

Sara J. Czaja · Joseph Sharit
Jacquelyn B. James *Editors*

Current and Emerging Trends in Aging and Work

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Editors

Sara J. Czaja
Center on Aging and Behavioral Research
Division of Geriatrics and Palliative Care
Weill Cornell Medicine
New York, NY, USA

Joseph Sharit
Department of Industrial Engineering
University of Miami
Miami, FL, USA

Jacquelyn B. James
Center on Aging and Work
Boston College
Chestnut Hill, MA, USA

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Preface

The focus of this book is on the intersection of the current and emerging landscape of work and older workers. Due to changes in the demographics of the workplace, organizations, and work processes, workplaces of today and tomorrow are and will continue to significantly differ from workplaces of the past. In the coming decades, the population of the United States will age considerably and become more racially and ethnically diverse. By 2035, the number of people aged 65 and older will outnumber those under the age of 18 for the first time in history (United States Census Bureau, 2018). The number of older workers is also on the rise. The Bureau of Labor Statistics projects that by 2024, the labor force will grow to about 164 million people and, of these, about 13 million are expected to be aged 65 and older. While workers in this age group will only represent about 8% of the overall labor force, the labor force growth rate is expected to be the highest for workers aged 65+ in the upcoming decade. Specifically, the growth rate of workers aged 65–74 is expected to be about 55% and for those aged 75+ about 86%. This rate far outpaces the expected growth of about 5% for the labor force as a whole (Toossi & Torpey, 2017). As noted in several chapters in this book, people are extending their working life for a variety of reasons. These include changes in retirement and benefits plans and the desire for greater financial security in retirement and to remain productive and engaged. In addition, work presents opportunities for social interactions.

Organizations and work are also changing. There is a greater emphasis on knowledge work, work teams, and intergenerational workplaces. Many workers also work from remote locations such as their home or satellite offices. The influx of technology into work environments is also increasing at an unprecedented rate. Thus, workers must learn new ways of working and how to integrate these new technologies into their job. They must also constantly upgrade their knowledge and skills. The responsibility for acquiring new skills is being shifted to the worker, and technology-mediated learning formats are being promoted as a convenient way to meet training demands. Also, for many workers, there is a shift in work-life balance. Many middle-aged and older workers are involved in some form of caregiving, which can impact performance and work opportunities as well as have a financial impact on the work organization. Due to global competition, many organizations are

considering alternative work arrangements such as contractual work or part-time work to reduce costs. This can result in decreased opportunities for aging workers who, because of existing myths, are often considered to be less productive and reliable, unable to keep up with changes in job demands, and more costly. Unfortunately, negative stereotypes about older workers are still pervasive in many work settings.

Clearly, the changing workplace presents challenges for workers of all ages and for organizations. Older workers in particular are challenged, as they must confront these changes while at the same time experiencing changes in their abilities and life circumstances. Thus, understanding the skills, abilities, and preferences of older workers as well as the objectives and practices of organizations is critical in developing strategies to help older workers successfully adapt to a changing workplace.

The intent of this edited volume, which has contributions from leading scholars and practitioners across many disciplines, is to address the new face of the workplace and the complex challenges confronting older workers and organizations. The book addresses a wide range of topics, and the authors represent a variety of disciplines and perspectives. Given the broad and inclusive scope of the topics, the chapters are organized according to thematic sections including the following: current employment patterns and demographics, policy issues and an aging workforce, work performance issues, trends in job and work patterns, and health and wellness issues.

This volume presents a comprehensive assessment of the state of aging and work and addresses topics that are at the forefront of work in the twenty-first century. Overall, several important themes emerge. One is that the workforce is changing and that traditional models of retirement are no longer adequate. There will be greater numbers of older workers, including those 75+ years of age. Workers today are also generally better educated, diverse along a number of dimensions, and have different expectations about work and work-life balance. Older workers also represent a valuable resource that can continue to make strong contributions to organizations and employers. Another theme that emerges is that technology will continue to be infused into the workplace and have an impact on jobs, skill requirements, work locations, and communication patterns. The influx of technology creates a need for a more highly skilled workforce and for training strategies that are accessible and effective for workers of all ages. Finally, there are changes that also need to be made by organizations to best accommodate the skills that older workers can bring, promote intergenerational collaborations, and ensure job designs that are commensurate with older worker needs and abilities. Overall, there remain many unanswered questions about aging and work. Answering these questions and accommodating an aging workforce will require collaboration among researchers, policy-makers, as well as business and industry.

New York, NY, USA
Coral Gables, FL, USA
Chestnut Hill, MA, USA

Sara J. Czaja
Joseph Sharit
Jacquelyn B. James

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Contributors

Caitlin Adams South Bronx United, Bronx, NY, USA

Mailman School of Public Health, Columbia University, New York, NY, USA

Valeria Alterman, B.S. Department of Management, Warrington College of Business, University of Florida, Gainesville, FL, USA

Daniel J. Beal, Ph.D. Department of Management, Pamplin College of Business, Virginia Institute of Technology, Blacksburg, VA, USA

Margaret E. Beier, Ph.D. Department of Psychological Sciences, Rice University, Houston, TX, USA

Gail Betz, M.L.I.S. Health Sciences and Human Services Library, University of Maryland, Baltimore, MD, USA

Patrick Button, Ph.D. Department of Economics, Tulane University, New Orleans, LA, USA

The RAND Center for the Study of Aging, RAND Corporation, Santa Monica, CA, USA

The IZA Institute for Labor Economics, Bonn, Germany

National Bureau of Economic Research, Cambridge, MA, USA

Kevin E. Cahill, Ph.D. ECONorthwest, Portland, OR, USA

Center on Aging & Work at Boston College, Chestnut Hill, MA, USA

Neil Charness, Ph.D. Psychology Department and Institute for Successful Longevity, Florida State University, Tallahassee, FL, USA

