaired cognitive functioning, physical discomfort, and the need for assistance with activities of daily living (ADLs) and instrumental activities of daily living (IADLs). In 2009, more than 40 percent of persons aged 65 and older required assistance with ADLs or IADLs (Federal Interagency Forum on Aging-Related Statistics, 2012). The number of older Americans with serious cognitive impairment is also high and rising; the number of older adults suffering from Alzheimer's disease and related dementias is expected to grow from 5.5 million in 2010 to 8.7 million in 2030 (HHS/ASPE, 2013).

Because most late-life deaths occur following a period of chronic illness, the majority of older adults who experience the loss of a spouse, sibling, parent, or even an adult child typically have witnessed some suffering, have played a role as a caregiver, or have had the time to prepare practically and emotionally for the impending death. Caregivers to loved ones with dementia also must grapple with the loss of their loved one's ability to communicate and to be one's usual self prior to loss (Chan et al., 2013). In short, for most older bereaved persons, death is not an acute, sudden, and unexpected event, but is rather a slowly unfolding process. These dying trajectories carry implications for the nature and timing of grief.

Grief: Definitions and Subtypes

While bereavement refers to the objective situation of having lost a loved one through death, grief refers to the emotional or physical reactions of distress that one has in response to the loss. Grief has been described as "the cost we pay for being able to love in the way we do" (Archer, 1999, 5). Mourning, by contrast, refers to the public display or expression of grief, such as wearing black clothing or draping the coffins of deceased military personnel with American flags (Fontana & Keene, 2009). Rich anthropological research has documented cross-cultural differences in mourning practices, although the topic is beyond the scope of this chapter (see Robben, 2009).

As we shall see later in this chapter, the intensity and duration of one's grief symptoms vary widely based on who the decedent is, the cause of death, and a range of other personal and situational factors. Despite this heterogeneity, a core theme in grief research is distinguishing between normal grief and grief that is deemed complicated or prolonged (Prigerson et al., 2008; Shear et al., 2011). Although the boundaries demarcating these different types of grief are both fuzzy and controversial, a general assumption is that some sadness following the death of a loved one is normal and that grief symptoms are problematic only when they extend for prolonged periods of time, or inhibit one's daily functioning. For example, the types of grief viewed as most problematic and thus most in need of professional attention are chronic or prolonged grief (Shear et al., 2011), which is characterized by long-lasting symptoms associated with intense grief. Yet at the same time, individuals who show no symptoms of sadness historically were considered pathological. For example, delayed, inhibited, or absent grief were viewed as indications that an individual may not attach to significant others in a meaningful way, given that grief is a consequence of severed bonds to an important attachment object (e.g., Archer, 1999; Weiss, 2008).

One of the most hotly contested debates in grief research, theory, and practice over the past two decades has been the exclusion of bereavement in the *Diagnostic and Statistical Manual* (*DSM*; American Psychiatric Association, 2013). The *DSM* provides mental health practitioners with a definition and treatment guidelines for mental health disorders. In the *DSM-4*, American Psychiatric Association (1994), persons who experienced two months or more of sadness were excluded from receiving a major depression diagnosis if those symptoms were a result of a recent bereavement. This exclusion suggested that sadness for a delimited time period is normal in the face of a major loss and as such was not a pathological condition in need of treatment. However, in the *DSM-5*, American Psychiatric Association (2013), the bereavement exclusion was removed, and thus enables practitioners to diagnose (and medicate) some bereaved persons as suffering from major depressive disorder. Impassioned debates continue among researchers and practitioners, and hinge on competing notions about whether sadness is a normal reaction to loss, and whether untreated symptoms will fade with the passage of time or require more serious interventions (e.g., Shear, 2011, Wakefield & First, 2012). Some of the most compelling empirical evidence to date suggests that for older adults, in particular, most bereaved spouses experience brief spells of depressive symptoms but then quickly return to their preloss functioning (Bonanno et al., 2002), although a small minority experiences persistent and debilitating symptoms that require treatment (Shear et al., 2011).

Anticipatory Grief

Most writings on grief focus on a bereaved person's psychological and physiological responses after the death occurs. However, in the case of older adults, as noted earlier, the majority of deaths tend to occur after a prolonged illness. As such, one's feelings of loss, sadness, and loneliness may begin far earlier than the actual death, and may begin to unfold as one is caring for an ailing loved one, or watching the personhood of their loved one slip away as dementia symptoms take over (Chan et al., 2013; Rando, 1986). While these individuals may experience sadness during the dying process, they may ultimately be better prepared for the death when it arrives.

For example, researchers have administered grief surveys to caregivers when they were still providing care for their loved ones and found that predeath grief symptoms were highly correlated with feelings of distress (e.g., Meuser & Marwit, 2001). Several recent studies also show that those experiencing grief symptoms prior to the loss have reduced symptoms postloss, with some bereaved persons even reporting relief. For example,

one study of older widows in Sweden found that 40 percent described the preloss period as more stressful than the postloss period. For these widows of men who died of cancer, preparatory grief involved emotional stress, intense preoccupation with the dying, longing for his/her former personality, loneliness, tearfulness, cognitive dysfunction, irritability, anger and social withdrawal, and a need to talk (Johansson & Grimby, 2012). However, they also reported resilience and effective coping after the loss, in part because the "living-dying interval" (Pattison, 1977) provided a time and space to prepare for the impending death.

Family Bereavement in Late Life

The primary types of family bereavement experienced by older adults are the deaths of spouses or romantic partners, siblings, parents, and adult children.

Spouse and Partner Loss

Spousal loss can occur at any age, yet in the United States and most wealthy nations today, it is a transition overwhelmingly experienced by persons aged 65 and older. Of the roughly 900,000 persons widowed annually in the United States, nearly three-quarters fall into this age category (Federal Interagency Forum on Aging-Related Statistics, 2012). Because life expectancy is roughly 79 for men and 84 for women, women are much more likely than men to become widowed (Miniño & Murphy, 2012). Among persons aged 65 to 74, 26 percent of women but just 7 percent of men are widowed; at ages 75 and more, these percentages jump to 58 percent of women and 21 percent of men. This stark gender gap also reflects the fact that widowers are far more likely than widows to remarry and thus may exit the widowed category. Widows are less likely than widowers to remarry because of a dearth of potential partners. Among persons aged 65 and older in the United States, the sex ratio is 1.5 women per every one man and by age 85, this ratio is more than 3 women per every man. As a result, few widows have the opportunity to remarry even if they would like to do so. Additionally, cultural norms encourage men to marry women younger than themselves, so widowed men may opt to remarry a younger woman, whereas older widows do not typically have that option (Federal Interagency Forum on Aging-Related Statistics, 2012). Qualitative interviews also show that older women who were caregivers to dying husbands, especially those dying from prolonged or treatment-intensive illness such as cancer are reluctant to remarry again and possibly resume the stressful role of caregiver (Bennett, Hughes, & Smith, 2003).

Far less is known about the number of bereaved persons following a long-term same-sex relationship. According to data from the 2010 U.S. Census, there are currently 605,000 same-sex households in the United States, 27 percent of whom identify as married. The average age of the partners in same-sex households is 48; roughly 13 percent are 65 or older, whereas 17 percent are between 55 and 64 (Lofquist, 2011). Thus a sizeable number of older gays and lesbians are at risk of losing a partner. As I discuss later in this chapter, gay and lesbian couples face both distinctive challenges yet possess protective resources as they cope with the loss of their partner.

Sibling Loss

Studies of sibling bereavement in late life are rare; most studies of the death of a brother or sister are focused on childhood and adolescence (e.g., Devita-Raeburn, 2004). This omission is troubling, given that most older adults have at least one living sibling, and most have emotionally close and mutually supportive relationships (White, 2001). Theoretical writings propose that the death of a sibling may have profound effects on older adults because "it marks an end to what is expected to be one of the longest and most intimate relationships of a lifetime" (Mahon, 1997).

One of the few empirical studies of adjustment to sibling loss in late life reveals that sibling death is linked with heightened depressive symptoms, and that this association is partly explained by the fear of death and sense of personal vulnerability that is triggered by a sibling's demise (Cicirelli, 2009). Because most siblings are close in age and spent their formative years together, the death of one sibling may render the other acutely aware of his or her own mortality. Relationships among surviving siblings typically grow closer following sibling death (Moss & Moss, 1989), and siblings with strained relationships may work to make amends, especially as they cope with the challenges of aging including illness, cognitive decline, and caregiving for parents (Hays, Gold, & Pieper, 1997).

Parental Loss

With rising life expectancy in recent decades, many older adults have at least one living parent, and the proportion of persons aged 65+ with a living parent is expected to increase further among future cohorts. Most older adults with a living parent will eventually face the death of that parent. However, very little is known about bereavement experiences of older adult children who survive the loss of very aged parents. Moss and Moss (1983–1984) attribute this research gap to the facts that late-life mortality is normative, and adult children have limited daily contact with their

aging parent(s). As such, many presume that the daily lives of older adult children may not be disrupted by parental death, given a norm of residential independence in the United States and many other wealthy nations. However, adult children play an active role in end-of-life decision making (Carr & Khodyakov, 2007) and are the most common source of informal care to aging parents (Wolff & Kasper, 2006). Given adult children's high levels of engagement with their parents' health and health care, parental death remains "an unexpected crisis for most healthy, well-functioning adults" (p. 7) and also "represents a rite of passage into a new adult identity" (Umberson, 2003, p. 8).

A handful of studies have explored psychological reactions to late-life parental death and find wide variation based on the gender of parent and child, and nature of the late relationship. An estimated 45 percent of adult children experience somatic reactions to the death of a parent and roughly 10–15 percent report declines in overall health (Scharlach & Fredriksen, 1993). Symptoms of anxiety and depression often occur immediately after the death yet rarely persist in the longer term (Scharlach & Fredriksen, 1993). After six months, there is generally a significant decline in these emotional reactions to death (Pratt, Walker, & Wood, 1992). Umberson and Chen (1994) also found that adults who had recently lost a parent had significantly more frequent alcohol use and more depressive symptoms than their peers without a parental loss, and effects were largest for those who had positive relationships with their late parent. Grief symptoms also are linked to the nature of the death; some studies suggest that sudden deaths or deaths that the adult child feels partly responsible for are particularly likely to trigger symptoms of distress (Horowitz et al., 1984).

Other studies suggest that the toll of parental death is more severe when the second parent dies (Marshall, 2004). Some research also suggests that sibling relationships may grow closer upon the death of a second parent, as the surviving children must develop new rituals and practices to make up for those previously upheld by their parents, such as family holiday meals (Russo, 2010). In sum, while little is known about older adults' adjustment to elderly parents' deaths, the literature generally concludes that effects are short-lived, although the early weeks and months are marked by profound sadness and identity shifts, which are particularly acute when a second parent dies and the surviving child(ren) must assume the identity as the most senior member of their family line (Rosenblatt, 2000).

Child Loss

The death of a child is generally considered the most distressing event a parent can withstand, as it betrays that assumption of a natural order

in which children outlive their parents (Hazzard et al., 1992). Extensive research explores the effects of parents' psychological and physical well-being, marital stability, and economic well-being following a child's death, with studies uniformly showing devastating effects that often linger for years (Klass, 1988). The bulk of this research is focused on the deaths of children under the age of 18 and shows that parental distress is particularly acute when the child's death was sudden due to causes such as SIDS, suicide, murder, or accidents (Institute of Medicine, 2003).

Far less research is focused on older adults' adjustment to the death of an adult child, although the general patterns that emerge are similar to those found earlier in the life course (Moss et al., 1986). However, the specific symptoms evidenced among surviving parents differ based on the expectedness and cause of their child's death, with sudden deaths such as murders and suicide eliciting symptoms of anger and shock, similar to PSTD. By contrast, deaths that occur following long chronic illnesses such as cancer are more often accompanied by anticipatory grief symptoms prior to the death (e.g., Shanfield, Benjamin, & Swain, 1984; Van Humbeeck et al., 2013). One way for older parents to adapt to the untimely death of an adult child is to maintain strong ties with their grandchild(ren) who were offspring of their now-deceased son or daughter and in doing so maintain their identity as a parent (Blank, 1998).

Surviving Spousal Bereavement: Risk and Protective Factors

Widowhood, or the loss of a spouse/romantic partner, is the most well-researched area of late-life family bereavement, reflecting the primacy of marriage in the lives of most older adults (Carr & Moorman, 2011). Older bereaved spouses vary widely in their social, emotional, and behavioral adjustment to loss. Some may have minor symptoms of depression and anxiety during the first six months following loss (Bonanno et al., 2002), whereas others may experience severe, debilitating, and persistent symptoms, including complicated and prolonged grief (Prigerson, Vanderwerker, & Maciejewski, 2008). Although myriad influences, including biological, psychological, social, and economic factors affect one's adjustment, I focus here on five sets of influences that recent studies have identified as particularly important: sociodemographic factors (age, cohort, gender, sexual orientation, and race) and four potentially modifiable factors: the nature of the late marital relationship, conditions surrounding the death, social support and integration, and other co-occurring losses and stressors.

Sociodemographic Influences on Partner Bereavement

The meaning, context, and personal consequences of spouse and partner bereavement vary based on one's social location, including one's age, birth cohort, gender, sexual orientation, and race/ethnicity. Although researchers have investigated extensively the ways that age and gender shape spousal bereavement, comparisons across other subgroups of older adults are rare. One reason for the limited research on race and sexual orientation differences in bereavement experiences reflect data availability. Most research on adjustment to late-life spousal loss focuses on mental and physical health symptoms during the first 12 to 18 months postloss, as symptoms typically fade after that time (e.g., Bonanno et al., 2002). However, given the relatively small number of recently bereaved persons in any cross-sectional study of bereavement, and the relatively low proportion of older adults identified as a sexual or racial minority, most data sets used to study spousal bereavement would not have adequate sample sizes to explore these particular points of intersectionality. For example, in 2010, only 9 and 7 percent of persons aged 65 or older identified as black or Latino, respectively (Federal Interagency Forum on Aging-Related Statistics, 2012), while only 2 percent identified as gay, lesbian, or bisexual (Gates & Newport, 2012).

Studying cohort differences also is challenging, as such studies would require not only multiple interviews with bereaved persons to track their adjustment over time but comparable interviews would need to be done at different points in historical time to capture the distinctive experiences of different birth cohorts. Taken together, research on subgroup differences in bereavement and grief underscore that spousal loss is not a monolithic experience and sheds light on the ways that social factors shape the quality of one's marriages and one's access to psychosocial, economic, and instrumental resources that may ease adjustment to loss.

Age. Spouse or partner bereavement has profoundly different meanings and consequences for older versus younger persons. Older adults have risk factors that render them particularly vulnerable to the emotional and physical health consequences of spousal loss, yet they also possess skills, experiences, social resources, and even cognitive capacities that enable them to adapt to loss. Older adults are more likely than younger persons to have experienced the deaths of significant other prior to spousal loss, and they may be better equipped to make sense of and cope with their most recent loss (Thompson et al., 1991). With older age, spousal loss may be at least somewhat expected. More than half of all women over age 65 in the United States are widowed (Federal Interagency Forum on Aging-Related Statistics, 2012); thus, older women may anticipate and

prepare for the deaths of their husbands as they observe their peers experiencing spousal loss (Silverman, 2004). They also may turn to their widowed peers for emotional support and advice after their loss. By contrast, deaths to younger adults are more likely to occur suddenly and under very distressing circumstances, such as murders or accidents. Given that predictable, anticipated life transitions are less stressful than unexpected ones (George, 1993), older bereaved spouses may experience a less difficult readjustment than their younger counterparts.

Research also suggests developmental reasons why older adults tend to have less acute symptoms of depression in the face of loss, relative to their younger counterparts. Compared with younger adults, older adults have reduced emotional reactivity, or a greater capacity to manage or regulate their emotional states (Carstensen & Turk-Charles, 1994). As a result, their grief reactions also are shorter lived and less intense, compared with younger bereaved persons (Nolen-Hoeksema & Ahrens, 2002). Emotional reactivity declines in late life due to a variety of factors: biological decreases in autonomic arousal, the greater habituation of older adults to emotional life events, adherence to cultural expectations that the elderly should not be too emotional, and shifts in the relative salience of emotion versus cognition in late life (Carstensen & Turk-Charles, 1994). Older adults also are believed to possess wisdom, which may help minimize loss-related distress; they may respond to adverse life events with equanimity and acceptance (Baltes, Smith, & Staudinger, 1992).

In late life, bereaved heterosexual adults also may be better prepared to manage the practical tasks that were once managed by their late spouse. The boundaries demarcating traditional men's roles and women's roles in marriage become blurred as husbands and wives age. Although older married couples abide by a gender-typed division of household labor, just as younger couples do, this division may change as older adults face health declines and limitations to daily functioning (Szinovacz, 2000). The onset of physical health problems may render older adults less able to perform the specialized homemaking or home maintenance tasks they performed earlier in the life course. For instance, if a wife's physical limitations prevent her from preparing meals or cleaning, her husband may take over those duties. Likewise, cognitive decline in a husband may result in a wife's increased involvement in estate planning and other financial decisions that previously were managed by the husband. Older adults may gradually take on their spouses' tasks even prior to widowhood, and thus they may be better prepared on the death of a spouse (Carr, 2004).

Yet older adults also have important vulnerabilities. They are more likely than younger persons to experience co-occurring stressors that may overwhelm their ability to cope, including cognitive and physical declines;

financial strains; the deaths of friends and loved ones; and the loss of other important social roles, such as employment (Norris & Murrell, 1990). As noted earlier, because late-life deaths typically occur after a long illness, bereaved spouses often experienced a stressful period of caregiving and may see their loved one suffer for long periods prior to the death (Carr et al., 2001). As a result, older adults may be overwhelmed not only by their spouse's death but also by the acute and chronic stressors that accompany the death.

Cohort. Very little is known about generational or cohort differences in older widow(er)s' experiences. However, the nature of death and dying has changed dramatically over the past two centuries and these shifts, accompanied by other sweeping social changes in gender roles and family relations, have created a context in which loss is experienced very differently today than in the past.

No studies in the United States have directly compared cohorts of widow(er)s and their adjustment to loss. However, one recent study compared the psychological and social adjustment of two cohorts of widowed older women in Switzerland, one born in the early 1900s and widowed during the 1970s or earlier, the other born in the 1930s–1940s and widowed in the 2000s (Perrig-Chiello et al., 2015). These two cohorts of women faced very different opportunities for education and employment and also varied widely in the gender relations maintained in their households. The cohorts also differed with respect to the public benefits they received, reflecting the expansion of Switzerland's public pension system and expanded survivor and old-age benefits over the 20th century. The study showed that the two cohorts of women did not differ with respect to their emotional reactions to loss; the sadness and loneliness they experienced was comparable for the two cohorts. However, when other aspects of adaptation were considered including perceived financial strain and availability of social support, the more recent cohort fared considerably better, suggesting that while sadness may be a near universal consequence of spousal loss, other financial and social costs can be ameliorated through social programs or expansion in the social roles afforded to women.

Gender. The well-documented effects of spouse or partner loss on mental health (including depressive symptoms, loneliness, and anxiety) and on physical health outcomes (including mortality risk, disability, and functional limitations) are consistently larger for men than women (Lee & DeMaris, 2007), although one recent study suggests that with the passage of time, long-term widowed men and women do not differ significantly with respect to depressive symptoms (Sasson & Umberson, 2013). While romantic lore suggests that emotionally devastated widowers may die of a broken heart shortly after their wives die, research shows the loss of a

helpmate and caretaker is a more plausible explanation for men's health declines following spousal loss. Wives monitor their husbands' diets, remind them to take daily medications, and urge them to give up vices like smoking and drinking (August & Sorkin, 2010). Widowers are more likely than married men to die of accidents, alcohol-related deaths, lung cancer, and chronic ischemic heart disease during the first six months after their loss, but not from causes less closely linked to health behaviors (Moon et al., 2011; Shor et al., 2012).

Widows, by contrast, often experience declines in their economic well-being, which may trigger anxiety and distress (Stroebe et al., 2006). Widows experience substantial declines in income from all sources, ranging from earned income to pensions to Social Security (Gillen & Kim, 2009). Within three years of the death of her husband, a widow's income drops by 44 percent on average (Holden & Kuo, 1996). More than half of older widows in poverty were not poor prior to the death of their husbands. Costs associated with burial, funeral, long-term and medical care, or estate-related legal proceedings can devastate the fixed income of older adults. Because current cohorts of older women typically tended to child-rearing and family responsibilities during their younger years, they have had fewer years of paid work experience and lower earnings than their male peers, on average. Older widows who try to reenter the labor force also may face age discrimination (Holden & Kuo, 1996), which in turn may compromise their emotional and financial well-being.

Sexual orientation. Relatively little is known about whether older gay men and lesbians adjust differently than heterosexual men and women to the loss of their long-term partners. However, mounting research suggests that older gay men and lesbians may face both distinctive challenges and advantages as they cope with loss. The stressors associated with loss may be particularly acute for gays and lesbians, who may also experience institutional and interpersonal discrimination due to their sexual orientation (Meyer, 2003). They may encounter conflict with their deceased partner's family, particularly with respect to the dispersion of personal possessions following death. Legal rights extended to heterosexual married couples have not typically been available for same-sex couples, including the opportunity to make health care and end-of-life decisions for ill partners. Bereaved same-sex partners may not receive sufficient emotional support upon loss because the end of their relationship is not recognized or acknowledged in the wider community (Green & Grant, 2008). The increasing legalization of marriage for same-sex individuals may gradually alleviate some of these stresses.

However, gay men and lesbians also have resources that may enable successful adjustment to partner loss. They have often created their own

support networks of friends and selected family members. They also may be more likely than their heterosexual peers to enact flexible gender roles throughout the life course. Because they are not bound to traditional gender-typed family roles, they may be better prepared to manage the daily challenges and responsibilities faced by the newly bereaved (Almack, Seymour, & Bellamy, 2010).

Race. Research on racial differences in late-life spousal bereavement is sparse. This omission reflects the fact that few sample surveys include adequate numbers of older blacks, given their elevated risk of premature death (Federal Interagency Forum on Aging-Related Statistics, 2012). Studies of recently widowed older blacks are even more difficult, given that blacks are less likely than whites to marry, to remain married over the life course, or to remarry following an early-life marital dissolution (Federal Interagency Forum on Aging-Related Statistics, 2012). As such, we know very little about similarities and differences in how blacks and whites adjust to widow(er)hood. One prospective study of late-life spousal loss found that blacks and whites did not differ significantly with respect to depressive symptoms or yearning for their late spouse, although blacks had significantly fewer symptoms of anger and despair (Carr, 2004a). Blacks' lower levels of anger were largely explained by two important coping resources: their higher levels of religiosity and their greater reliance on their children for social and instrumental support relative to whites. By contrast, blacks' lower levels of despair were explained, in part, by the fact that they reported higher levels of preloss marital conflict than did whites. These findings are consistent with emerging evidence that bereavement experiences are most painful when the relationship lost was marked by closeness and warmth, rather than strain and conflict.

Nature of the Marriage or Romantic Relationship

Older adults' psychological adjustment to partner death varies based on the nature of the relationship lost. Early writings, based on the psychoanalytic tradition, proposed that bereaved persons with the most troubled marriages would suffer heightened and pathological grief (Parkes & Weiss, 1983). This perspective held that persons who had conflicted marriages would find it hard to let go of their spouses, yet also feel angry at the deceased for abandoning them. However, longitudinal studies that track married persons over time through the widowhood transition find that older persons whose marriages were marked by high levels of warmth and dependence and low levels of conflict experience elevated grief symptoms within the first six months postloss (Carr et al., 2000).

Although those with high-quality marriages may suffer a greater sense of sadness within the earlier months of loss, their strong emotional ties to

the late spouse may prove protective in the longer term. Recent research suggests that those in high-quality marriages may be able to draw strength from continuing bonds with the decedent. Early work on grief suggested that bereaved persons needed to dissolve or relinquish their emotional ties to the deceased and get on with their lives (e.g., Freud 1917/1957), yet current research suggests that maintaining a psychological tie to the deceased is an integral part of adaptation (Field, 2008). Although some aspects of continuing bonds may be problematic for adjustment, researchers point to particular scenarios for which maintaining emotional ties to one's late spouse may be helpful. For instance, Rando (1993) observed that bereaved persons may think about what their late spouse might do, when faced with a difficult decision. Others may keep alive their spouse's legacy by recognizing the continuing positive influence the deceased has on one's current life. In this way, the warmth and closeness of the relationship may continue to be protective and affirming to the bereaved spouse.

Nature of the Death

Researchers have documented that adjustment to spouse or partner loss is affected by the timing and nature of the late spouse's death. As noted earlier, anticipated deaths tend to be less distressing than unanticipated ones. The knowledge that one's partner is going to die in the imminent future provides the couple with the time to address unresolved emotional, financial, and practical issues before the actual death. This preparation for death is believed to enable a smoother transition to widowhood. However, for older persons, anticipated deaths often are accompanied by long-term illness, painful images of a loved one's suffering, intensive caregiving, and neglect of one's own health concerns, thus taking a toll on one's health and emotional well-being (Carr et al., 2001).

Contrary to popular lore, there is no clear-cut evidence that caregivers show greater symptoms of distress than those who did not provide direct care to their late spouse. Emerging research shows that caregivers may even experience improved psychological health following the loss of their spouse, either because they are relieved of their stressful caregiving duties, they are no longer witnessing their loved one suffer, or they experience a sense of satisfaction, meaning, and accomplishment from caring for their loved one in his or her final days (Schulz, Boerner, & Herbert, 2008). However, family caregivers—who currently number more than 50 million in the United States alone—may require assistance prior to the death of their spouse (Caregiver Alliance, 2010). The threat of impending death, strain of caregiving work, and the loss of personal time and activities may be distressing in the days and weeks leading up to the death.

The quality of end-of-life care received by the decedent and place of death also affect the bereavement experience. Older adults who believe that their loved one was in pain or received problematic medical care at the end of life report greater anxiety and anger postloss than persons whose loved one had a good death (Carr, 2003). Use of hospice or palliative care services at the end of life is associated with better spousal bereavement outcomes (Christakis & Iwashyna, 1993), including fewer symptoms of depression (Ornstein et al., 2015). Site of care also matters. Teno and colleagues (2004) found that family members of recent decedents who received at-home hospice services were more likely than those who died at hospitals or nursing homes to say that their loved one received high-quality care, that they were treated with respect and dignity at the end of life, and that they and the patient received adequate emotional support. Ironically, however, more than three-quarters of Americans currently die in institutions (Federal Interagency Forum on Aging-Related Statistics, 2012); this carries implications for survivors' well-being.

Social Support and Integration

Emotionally intimate social relationships over the life course are an important resource as older adults adjust to spousal loss. One widely cited explanation for women's lower levels of distress following spousal loss relative to men's is that women maintain closer relationships over the life course than their male counterparts (Carr & Moorman, 2011). Older widows typically receive more practical and emotional support from their children than do widowers, given mothers' closer relationships with their children throughout the life course. Women also are more likely to have larger and more varied friendship networks than men, and these friendships are an important source of support as women cope with their loss (Ha, 2008). Men, by contrast, often seek social support in new romantic relationships, whether dating or remarriage (Carr, 2004b). Many researchers concur that one reason why women typically adjust better psychologically to loss than men is because they have closer social ties with their children, friends, and siblings.

For both widows and widowers, however, social isolation and limited contact can impede adjustment to loss. Social isolation often is due to structural factors. Older adults living independently may lack transportation, they may have physical limitations that impair their mobility, and they may be cut off physically from loved ones following a relocation to a new home or an assisted living facility. Even those who live close to their family may feel lonely because of family conflict, or because their family does not offer support of the type or amount that the widow(er) would like (Cacioppo & Cacioppo, 2014). The deaths of siblings and friends also

may leave older bereaved spouses feeling isolated, as they have no one with whom to reminisce or share their private thoughts and feelings.

Other Stressors

Stress researchers agree that the psychological consequences of any one stressor may be amplified when experienced in conjunction with other losses or strains. For older bereaved persons, the death of a spouse is almost always accompanied by other strains and losses which may compromise their well-being, including financial strain, the loss of work and community roles including retirement and relocation, compromised mobility whether by walking or driving, health declines, decline or loss of sensory functions including vision and hearing, and even the loss of daily routines that gave one's life order and meaning. Widowhood often sets off a chain of secondary stressors, or stressors that result from the loss of a spouse; these secondary stressors in turn may compromise one's emotional and physical well-being. For widowers, the loss of a confidante, helpmate, and caregiver may be particularly harmful, whereas for widows, financial difficulties often are a source of distress (Stroebe et al., 2006).

Discussion and Future Research

This chapter has summarized the context of family bereavement in the contemporary United States, the general patterns of grief that emerge in the face of loss, and the distinctive challenges associated with spouse/partner, sibling, parent, and child loss in late life. However, our knowledge about family bereavement in late life is still in the nascent stages, especially with respect to sibling, parent, and child death, and with respect to race and sexual orientation differences in adjustment to spouse/partner loss. Moreover, much of what we know about bereaved spouses is based on current cohorts of older adults, who were born mainly in the early 20th century, married at midcentury, and experienced old age in the late 20th and early 21st centuries (e.g., Carr, Wortman, & Nesse, 2006). As such, extant research may not necessarily characterize the experiences of future cohorts of bereaved adults, especially the 75 million baby boomers born between 1946 and 1964 (Pruchno, 2012). The baby boomers are much more ethnically and racially diverse than prior cohorts, are more likely to have identified as gay or lesbian in early adulthood, and are more likely to have abided by egalitarian gender roles in the home than their predecessors. As such, in the future, researchers will be charged with exploring more fully the ways that race, ethnicity, and sexual orientation shape the experiences of older bereaved persons.

Demographic shifts over the past half-century have had profound effects on family structure, roles, and relationships, each of which may shape the experiences of spouse, child, sibling, or parent loss in late life (Manning & Brown, 2011). For example, declining fertility rates and increases in geographic mobility mean that future cohorts of older persons will have fewer children on whom they can rely for social support, and these children will be less likely than past generations to live close to their parents. For parents with only one child, the loss of that child may be particularly devastating emotionally, as it deprives one wholly of one's identity as parent (Klass, 1988) and may deprive parents of the one child who was a source of late-life emotional, instrumental, or financial support. Parental death may also be particularly difficult for adult children with no siblings, as they lack an important source of support and assistance.

Divorce and remarriage also may reshape the nature of family bereavement (Manning & Brown, 2011). Current and future cohorts of married couples are more likely than past generations to dissolve dissatisfying marriages through divorce; consequently, persons who remain married until late life may have higher levels of marital closeness and may suffer elevated grief following the loss of these close relationships (Carr et al., 2001). Likewise, older adults who have divorced and then remarry in late life may find spousal death to be particularly distressing, as they are being robbed of relatively new marriages and the promise of a future with their spouse. Emerging research shows, for example, that older women in second marriages report higher levels of marital happiness than their counterparts in long-term first marriages (Freedman, Cornman, & Carr, 2015). Remarriage also may be accompanied by the formation of reconfigured families which include step-children. Although stepchildren may be a source of support as older adults manage the loss of their spouses, emerging evidence suggests that stepchildren and parents often have conflicted interactions at the end of life, especially regarding caregiving responsibilities and the dispersion of the decedent's assets (Sherman, 2012; Sherman & Bauer, 2008).

Shifting gender roles also may reshape the bereavement experience of older heterosexual spouses. Current generations of young adult women have higher levels of education, more years of work experience, and more egalitarian divisions of labor in their families than do past cohorts. Thus, they may be less dependent on their husbands for income, home repair, and financial management tasks, whereas husbands may be less dependent on their wives for homemaking chores and emotional support (Spain & Bianchi, 1996). Under this scenario, future cohorts of widowed persons may experience much lower levels of anxiety than previous cohorts, as they have a greater comfort level in performing a range of household tasks.

Cultural contexts also may continue to powerfully shape experiences of loss and grief. The research described in this chapter has focused primarily on the United States or other Western, individualistic nations similar to the United States. Researchers should further explore how adjustment to familial loss may reflect a broader array of cultural contexts. Cultural factors, including patterns of household structure and filial piety, and attitudes toward life and death, may condition the experiences of older bereaved spouses, siblings, parents, and children. As practitioners develop policies and interventions for older bereaved persons, they must take into consideration the larger cultural, social, historical, and demographic backdrop against which family loss occurs.

Future research also should explore more fully the medical and technological contexts in which late-life death occurs. In particular, technological and medical advancements that extend the lifespan may create the need for more intensive family caregiving, a task that typically falls to wives, daughters, and mothers. Those who perform complex illness-related tasks at home in addition to personal care such as feeding, bathing, and toileting, may experience a crisis in caregiving that requires assistance or relocation of the patient outside the home (Waldrop & Meeker, 2011). Managing ventilators and feeding tubes, tending to pressure sores, and administrating medications are also linked to elevated symptoms of distress among family caregivers (Moorman & Macdonald, 2013). If women continue to bear the burden for personal care of ailing family members, then cohorts of women entering old age in the future may find their own emotional and physical well-being compromised. Further exploration of the way that social, cultural, and technological forces shape the bereavement experience will provide knowledge of theoretical and practical importance for future generations of bereaved older adults.

References

Almack, K., Seymour, J., & Bellamy, G. (2010). Exploring the impact of sexual orientation on experiences and concerns about end of life care and on bereavement for lesbian, gay, and bisexual older people. *Sociology, 44*(5), 908–924.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders, (DSM-IV)*. Washington, DC: American Psychiatric Association.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders, (DSM-5)*. Washington, DC: American Psychiatric Association.

Archer, J. (1999). *The nature of grief: The evolution and psychology of reactions to loss.* London: Routledge.

Arias E. (2014). *United States life tables, 2009. National vital statistics reports, 62*(7). Hyattsville, MD: National Center for Health Statistics.

August, K.J., & Sorkin, D.H. (2010). Marital status and gender differences in managing a chronic illness: The function of health-related social control. *Social Science and Medicine, 71*(10), 1831–1838.

Baltes, P., Smith, J., & Staudinger, U. (1992). Wisdom and successful aging. In T. Sonderegger (Ed.), *Nebraska Symposium on Motivation* (Vol. 39, Psychology and aging, pp. 103–121). Lincoln: University of Nebraska Press.

Bennett, K.M., Hughes, G.M., & Smith, P.T. (2003). "I think a woman can take it": Widowed men's views and experiences of gender differences in bereavement. *Ageing International, 28*(4), 408–424.

Blank, J.W. (1998). *The death of an adult child: A book for and about bereaved parents*. New York: Baywood Publishing.

Boelen, P.A., & Prigerson, H.G. (2013). Prolonged grief disorder as a new diagnostic category in DSM-5. In M. Stroebe, H. Schut, and J. van den Bout (Eds.), *Complicated grief: Scientific foundations for health care professionals.* New York: Routledge.

Bonanno, G.A., Wortman, C.B., Lehman, D.R., Tweed, R.G., Haring, M., Sonnega, J., Carr, D., & Nesse, R.M. (2002). Resilience to loss and chronic grief: A prospective study from preloss to 18-months postloss. *Journal of Personality and Social Psychology, 83*, 1150–1164.

Cacioppo, J.T., & Cacioppo, S. (2014). Social relationships and health: The toxic effects of perceived social isolation. *Social and personality psychology compass, 8*(2), 58–72.

Caregiver Alliance. (2010). *Fact Sheet on Statistics*. Retrieved May 26, 2015 from http://www.caregiver.org/caregiver/jsp/content.

Carr, D. (2003). A good death for whom? Quality of spouse's death and psychological distress among older widowed persons. *Journal of Health & Social Behavior, 44*, 215–232.

Carr, D. (2004a). Black/White differences in psychological adjustment to spousal loss among older adults. *Research on Aging, 26*(6), 591–622.

Carr, D. (2004b). The desire to date and remarry among older widows and widowers. *Journal of Marriage and Family, 66*(4), 1051–1068.

Carr, D. (2004c). Gender, pre-loss marital dependence and older adults' adjustment to widowhood. *Journal of Marriage and Family, 66*, 220–235.

Carr, D. (2012). Death and dying in the contemporary United States: What are the psychological implications of anticipated death? *Social and Personality Psychology Compass, 6*(2), 184–195.

Carr, D., House, J.S., Kessler, R.C., Nesse, R., Sonnega, J., & Wortman, C.B. (2000). Marital quality and psychological adjustment to widowhood among older adults: A longitudinal analysis. *The Journals of Gerontology, Series B: Social Sciences, 55*, S197–S207.

Carr, D., House, J.S., Wortman, C.B., Nesse, R., & Kessler, R.C. (2001). Psychological adjustment to sudden and anticipated spousal death among the older widowed. *The Journals of Gerontology, Series B: Social Sciences, 56B*, S237–S248.

Carr, D., & Khodyakov, D. (2007). Health care proxies in late life: Whom do we choose and why? *Journal of Health and Social Behavior, 48*, 180–194.

Carr, D., & Moorman, S. M. (2011). Social relations and aging. In R. A. Settersten Jr., & J. L. Angel (Eds.), *Handbook of sociology of aging* (pp. 145–160). New York: Springer.

Carr, D., Nesse, R. M., & Wortman, C. B. (Eds.). (2006). *Spousal bereavement in late life*. New York: Springer Publishing Company.

Carstensen, L., & Turk-Charles, S. (1994). The salience of emotion across the adult life span. *Psychology and Aging, 9*, 259–264.

Chan, D., Livingston, G., Jones, L., & Sampson, E. L. (2013). Grief reactions in dementia carers: A systematic review. *International Journal of Geriatric Psychiatry, 28*(1), 1–17.

Christakis, N. A., & Iwashyna, T. J. (2003). The health impact on families of health care: A matched cohort study of hospice use by decedents and mortality outcomes in surviving, widowed spouses. *Social Science and Medicine, 57*, 465–475.

Cicirelli, V. G. (2009). Sibling death and death fear in relation to depressive symptomatology in older adults. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 64*(1), 24–32.

DeVita-Raeburn, E. (2004). *The empty room: Surviving the loss of a brother or sister at any age*. New York: Simon and Schuster.

Federal Interagency Forum on Aging-Related Statistics. (2013). *Older Americans 2012: Key indicators of well-being*. Washington, DC: Department of Health and Human Services.

Field, N. P. (2008). Whether to relinquish or maintain a bond with the deceased. In M. Stroebe, R. O. Hansson, H. Schut, & W. Stroebe (Eds.), *Handbook of bereavement research and practice: 21st century perspectives* (pp. 133–162). Washington, DC: American Psychological Association (APA) Press.

Fontana, A., & Keene, J. R. (2009). *Death and dying in America*. Malden, MA: Polity.

Freedman, V., Cornman, J. C., & Carr, D. (2015). *Second time around: Second marriages, wellbeing and time use in late life*. Unpublished manuscript.

Freud, S. (1917/1957). Mourning and melancholia. In J. Strachey (Ed. and Trans.), *The standardized edition of the complete psychological works of Sigmund Freud* (pp. 152–170). London: Hogarth Press (Original work published 1917).

Gates, G. J., & Newport, F. (2012). *Special report: 3.4% of U.S. adults identify as LGBT*. Princeton, NJ: Gallup Poll. Retrieved May 30, 2015 from http://www.gallup.com/poll/158066/special-report-adults-identify-lgbt.aspx.

George, L. K. (1993). Sociological perspectives on life transitions. *Annual Review of Sociology, 19*, 353–373.

Gillen, M., & Kim, H. (2009). Older women and poverty transition: Consequences of income source changes from widowhood. *Journal of Applied Gerontology*, *28*(3), 320–341.

Green, L., & Grant, V. (2008). "Gagged grief and beleaguered bereavements?" An analysis of multidisciplinary theory and research relating to same sex partnership bereavement. *Sexualities, 11*(3), 275–300.

Ha, J. (2008). Changes in support from confidantes, children, and friends following widowhood. *Journal of Marriage and Family, 70*, 306–318.

Hays, J. C., Gold, D. T., & Pieper, C. F. (1997). Sibling bereavement in late life. *OMEGA: Journal of Death and Dying, 35*(1), 25–42.

Hazzard, A., Weston, J., & Gutterres, C. (1992). After a child's death: Factors related to parental bereavement. *Journal of Developmental & Behavioral Pediatrics, 13*(1), 24–30.

HHS/ASPE (Department of Health and Human Services, Assistant Secretary for Planning and Evaluation). (2013). *National plan to address Alzheimer's disease—2013 update*. Retrieved May 30, 2015 from http://aspe.hhs.gov/daltcp/napa/NatlPlan2013.shtml#intro.

Holden, K. C., & Kuo, H. H. D. (1996). Complex marital histories and economic well-being: The continuing legacy of divorce and widowhood as the HRS cohort approaches retirement. *Gerontologist, 36*(3), 383–390.

Horowitz, M. J., Weiss, D. S., Kaltreider, N., Krupnick, J., Marmar, C., Wilner, N., & DeWitt, K. (1984). Reactions to the death of a parent: Results from patients and field subjects. *Journal of Nervous and Mental Disease, 172*, 383–392.

Institute of Medicine (IOM). (2003). *When children die: Improving palliative and end-of-life care for children and their families.* Washington, DC: National Academies Press.

Institute of Medicine (IOM). (2014). *Dying in America: Improving quality and honoring individual preferences near the end of life.* Washington, DC: The National Academies.

Johansson, Å. K., & Grimby, A. (2012). Anticipatory grief among close relatives of patients at hospice and palliative wards. *American Journal of Hospice and Palliative Medicine*, *29,* 134–138.

Klass, D. (1988). *Parental grief: Solace and resolution*. New York: Springer.

Lee, G. R., & DeMaris, A. (2007). Widowhood, gender, and depression: A longitudinal analysis. *Research on Aging, 29*, 56–72.

Lofquist, D. (2011). *Same sex couple households: American Community Survey briefs.* Washington, DC: U.S. Census Bureau. Retrieved June 10, 2013, from http://www.census.gov/prod/2011pubs/acsbr10–03.pdf

Mahon, M. M. (1997). Sibling bereavement: A concept analysis. *Death Studies, 21*(5), 477–499.

Manning, W. D., & Brown, S. L. (2011). The demography of unions among older Americans, 1980–present: A family change approach. In R. A. Settersten Jr. & J. L. Angel (Eds.), *Handbook of sociology of aging* (pp. 193–210). New York: Springer.

Marshall, H. (2004). Midlife loss of parents: The transition from adult child to orphan. *Ageing International, 29*(4), 351–367.

Meuser, T. M., & Marwit, S. J. (2001). A comprehensive, stage-sensitive model of grief in dementia caregiving. *The Gerontologist, 41*(5), 658–670.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674–697.

Miniño, A. M., & Murphy, S. L. *Death in the United States, 2010*. NCHS data brief, no. 99. Hyattsville, MD: National Center for Health Statistics. 2012.

Moon, J. R., Kondo, N., Glymour, M. M., & Subramanian, S. V. (2011) Widowhood and mortality: A meta-analysis. *PLoS ONE* 6(8), e23465. doi:10.1371/journal.pone.0023465

Moorman, S. M., & Macdonald, C. (2013). Medically complex home care and caregiver strain. *The Gerontologist, 53*(3), 407–417.

Moss, M. S., Lesher, E. L., & Moss, S. Z. (1986). Impact of the death of an adult child on elderly parents: Some observations. *OMEGA: Journal of Death and Dying, 17*(3), 209–218.

Moss, M. S., & Moss, S. Z. (1983–1984). The impact of parental death on middle aged children. *OMEGA: Journal of Death and Dying, 14*(1), 65–75.

Moss, S. Z., & Moss, M. S. (1989). The impact of the death of an elderly sibling: Some considerations of a normative loss. *American Behavioral Scientist,* 33(1), 94–106.

Nolen-Hoeksema, S., & Ahrens, C. (2002). Age differences and similarities in the correlates of depressive symptoms. *Psychology and Aging, 17,* 116–124.

Norris, F. H., & Murrell, S. A. (1990). Social support, life events, and stress as modifiers to bereavement by older adults. *Psychology of Aging, 5*, 429–436.

Olshansky, S. J., & Ault, A. B. (1986). The fourth stage of the epidemiologic transition: The age of delayed degenerative diseases. *Milbank Quarterly, 64*, 355–391.

Omran, A. (1971). The epidemiologic transition: A theory of the epidemiology of population change. *Milbank Quarterly, 29*, 509–538.

Ornstein, K. A., Aldridge, M. D., Garrido, M. M., Gorges, R., Meier, D. E., & Kelley, A. S. (2015). Association between hospice use and depressive symptoms in surviving spouses. *JAMA Internal Medicine*. Online First.

Parkes, C. M., & Weiss, R. S. (1983). *Recovery from bereavement.* New York, NY: Basic.

Pattison, E. M. (1977). The living–dying process. In C. A. Garfield (Ed.), *Psychosocial care of the dying patient* (pp. 133–168). New York, NY: McGraw-Hill.

Perrig-Chiello, P., Spahni, S., Höpflinger, F., & Carr, D. (2015). Cohort and gender differences in psychosocial adjustment to late-life widowhood. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, gbv004. Online First.

Pratt, C. C., Walker, A. J., & Wood, B. L. (1992). Bereavement among former caregivers to elderly mothers. *Family Relations, 41*, 278–283.

Prigerson, H. G., Vanderwerker, L. C., & Maciejewski, P. K. (2008). A case for inclusion of prolonged grief disorder in DSM-V. In M. Stroebe, R. O. Hansson, H. Schut, & W. Stroebe (Eds.), *Handbook of bereavement research and practice: 21st century perspectives* (pp. 165–186). Washington, DC: American Psychological Association (APA) Press.

Pruchno, R. (2012). Not your mother's old age: Baby Boomers at age 65. *The Gerontologist, 52*(2), 149–152.

Rando, T. A. (1986). *Loss and anticipatory grief*. New York: Lexington Books.

Rando, T. A. (1993). *Treatment of complicated mourning.* Champaign, IL: Research Press.

Robben, A. C. (Ed.). (2009). *Death, mourning, and burial: A cross-cultural reader*. New York: John Wiley & Sons.

Rosenblatt, P. C. (2000). *Parent grief: Narratives of loss and relationship*. Philadelphia, PA: Taylor & Francis.

Russo, F. (2010). *They're your parents, too!: How siblings can survive their parents' aging without driving each other crazy*. New York: Bantam.

Sasson, I., & Umberson, D. J. (2014). Widowhood and depression: New light on gender differences, selection, and psychological adjustment. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 69*(1), 135–145.

Scharlach, A. E., & Fredriksen, K. I. (1993). Reactions to the death of a parent during midlife. *OMEGA, 27*, 307–319.

Schulz, R., Boerner, K., & Hebert, R. S. (2008). Caregiving and bereavement. In M. Stroebe, R. O. Hansson, H. Schut, & W. Stroebe (Eds.), *Handbook of bereavement research and practice: 21st century perspectives* (pp. 265–286). Washington, DC: American Psychological Association (APA) Press.

Shanfield, S. B., Benjamin, A. H., & Swain, B. J. (1984). Parents' reactions to the death of an adult child from cancer. *The American Journal of Psychiatry, 141*(9), 1092–1094.

Shear, M. K., Simon, N., Wall, M., Zisook, S., Neimeyer, R., Duan, N., . . . & Keshaviah, A. (2011). Complicated grief and related bereavement issues for DSM-5. *Depression and Anxiety, 28*(2), 103–117.

Sherman, C. W. (2012). Remarriage as context for dementia caregiving: Implications of positive support and negative interactions for caregiver well-being. *Research in Human Development, 9*(2), 165–182.

Sherman, C. W., & Bauer, J. W. (2008). Financial conflicts facing late-life remarried Alzheimer's disease caregivers. *Family Relations, 57*(4), 492–503.

Shor, E., Roelfs, D. J., Curreli, M., Clemow, L., Burg, M. M., & Schwartz, J. (2012). Widowhood and mortality: A meta-analysis and meta-regression. *Demography, 49*, 575–606.

Silverman, P. R. (2004). *Widow to widow: How the bereaved help one another*. New York: Routledge.

Spain, D., & Bianchi, S. M. (1996). *Balancing act: Motherhood, marriage and employment among American women*. New York: Russell Sage Foundation.

Stroebe, M. S., Folkman, S., Hansson, R. O., & Schut, H. (2006). The prediction of bereavement outcome: Development of an integrative risk factor framework. *Social Science and Medicine, 63*(9), 2440–2451.

Szinovacz, M. E. (2000). Changes in housework after retirement: A panel study. *Journal of Marriage and Family, 62*, 78–92.

Teno, J. M., Clarridge, B. R., Casey, V., Welch, L. C., Wetle, T., Shield, R., & Mor, V. (2004). Family perspectives on end-of-life care at the last place of care. *Journal of the American Medical Association, 291*, 88–93.

Thompson, L. W., Gallagher-Thompson, D., Futterman, A., Gilewski, M. J., & Peterson, J. (1991). The effects of late life spousal bereavement over a 30-month interval. *Psychology and Aging, 3*, 434–441.

Umberson, D. (2003). *Death of a parent: Transition to a new adult identity*. New York: Cambridge University Press.

Umberson, D., & Chen, M. D. (1994). Effects of a parent's death on adult children: Relationship salience and reaction to loss. *American Sociological Review, 59*, 152–168.

Van Humbeeck, L., Piers, R. D., Van Camp, S., Dillen, L., Verhaeghe, S. T., & Van Den Noortgate, N. J. (2013). Aged parents' experiences during a critical illness trajectory and after the death of an adult child: A review of the literature. *Palliative Medicine, 26*, 583–595.

Wakefield, J. C., & First, M. B. (2012). Validity of the bereavement exclusion to major depression: Does the empirical evidence support the proposal to eliminate the exclusion in DSM-5? *World Psychiatry, 11*(1), 3–10.

Waldrop, D., & Meeker, M. (2011). Crisis in caregiving: When home-based end-of-life care is no longer possible. *Journal of Palliative Care, 27*(2), 117–125.

Weiss, R. S. (2008). The nature and causes of grief. In M. S., Stroebe, R. O. Hansson, H. E. Schut, W. E. Stroebe, & E. I. Van den Blin (Eds.), *Handbook of bereavement research and practice: Advances in theory and intervention* (pp. 29–44). Washington, DC: American Psychological Association.

White, L. (2001). Sibling relationships over the life course: A panel analysis. *Journal of Marriage and Family, 63*(2), 555–568.

Wolff, J. L., & Kasper, J. D. (2006). Caregivers of frail elders: Updating a national profile. *The Gerontologist, 46*(3), 344–356.

APPENDIX A

Organizations for Older Persons

Elizabeth A. Daniele

Hundreds of organizations represent the rights, interests, and concerns of older Americans. They operate at the federal, state, and local levels. They are publically, privately, and user funded. This is a compilation of some of the organizations that address various aspects of aging. For every organization I included there are a dozen more I could have included. In selecting organizations to feature here, I highlight some with resources that are of particular note due to their relative rarity, such as Spanish language resources, visual aids, particularly accessible formats, toolkits, and data-rich sites. These descriptions are paraphrased from the organizations' own web pages. Each group is unique in terms of organizational history, trajectory, and online offerings.

AARP
http://www.aarp.org
With 37 million members, AARP works to improve the lives of individuals aged 50 and older. AARP is a nonpartisan organization with widely distributed publications and broadcasts; the website offers articles on a variety of topics. The associated AARP Foundation is a charitable organization dedicated to aiding older Americans in need.

Administration on Aging (AoA)
http://www.aoa.gov
Part of the U.S. Department of Health and Human Services, AoA publishes an annual *Profile of Older Americans*; keeps statistics in a database called AGing Integrated Database (AGID) that offers state profiles and data in accessible formats; compiles information on older minorities; and publishes aging-related census data. The AoA supports Eldercare Locator (www.eldercare.gov or +1-800-677-1116), a tool that enables individuals to search for services by geographic location or type of service sought.

Advancing Excellence in America's Nursing Homes
https://www.nhqualitycampaign.org/
In 2006, this campaign was founded by a coalition of 28 organizations interested in "making nursing homes better places to live, work, and visit." Their website provides resources on organizational and clinical aspects of nursing home services featuring steps to meet goals around staffing, person-centered care, pain management, and mobility in facilities.

Aging with Dignity
https://www.agingwithdignity.org
Inspired by Mother Teresa of Calcutta and her proclamation on the value of human interaction, this national nonprofit organization aims to protect the self-worth of aging adults especially toward the end of life. *Five Wishes* is a template for an advance directive living will available on their website in many languages.

AgingStats.gov: Federal Interagency Forum on Aging-Related Statistics
http://www.agingstats.gov/
This forum was begun in 1986 by federal agencies interested in sharing and refining data related to aging. Their website features reports on older Americans, brief descriptions of surveys relevant to gerontology, and links to additional statistical information.

Alliance for Aging Research
http://www.agingresearch.org
A nonprofit advocacy organization, the Alliance for Aging Research works to improve the lives of older adults through scientific advancement. Their website provides articles, publications, and blogs about topics such as caregiving, drug safety, various health conditions, and aging healthfully.

Alliance for Retired Americans
http://retiredamericans.org
Advocates for economic justice and civil rights for Americans since 2001, the Alliance for Retired Americans member population of 4.3 million includes many retired union members. Contact information for state chapters and selected weekly news and media clips are available on the website.

Alzheimer's Association
http://www.alz.org
With the aims of enhancing care, advancing research, and advocating, the Alzheimer's Association is a national organization with many local chapters, a helpline (+1-800-272-3900), support groups and message boards, and online resources for families and caregivers. Their website features tools that help individuals and their families make appropriate action plans

and find community resources. The Alzheimer's Association offers research grants, hosts an annual international conference to bring researchers of Alzheimer's together, and publishes the journal *Alzheimer's & Dementia*.

American Bar Association Commission on Law and Aging
http://www.americanbar.org/groups/law_aging.html
A small group of experts on aging and law nested within the national professional association for attorneys, this commission exists to support and obtain legal rights, human dignity, independence, and quality of life for older adults. They study legal issues related to housing, elder abuse, planning for incapacity, decisions around health care, dispute resolution, guardianship, and public benefit programs like Social Security.

American Federation for Aging Research (AFAR)
http://www.afar.org
This grant-giving organization supports healthful aging by funding biomedical research. The primary initiatives of AFAR include funding research related to healthy aging, drawing more primary care physicians toward working with older adults, increasing communication between scientific and clinical communities, and educating the public regarding medical findings.

American Geriatrics Society (AGS)
http://www.americangeriatrics.org
This nonprofit is comprised of professionals interested in improving "health, independence, and quality of life" for elders. AGS aims to provide excellent patient-centered care by expanding awareness of research about treatment for older adults, and increasing the populations of health-care professionals doing geriatric care, and using principles of geriatric medicine. They offer policy suggestions and founded the Health in Aging Foundation to increase public awareness about older adult health and care.

American Society on Aging (ASA)
http://www.asaging.org
This multidisciplinary organization exists to continually educate and disseminate information to professionals working with elders or those in aging-related fields. ASA publishes a scholarly journal entitled *Generations*, as well as a bimonthly newspaper, and a complementary online blog in addition to offering periodic webinars, continuing education trainings for those who work with older adults, and an annual conference.

ARCH National Respite Network and Resource Center
http://archrespite.org
This organization offers a tool for finding local respite services, a coalition that promotes maintaining these services in legislation and policy

initiatives, and a resource center replete with toolkit, webinars, and funding information related to respite over the lifespan.

Argentum (formerly Assisted Living Federation of America)
http://alfa.org
An association representing senior living communities, this organization advocates for excellence in senior care, choice, and independence. Argentum supports an online action center that enables individuals to contact their federal representatives and offers webinars and toolkits for those managing senior living communities.

Association for Gerontology in Higher Education (AGHE)
http://www.aghe.org
The dual missions of AGHE are to advance the study of gerontology and geriatrics education at institutions of higher education and to support faculty and students who study these topics. In existence since 1974, today the association publishes the journal *Gerontology & Geriatrics Education*. Their website also features suggestions of books that are appropriate for K–12 students.

The Bernard Osher Foundation
http://www.osherfoundation.org
Founded in 1977, today the Osher Foundation provides support for students returning to school and offers lifelong learning for older adults. Osher Lifelong Learning Institutes (OLLI) programs offer noncredit classes for adults aged 50 or older at 119 college and universities across the United States. The National Resource Center for Osher Lifelong Learning Institutes (http://nrc.northwestern.edu) offers a newsletter, a live feed of tweets, news stories, and an interactive map to find OLLI programs.

Brookdale Center for Healthy Aging
http://brookdale.org
An academic gerontology center since 1974 and affiliated with Hunter College, the Brookdale Center endeavors to better the lives of older adults through research on health problems common for older adults and professional development of individuals who work in human services, law, and other areas impacting elders. The Brookdale website offers toolkits dealing with fiscal issues at care facilities, emergency preparation, and how to address chronic disease.

Caregiver Action Network (CAN)
http://www.caregiveraction.org
Focusing on the more than 65 million persons who provide care to loved ones encumbered by disability, disease, chronic ailment, or old age, this

nonprofit organization prioritizes bettering the quality of life for the caregivers. Formerly known as the National Family Caregivers Association, goals of CAN include supporting resourcefulness of caregivers, reducing their stress and financial strains, and increasing respect for caregivers, as well as enhancing their senses of competence and confidence. The CAN website offers an online discussion forum, family caregiver toolbox, a list of other groups caregivers can use as resources, and volunteers who are trained to support and teach advocacy to caregivers.

The Center for Social Gerontology (TCSG)
http://www.tcsg.org
Founded in 1972 with a commitment to advancing individual autonomy of older adults and promoting incorporation of an increasingly larger population of older and very old Americans, TCSG continues as a nonprofit organization. TCSG aims to make changes through research, sharing information with policy makers and the public, and training future care providers.

Centers for Medicare & Medicaid Services (CMS)
http://www.cms.gov
Covering 100 million people with different types of insurance programs, CMS is an organization within the U.S. Department of Health and Human Services. Their website features sections on key regulations, news and publications, research reports and data, trainings, and creative solutions for health-care dilemmas. Additionally, the CMS website offers information about Medicare and Medicaid, how to coordinate these two services, and links to the Health Insurance Marketplace site which is replete with information about programs, forms, and application materials.

Death Cafés
http://deathcafe.com
Death Café is a social franchise with a website that guides individuals on how to use the name, join the online community, and represent the organization. Death Cafés are gatherings where individuals discuss death in group-directed fashion without an agenda or theme. These have been hosted in Europe, North America, and Australasia since 2011.

Eldercare Workforce Alliance
http://www.eldercareworkforce.org
Created to tackle the crisis of having a capable workforce to care for an aging U.S. population, this alliance of 31 organizations aims to improve quality of care to older Americans. They represent health-care providers, consumers, and family members who provide care.

Elderhostel Road Scholar Programs
http://www.roadscholar.org
Elderhostel is a nonprofit organization that started offering noncredit classes and overnight accommodations for adults in 1975. In 2009, they renamed their travel-based learning programs Road Scholar. Today these programs operate around the world and include a range of options such as outdoor excursions, traveling with a grandchild, exploring cities, and educational cruises.

Ethnic Elders Care Network
http://ethnicelderscare.net
Designed as a resource for those who provide care to ethnic elders with Alzheimer's disease, this site promotes cultural competence in care provision by increasing education for those who provide care and the wider population. The Ethnic Elders Care Network also promotes research, prevention, and treatment of Alzheimer's disease.

Family Caregiver Alliance (FCA)
https://caregiver.org
Representing those who provide long-term care for loved ones, FCA aims to support those individuals by providing education and support as well as advocating and producing research through their National Center on Caregiving. The FCA website features services listed by state, online discussion and support groups, and a number of research reports. They offer an informative training known as *Caregiving 101: Exploring the Complexities of Family Caregiving*.

Generations United
http://www.gu.org
With the goal of improving the lives of younger and older adults, Generations United advocates for intergenerational collaboration. Their website features information about relevant public policies, intergenerational issues, families that are headed by grandparents, a blog about successful intergenerational undertakings, and the Seniors4kids program that works to mobilize adults over 50 on behalf of children.

Gerontological Society of America (GSA)
https://www.geron.org
This organization exists to advance aging studies and share information between scientific and policy-making communities as well as educate the population at large. As the oldest and largest organization with an agenda

of research, practice, and education, they publish the top scholarly journals and have a large meeting of professionals each year.

Gray Panthers
(Chapters in various cities maintain their own websites.)
Founded by Maggie Kuhn in 1970, today this intergenerational organization has a presence in various locations around the United States. The key values of this justice-oriented group, according to their Facebook page, are "honoring maturity, unifying the generations, active engagement, [and] participatory democracy" (https://www.facebook.com/GrayPanthers/info?tab=page_info).

Health Finder en español
http://www.healthfinder.gov/espanol/
A Spanish language resource for living well, this site offers a guide with advice on healthy living for different age groups, resources on a variety of health concerns or problems, and news about health. The Office of Disease Prevention and Health Promotion sponsor the site.

Healthy Aging
http://www.cdc.gov/aging/index.html
The target audience of this site is health professionals who want to learn more about the Healthy Aging program from the Centers for Disease Control and Prevention. The public health program is committed to finding ways to advance and safeguard the health of older adults as well preserve quality of life for the older adult population.

International Association of Homes and Services for the Ageing (IAHSA)
http://www.iahsa.net
Founded in 1994 as a means of facilitating communication between individuals with different professional expertise about aging, according to their website, the membership of IAHSA today includes specialists on housing, research, technology, and design. As an international network, their website features news headlines related to aging in many national contexts, designs from their biennial conference, and reports on topics such as technology and innovation.

Latino Center on Aging (LCA)
http://www.gerolatino.org
An advocacy organization in New York City since 1991, LCA recognizes linguistic, cultural, and fiscal barriers as restricting the health of Latino

elders. LCA works to educate, advocate, and close gaps between service providers and older adult Latinos.

Leadership Council of Aging Organizations (LCAO)
http://www.lcao.org
Comprised of 72 national nonprofit organizations that provide services to elders, this coalition advocates for older Americans in policy arenas. Their website features items such as issues briefs and open letters to policy makers as well as news updates on relevant topics.

LeadingAge
http://www.leadingage.org
This large organization addresses a broad range of topics, and is comprised of 6,000 nonprofit member groups incorporating partners such as states, businesses, foundations, and researchers. LeadingAge is home to three centers, which focus on applied research, aging-related technology, and housing. The LeadingAge website provides a search engine to find services by geography and topic, learning and education materials, and information about their advocacy work and annual conferences.

Meals on Wheels America
http://www.mealsonwheels.org
Started in Philadelphia in 1954, today this organization helps 2.5 million seniors through over 5,000 independently operated programs across the country. More than 2 million Meals on Wheels volunteers facilitate the provision of services in efforts to ease isolation and hunger among older adults with reduced mobility. This program is supported in part by funding from the Older Americans Act.

Medicare Rights Center
http://www.medicarerights.org
Medicare Rights Center is a nonprofit dedicated to helping consumers obtain high-quality medical care, primarily through facilitating understanding of benefits provided by the Medicare system. They provide a telephone helpline (800–333–4114); an interactive online tool that answers questions about Medicare; fact sheets about enrollment, medication costs, dual enrollment, and cases of denial of services; and release audiovisual recordings on relevant topics presented by older adults.

National Adult Day Services Association (NADSA)
http://nadsa.org
In 1995, the National Institute on Adult Daycare was renamed National Adult Day Services Association to better include respite, day care centers,

and day health-care providers. Adult day centers provide social and/or health services for adults who need to be monitored outside the home. Such sites may provide social interactions, transportation, nutrition, personal care for daily living, and physical or mental stimulation. As a representative organization for these centers, NADSA offers advice on selecting a site and opening centers and also promotes an agenda encouraging increased access to this type of service.

National Alliance for Caregiving (NAC)
http://www.caregiving.org
A nonprofit coalition of national organizations dedicated to easing the strains on family members who are caregivers, this organization was founded in 1996. The aim of NAC is to advocate for policies to improve situations for caregivers, educate about caregivers' conditions, and promote research related to caregiving.

National Asian Pacific Center on Aging (NAPCA)
http://napca.org
With the aim of supporting Asian Americans and Pacific Islanders (AAPI) so they receive the same rights and benefits as other American seniors, this organization advocates at multiple levels, educates both their constituents and the broader population, and works to empower AAPI older adults. Their website features portals tailored for members of the community of AAPI older adults, their family members, service providers, and advocates or policy makers; offers relevant census data and research reports; and provides information on work and training opportunities as well as healthful aging. NAPCA has helplines in Chinese, Korean, Vietnamese, and English (http://napca.org/helpline/).

National Association for Hispanic Elderly (Asociación Nacional Pro Personas Mayores)
http://www.anppm.org
Established in 1975 to serve Hispanic and other low-income elders, this private nonprofit addresses services for older adults, employment and training programs, housing and neighborhood plans, and produces culturally relevant educational and outreach materials through its media center.

National Association of Area Agencies on Aging (n4a)
http://www.n4a.org
This umbrella organization of Area Agencies on Aging (AAAs) and Title VI Native American aging programs aims to enable older adults and individuals with disabilities stay in their homes and local communities. AAAs were

established under the Older Americans Act of 1973 to help elders live dignified, independent lives; today these variously named organizations facilitate planning, development, coordination, and provision of services across the nation. Serving eight million people nationwide, most AAAs support health of older adults through evidence-based programming, home and community-based services, insurance counseling, case management, and the five key areas required by the Older Americans Act: caregiving, elder rights, health and wellness, nutrition, and supportive services.

National Association of Nutrition and Aging Services Programs (NANASP)
http://www.nanasp.org
Since 1977, this membership organization has been advocating health and wellness among older Americans through support and promotion of nutrition programs funded by the Older Americans Act. The NANASP motto stresses local enactment of ideals that are national in scope. Their website contains links to advocacy letters, relevant news stories and government testimonies, conferences, the *NANASP Washington Bulletin*, and other publications.

National Academy of Social Insurance (NASI)
https://www.nasi.org
This nonprofit organization specializes in understanding and communicating the values of social insurance. The NASI website features information about Social Security, Medicare, Workers' Compensation, disability, Unemployment Insurance, long-term care, workforce issues and employee benefits, and income assistance.

National Association of States United for Aging and Disabilities (NASUAD)
http://www.nasuad.org
Founded in 1964 as the National Association of State Units on Aging, today this organization represents aging and disabilities services agencies from 56 state and territorial areas of the United States. The aim of the organization is to create, support, and advance state systems for delivery of services to homes and communities of individuals who are disabled or aged and their caregivers.

National Caregivers Library
http://www.caregiverslibrary.org/
Affiliated with Caregiving Ministries, which seeks to support the growing population of people who care for their loved ones, this library website is designed for caregivers. It offers resources such as checklists and articles on myriad topics from basics of caregiving and caring for oneself, to long distance care,

end-of-life, legal issues, transportation, and care facilities. The website features a section for employers that overviews the impact of caregiving on businesses.

National Caucus and Center on Black Aging (NCBA)
http://www.ncba-aged.org
Since 1970, this organization represents the concerns of minority and low-income seniors with aims of improving quality of life and drawing older minorities to the attention of other organizations that serve the public, such as legislators and policy makers.

National Center on Elder Abuse (NCEA)
http://www.ncea.aoa.gov
Funded by the U.S. government through the Administration on Aging, this center is designed to provide information related to elder mistreatment. Their website offers a listserv, and resources on best practices, news, research, and training for a target audience that includes advocates, health-care professionals, the general public, and those working in justice system and policy-making arenas.

National Consumer Voice for Quality Long-Term Care
http://theconsumervoice.org
Founded in 1975 as the National Citizens' Coalition for Nursing Home Reform and changing to the current name in 2010, today Consumer Voice represents seniors who use long-term care facilities. With information tailored for consumers, family members, and advocates, the Consumer Voice website provides an ombudsman location tool, resources about long-term care in an online clearinghouse, links to relevant news stories and current policy-related topics, a newsletter, and events like webinars and the annual conference.

National Clearinghouse on Abuse in Later Life (NCALL)
http://www.ncall.us
By educating and advocating, NCALL works to eradicate abuse of older adults. The mission statement of this organization reflects that elder abuse is a result of systemic conditions as well as philosophies, behaviors, and extant regulations. NCALL offers resources on the justice system and technology in formats such as webinars and information sheets.

National Committee to Preserve Social Security and Medicare Foundation (NCPSSM Foundation)
http://www.ncpssmfoundation.org
A nonprofit working to assure well-being and financial stability of older adults in the United States, NCPSSM advocates for broad support of

public welfare services for populations covered by Social Security and Medicare. The NCPSSM website notes that those with disabilities, the oldest-old, ethnic minorities, women, rural residents, and children are among the most vulnerable. This organization works to promote greater public understanding of both challenges to and benefits of Social Security and Medicare as well as increase awareness on these topics. The NCPSSM agenda to educate Americans includes an aim addressing media coverage of these public programs for older Americans.

National Council on Aging (NCOA)
https://www.ncoa.org
A nonprofit advocacy organization for adults over age 60, the National Council on Aging aims to improve the economic security of older adults that they may have secure and dignified later lives. This organization offers tools to learn about basic needs, economic security, and health benefits by sponsoring BenefitsCheckUp (https://www.benefitscheckup.org), EconomicCheckUp (https://www.benefitscheckup.org/esi-home/) and My Medicare Matters (https://www.mymedicarematters.org).

National Hispanic Council on Aging (NHCOA)
http://www.nhcoa.org
Founded in the late 1970s to improve quality of life among Latino elders, today NHCOA links affiliated community organizations across the continental United States and Puerto Rico through the Hispanic Aging Network, which enables dissemination of culturally appropriate programming. These organizations address issues of wellness, financial stability, and housing while emphasizing relevance of these topics for aging Latinos, for example, by focusing on diabetes prevention, promoting food security, advocating for paid family leave, and developing affordable housing options for low-income seniors.

National Indian Council on Aging (NICOA)
http://nicoa.org
This nonprofit organization was established in 1976 at the urging of members of the National Tribal Chairmen's Association to represent aging and elder American Indian and Alaska Natives at the national level. The aims of NICOA are to communicate and cooperate with community-based providers who serve and represent American Indian and Alaska Native elders; promote health and maximize effective health care by sharing information and offering technical assistance; and offer education resources salient for American Indian and Alaska Native elders, their caregivers, and advocates.

This organization also participates in the Senior Community Service Employment Program (SCSEP).

National Institute on Aging (NIA)
https://www.nia.nih.gov
This organization is under the National Institutes of Health (NIH) and focuses on research "dedicated to understanding the nature of aging, supporting the health and well-being of older adults, and extending healthy, active years of life for more people." The website features not only an alphabetized list of health topics, and also innovative publications to promote doctor-patient communication, resources explaining various aspects of exercise, posters promoting the value of physical activity, as well as resources in Spanish, and a subsection on dedicated to research and funding.

National Resource Center on LGBT Aging
https://www.lgbtagingcenter.org
Funded by a grant from the U.S. Department of Health and Human Services in 2010, this organization works to improve the services provided to lesbian, gay, bisexual, and transgender (LGBT) older adults. Their site features a number of webinar trainings on how to work with diverse populations as well as an interactive map to find resources by state and by topic. Their database features information on veterans, transgender themes, racial equity, intimate partner violence, and *en español* (Spanish language) resources.

National Resource Center on Native American Aging
https://www.nrcnaa.org
With the aim of bringing attention to concerns for aging Native populations, this organization works to improve services provided to Native elders and create better outcomes for the population served. This National Resource Center is funded by the Administration on Aging.

National Senior Citizens Law Center (NSCLC)
http://nsclcarchives.org
Created in 1972, this organization works to protect disadvantaged minorities so individuals of any background can live as contributing citizens without distraction from destitution or lack of health care. NSCLC educates and trains local advocates and litigates with the goal of defending the rights of low-income seniors. The NSCLC website offers information about relevant court cases, economic safety net programs like Supplemental Security Income (SSI) and Social Security, as well as information on

refugees and SSI benefits, cross-cultural health disparities and a subsection on language access.

NIH Senior Health
http://nihseniorhealth.gov
This website is a resource designed specifically for adults over age 60 with a compilation of health-related information subdivided into broad categories and offered in an accessible, alphabetized, easily navigable list format with summaries of each topic, options to gather additional information, and suggested complementary topics. In addition to providing access to some of the vast stores of information sustained by NIH, this website offers training materials for those who hope to teach older adults to use this particular resource.

National Shared Housing Resource Center (NSHRC)
(http://nationalsharedhousing.org)
Homesharing programs are based on geographic region, so local areas operate their own websites to coordinate interest in home sharing in a given state or county. The NSHRC website serves as a hub for such local programs and provides an accessible online directory that is a useful resource for finding regionally operated programs by state.

Office of Disability, Aging, and Long-Term Care Policy (DALTCP)
http://aspe.hhs.gov/office_specific/daltcp.cfm
This office evaluates programs and policies of the United States Department of Health and Human Services. DALTCP is also charged with investigating ways to advance the fiscal and general wellness of older Americans. The DALTCP subunits are Division of Behavioral Health and Intellectual Disabilities Policy, Division of Disability and Aging Policy, and Division of Long-Term Care Policy.

Older Women's League (OWL)
http://www.owl-national.org
Founded in 1980 to promote economic security for women over 40, today OWL represents over 75 million women of that demographic. The organization releases a report each May, entitled the annual *Mother's Day Report*, to highlight a key economic issue for that year. OWL identifies key concerns related to quality of life such as wellness, menopause, elder abuse, end-of-life, and some health-care initiatives.

Old Women's Project
http://www.oldwomensproject.org
A collective of three women from San Diego, California, that does not accept members but encourages participation from all females in various actions

they have organized and other progressive protests and local rallies they have joined. The Old Women's Project website summarizes their aim: "to make visible how old women are directly affected by all issues of social justice, and to combat the ageist attitudes that ignore, trivialize or demean us."

Raging Grannies
(Various websites, e.g., http://raginggrannies.org/, http://raginggrannies.net, http://www.raginggrannies.com)
Founded in 1987 in Canadian British Columbia, this conglomeration of activist organizations uses performance-based tactics like costume and song to spread their vision for a just and peaceful society. Their protests have addressed gender equity, environmental concerns, affordability of health care, and economic justice.

Resource Centers for Minority Aging Research (RCMAR)
http://www.rcmar.ucla.edu
A National Institute on Aging grant funds seven centers across the United States with the aim of "bridging the gap between health disparity research and successful minority aging." The RCMAR website features publications by affiliates, conferences, funding opportunities, and links to the informative websites of each of the seven centers.

SeniorNet
http://www.seniornet.org
This nonprofit, member-supported organization has offered older adults education about computers and Internet usage since 1986. Their website features past newsletters, information about learning centers that offer classes on technology for adults aged 50 or older, and exercises on computer basics such as how to use a mouse.

Senior Community Service Employment Program (SCSEP)
http://www.doleta.gov/seniors/
Created under Title V of the Older American Act of 1965, today the U.S. Department of Labor Employment and Training Administration administers this federally funded program as a minimum-waged community service job-training program. It constitutes the largest program serving older adult workers in search of work or training. Individuals must be at least 55 years old, unemployed, and living in households with income at or below 125 percent of the federal poverty level in order to participate.

Services & Advocacy for Gay, Lesbian, Bisexual, & Transgender Elders (SAGE)
http://www.sageusa.org
This national group is the largest and longest running organization advocating and providing services to LGBT older adults. They have a presence

in 20 states as well as Washington, D.C., to support quality of life for LGBT adults, encourage positive representations of this population, increase understanding of aging in general, and advocate for aging LGBT adults.

Setting Priorities for Retirement Years (SPRY) Foundation
http://www.spry.org
With a focus on converting research related to aging into information that can be readily used and applied in a variety of settings, SPRY Foundation has a strong focus on education. Their site features publications as well as past initiatives.

Social Security Administration
http://www.ssa.gov
This federal agency coordinates Social Security services offered across the United States. The website offers information about benefits for disability, Supplemental Security Income, retirement, children, individuals after incarceration, children with disabilities, and government employees. Their online offerings also include information for racial and ethnic minorities, same-sex couples, women, wounded veterans, immigrants, deaf or hard of hearing, blind or visually impaired persons, as well as third-party representatives, planners, and professionals.

Stanford Geriatric Education Center (SGEC)
http://sgec.stanford.edu
Specializes in health care for older adults from diverse populations, this consortium provides information to health-care providers about the needs of ethnic minority elders and their loved ones. The SGEC website features webinars as well as a unique section with resources about "cultural and spiritual diversity in end of life care."

Well Spouse Association
http://www.wellspouse.org
Founded in 1988 by 10 individuals who were spouses to chronically ill individuals, this organization exists to support that demographic through local chapters, increase awareness among professionals and the public as to the role of healthy spouses, and to promote solutions that work for these families. The website features annual reports; articles on advocacy, navigating health-care systems, spousal caregiving, and humor; as well as a calendar of events that are organized by members.

APPENDIX B

Documentaries about Aging

Elizabeth A. Daniele

Of the hundreds of documentaries that focus on aging, this list features a handful created since 2000. Such films are particularly important given our aging nation. Many of the documentaries featured here highlight inequalities linked to race, class, gender, sexuality, and living arrangements. Topics include the experiences of ethnic minority elders, older adult sexuality for lesbian, gay, bisexual, and transgender (LGBT) and straight Americans, aging workers, elder care, and abuse of older adults. The films incorporate myriad perspectives on aging, politics, inequality, and social movements. Inclusion on this list does not reflect an endorsement. Films are generally paraphrased or summarized in my words, though in some cases the words of the film creator or production company are included.

"A Place to Live: The Story of Triangle Square"
88 minutes
This impressive documentary follows seven gay and lesbian seniors who want to live in Triangle Square in Los Angeles. Triangle Square was the first affordable housing designed specifically for LGBT elders in the United States. Fittingly opening with reflections on their individual life histories, the film draws attention to the experiences of low-income, older LGBT adults and captures elements of opening the unique facility.

Childs, C., Munro, S., Dromi, N. (Producers), & Coal, C. (Director). (2008). *A place to live: The story of Triangle Square* [Motion Picture]. United States: NoCo Media Group and Bittersweet Productions.

"The Age of Love"
79 minutes
This documentary follows seniors who participate in a unique speed dating event for adults over age 70. It raises questions about relationships, romance, aging bodies, and the human experience of loving.

Loring, S. (Producer & Director). (2014). *The age of love* [Motion Picture]. United States: Free Play Pictures.

"**Ageless**"
27 minutes
This documentary addresses the topic of media and mainstream depictions of beauty as embodied by youth.

Gwaltney, H. (Producer), Akhamie, A., Saylor, D. (Associate Producers), & Gwaltney, H. (Director). (2014). *Ageless* [Motion Picture]. United States.

"**American Outrage**"
33 minute- and 56- minute versions
This film features the story of Carrie and Mary Dann, two elder Western Shoshone sisters who have been fighting against the United States Government since the early 1970s for the right to stay on their land in Nevada.

Gage, B., & Gage, G. (Directors). (2008). *American outrage* [Motion Picture]. United States: Gage and Gage Films & Bullfrog Films.

"**American Revolutionary: The Evolution of Grace Lee Boggs**"
82 minutes
This documentary focuses on the life of Grace Lee Boggs, who has been an activist involved with many social movements throughout her 97 years of life, including civil rights, feminism, and environmental justice.

Libresco, C., Wilkin, A. (Producers), & Lee, G. (Producer & Director). (2013). *American revolutionary: The evolution of Grace Lee Boggs* [Motion Picture]. United States: Chicken and Egg Pictures.

"**An Age for Justice: Elder Abuse in America**"
16 minutes
In a short video produced by a coalition of groups for the Elder Justice Now campaign, the film highlights physical, fiscal, and emotional elder abuse—and uses vignettes about individuals to put a human face on these different types of mistreatment.

WITNESS. (2010, April 21). *An age for justice: Elder abuse in America* [Video file]. Retrieved from https://www.youtube.com/watch?v=-eaJXBj87to&feature=youtu.be

"**Before You Know It**"
110 minutes
This film offers a relatively intimate perspective of individual LGBT seniors' lives by following three older gay men: one who likes to cross dress but

does not do so publically until he moves to an LGBT retirement community, one who does community outreach for Services and Advocacy for GLBT Elders (SAGE) in Harlem when New York State approves gay marriage, and an owner of a long-standing gay bar in Texas. While the documentary addresses some universal aspects of aging, it also brings to the fore some unique challenges faced by older adults who identify as LGBT.

Bush, A., Giustini, S. (Producers), & Raval, P.J. (Producer & Director). (2013). *Before you know it* [Motion Picture]. United States: Untitled Films.

"Big Mama"
40 minutes
This award-winning film documents the trials of Viola Dees, an African American elder trying to raise her grandson, Walter, while navigating the foster care system. The film highlights the importance of love at different ages and some difficulties encountered by grandfamilies, such as health concerns and questions about when the state challenges a grandparent's competence.

Block, M., Nevins, S. (Executive Producers), & Seretean, T. (Producer & Director). (2000). *Big mama* [Motion Picture]. United States: California Newsreel.

"The Caretaker"
8 minutes
This short documentary is about an undocumented Fijian immigrant who is a caregiver for an ill, elderly Japanese American woman in California.

Rigby, T., & McLean, K. (Directors). (2012). *The caretaker* [Motion Picture]. United States: Public Broadcasting service (PBS).

"The Collector of Bedford Street"
34 minutes
This documentary focuses on Larry Selman, the filmmaker's neighbor who is an older community activist with an intellectual disability. When his uncle can no longer provide care, Larry's community comes together to ensure that he can stay in his apartment.

Elliott, A. (Producer & Director). (2002). *The collector of Bedford Street* [Motion Picture]. United States: Welcome Change Productions.

"Cut Back: Facing Ageism"
73 minutes
This documentary offers discussion of ageism in the workplace primarily through personal tales from individuals who have experienced such

discrimination. These individual testimonies are supplemented by commentary from experts and professionals who deal in this realm. The film has been divided into segments and is available in its entirety online at http://cutbackmovie.com.

Sahertian, P. (Producer & Director). (2009). *Cut back: Facing ageism* [Motion Picture]. United States: CHeZ MaTch.

"Do Not Go Gently"
57 minutes
This film explores the power and impact of creativity in later life by documenting experiences of three artists.

Littig, E. (Executive Producer), & Godoy, M. (Producer & Director). (2007). *Do not go gently* [Motion Picture]. United States: American Public Television.

"Fleeced: Speaking Out against Senior Financial Abuse"
30 minutes
Exposing the high rates of seniors who are scammed or taken advantage of in the financial realm, this film looks at the impacts of financial deception on elders.

Jacobs, K. (Producer). (2013). *Fleeced: Speaking out against senior financial abuse* [Motion Picture]. United States: National Community Reinvestment Coalition, & WFYI Productions.

"Gen Silent"
64 minutes
By following six LGBT older adults in Boston, Massachusetts, this film explores decisions around health care and aging. It explores the theme one professional calls "distrust of mainstream institutions" among a generation that lived through McCarthyism and the highly closeted gay culture in the 1950s. Because institutionalization was a common treatment for homosexuals in earlier eras, there may be hesitancy to go to such places as hospitals or long-term care facilities. Further, the topics of training health-care providers on awareness and sensitivity, as well as provider resistance and objection to caring for LGBT elders are discussed.

Atkin, B.J. (Executive Producer), & Maddux, S. (Director). (2011). *Gen silent* [Motion Picture]. United States: Interrobang! Productions

"Golden Years: Aging and the Elderly"
27 minutes
Looking at the impacts of an aging population in the United States, this film focuses on programming at a particular nursing home and highlights

the longevity revolution to discuss quality and quantity of life in later years.

Kasparian, Y. (2005). Golden years: Aging and the elderly [Television series episode]. In Kammen, G. (Producer) *The way we live*. United States: Intelecom.

"Kings Point"
40 minutes
This documentary tells the stories of men and women who moved to Florida many years ago and how they are managing in their retirement community as they age. As the film's website says, this film "explores the dynamic tension between living and aging—between our desire for independence and our need for community—and underscores our powerful ambivalence toward growing old" (http://www.kingspointmovie.com).

Wider, J., Wider, T. (Producers), & Gilman, S. (Producer & Director). (2012). *Kings point* [Motion Picture]. United States: Wider Film Projects, & HBO Documentary Films.

"Old People Driving: A Film about the End of the Road"
25 minutes
Alluding to the national love of driving automobiles and acknowledging what one interview subject refers to as the association of driving with independence, this film explores the topic of older adult drivers. The documentary features stories of two male drivers in their 90s and is interspersed with statistics about older drivers as compared to other age groups, relevant media clips, and commentary from experts as well as family and friends of these older drivers. The filmmakers highlight gendered aspects of decisions to give up driving and raise questions about the role of public policy in this sphere.

Haas, S. (Producer & Director). (2010). *Old people driving: A film about the end of the road* [Motion Picture]. United States: New Day Films.

"The 100+ Club"
30 minutes
This film challenges traditional ideas about what it means to be an older adult by introducing three individuals who have lived a century, but are still pursuing ambitions in the realms of athletics, writing, and theater production.

Brown, M. (Producer), & Lake, M. (Director). (2012). *The 100+ club* [Motion Picture]. Australia: Flickchicks.

"The Passage of Time"
69 minutes
Comprised of interviews with people of many ages, this documentary explores the meaning of aging through exploration of meanings of life and death. Available for free and in its entirety online (https://vimeo.com/119885830), this film may be a useful tool to open discussions about aging, life course, and mortality.

Habif, D.A. (Producer & Director). (2013). *The passage of time* [Motion Picture]. United States: Horizon Films.

"Raging Grannies"
33 minutes
This film is interspersed with educational performances and media spots, but comprised primarily of footage from activist actions and personal interviews with older women who are members of the San Francisco Bay Area Peninsula Raging Grannies group. This chapter of Raging Grannies is one among many worldwide, and they describe themselves as concerned with the welfare of children and families around the world. The film highlights their clever use of humor and their self-proclaimed nonthreatening image to draw attention to matters of injustice in their region.

Carranza, R. (Producer), & Walton, P. (Producer & Director). (2009). *Raging grannies* [Motion Picture]. United States: New Day Films.

"The Retirement Gamble"
55 minutes
This episode of Frontline investigates the American retirement system, focusing on how retirement savings are managed. The program suggests that Wall Street is winning profits at the expense of individuals.

Gaviria, M., Smith, M. (Writers), & Smith, M. (Director). (2013). The retirement gamble [Television series episode]. In Gaviria, M. (Producer) *Frontline*. United States: Public Broadcasting Service (PBS).

"The Sandwich Generation"
28 minutes
The terms sandwich generation refers to those who are caring for young children and aging parents. The filmmaker, Julie Winokur, and her husband document their personal journey in moving across the country with their two children to care for Winokur's elderly father, who has dementia.

Winokur, J. (Producer & Director). (2008). *The sandwich generation* [Motion Picture]. United States: Talking Eyes Media.

"The Self-Made Man"
53 minutes
This documentary raises questions about what the film's website calls rational suicide and the right-to-die, and what entrepreneur Bob Stern's suicide note calls quantity versus quality of life. It is comprised of photos and narratives about the Stern family, interviews with family and friends of Bob Stern, and footage of Bob speaking to a camera about not pursuing medical treatment for his illnesses.

Bernal Beach Films (Producer), & Stern, S. (Director). (2005). *The self-made man* [Motion Picture]. United States: New Day Films.

"Stages"
82 minutes
This film features older Puerto Rican women coming together with youth in a New York City community center to create a play about their lives. As the website mentions, the participants' work engages "themes of immigration, identity, aging and coming of age" (http://www.stagesmovie.com).

Meerkat Media Collective (Directors). (2009). *Stages* [Motion Picture]. United States: New Day Films.

"Still Doing It: The Intimate Lives of Women Over 65"
56 minutes
Opening with bold statements by women over age 65 about their excitement over sexual activity in their later lives, this film explores the topic of intimacy among a diverse group of older women in the United States. Tying in individual histories of marriage, religious practices, involvement with social movements, as well as contemporary interviews, these women speak very frankly about sexual urges and sexual activity in later life, female bodies in general, and aging bodies in particular.

Holtberg, D. (Producer), & Fishel, D. (Director). (2004). *Still doing it: The intimate lives of women over 65* [Motion Picture]. United States: Mind's Eye Productions.

"Ten More Good Years"
71 minutes
Through interviews with experts and LGBT elders, this film explores historical trends and pressing contemporary realities for an aging LGBT population.

Jacoby, M. (Producer & Director). (2007). *Ten more good years* [Motion Picture]. United States: LookOut Films.

"Two Raging Grannies"
78 minutes
Two elder women who have significant histories of involvement with social justice issues travel the United States asking questions that challenge the framework of infinite economic growth.

Falch, C. (Producer), & Bustnes, H. (Producer & Director). (2013). *Two raging grannies* [Motion Picture]. Denmark: Faction Film.

"We Got Us"
27 minutes
This film focuses on four older women who play mah-jongg together on a weekly basis. Filmed over 18 months, it reflects their views on themes of living and aging.

Brooker, J., (Producer & Director), & Harry, M. (Producer). (2001). *We got us* [Motion Picture]. United States: Docurama.

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