Damir Cosic, Ph.D. Urban Institute, Washington, DC, USA

Sara J. Czaja, Ph.D. Center on Aging and Behavioral Research, Division of Geriatrics and Palliative Care, Weill Cornell Medicine, New York, NY, USA

Jürgen Deller, Ph.D. Leuphana University of Lüneburg, Lüneburg, Germany
Silver Workers Research Institute, Berlin, Germany

Ruth Finkelstein, Sc.D. Brookdale Center for Healthy Aging, Hunter College,
City University of New York, New York, NY, USA

Keaton A. Fletcher, Ph.D. School of Psychology, Georgia Institute of Technology,
Atlanta, GA, USA

Ariane Froidevaux, Ph.D. Department of Management, Warrington College of
Business, University of Florida, Gainesville, FL, USA

Jacqueline M. Gilberto, M.A. Department of Psychological Sciences, Rice
University, Houston, TX, USA

Ernest Gonzales, Ph.D. New York University, New York, NY, USA

James W. Grosch National Institute for Occupational Safety and Health, Centers
for Disease Control and Prevention, Cincinnati, OH, USA

Maria Heidkamp John J. Heldrich Center for Workforce Development, Edward J.
Bloustein School of Planning and Public Policy, Rutgers, The State University of
New Jersey, New Brunswick, NJ, USA

Kène Henkens Netherlands Interdisciplinary Demographic Institute/KNAW/
University of Groningen, The Hague, The Netherlands
University Medical Center Groningen and University of Amsterdam, Groningen,
The Netherlands

Jacquelyn B. James, Ph.D. Center on Aging and Work, Boston College, Chestnut
Hill, MA, USA

Richard W. Johnson, Ph.D. Urban Institute, Washington, DC, USA

Ruth Kanfer, Ph.D. School of Psychology, Georgia Institute of Technology,
Atlanta, GA, USA

David Lain, D.Phil. Newcastle University Business School, Newcastle upon Tyne,
UK

Christina Matz-Costa Boston College, Chestnut Hill, MA, USA

Tay McNamara, Ph.D. Center on Aging & Work, School of Social Work, Boston
College, Chestnut Hill, MA, USA

Nancy Morrow-Howell, M.S.W., Ph.D. Brown School of Social Work,
Washington University, St. Louis, MO, USA

Jaap Oude Mulders Netherlands Interdisciplinary Demographic Institute/KNAW/
University of Groningen, The Hague, Netherlands

Jensine Paoletti, M.A. Department of Psychological Sciences, Rice University,
Houston, TX, USA

Marcie Pitt-Catsoupes, Ph.D. Boston College School of Social Work, Chestnut Hill, MA, USA

Joseph F. Quinn Department of Economics, Boston College, Chestnut Hill, MA, USA

Anna Riddle-Wilder, M.S.W., L.C.S.W. School of Social Work, Boston College, Chestnut Hill, MA, USA

Eduardo Salas, Ph.D. Department of Psychological Sciences, Rice University, Houston, TX, USA

Lily Scheindlin, B.A. Departments of Epidemiology and Public Health, University of Maryland School of Medicine, Baltimore, MD, USA

Masters in Public Policy Program, The Heller School for Social Policy and Management, Brandeis University, Waltham, MA, USA

Juliann C. Scholl National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Cincinnati, OH, USA

Richard Schulz, Ph.D. Department of Psychiatry, University Center for Social and Urban Research, University of Pittsburgh, Pittsburgh, PA, USA

Joseph Sharit, Ph.D. Department of Industrial Engineering, University of Miami, Miami, FL, USA

Diane M. Spokus, Ph.D., M.Ed., M.C.H.E.S. Department of Health Policy and Administration, College of Health and Human Development, The Pennsylvania State University, State College, PA, USA

Harvey L. Sterns, Ph.D. Transition After Retirement Program, Institute for Life-Span Development and Gerontology, The University of Akron, Akron, OH, USA

Northeast Ohio Medical University, Rootstown, OH, USA

Jennifer E. Swanberg, Ph.D., M.M.H.S. Department of Health Policy and Management, School of Professional Studies, Providence College, Providence, RI, USA

W. Jackeline Torres, Ph.D. Department of Psychological Sciences, Rice University, Houston, TX, USA

Hendrik P. van Dalen Netherlands Interdisciplinary Demographic Institute/KNAW/University of Groningen, The Hague, The Netherlands

Tilburg University, Tilburg, The Netherlands

Mariska van der Horst, Ph.D. Department of Sociology, Vrije Universiteit, Amsterdam, Netherlands

Carl Van Horn, Ph.D. John J. Heldrich Center for Workforce Development, Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey, New Brunswick, NJ, USA

Cathy Ventrell-Monsees U.S. Equal Employment Opportunity Commission, Washington, DC, USA

Sarah Vickerstaff, B.Sc., Ph.D., F.G.S.A., F.Ac.S.S School of Social Policy, Sociology and Social Research, University of Kent, Canterbury, UK

Robert B. Wallace, M.D., M.Sc. Departments of Epidemiology and Internal Medicine, Colleges of Public Health and Medicine, University of Iowa, Iowa City, IA, USA

Mo Wang, Ph.D. Department of Management, Warrington College of Business, University of Florida, Gainesville, FL, USA

Max R. Wilckens Institute of Management and Organization, Leuphana University of Lüneburg, Lüneburg, Germany

Anne M. Wöhrmann, Ph.D. Federal Institute for Occupational Safety and Health (BAuA), Dortmund, Germany

Leuphana University of Lüneburg, Lüneburg, Germany

Aya Zouhri University of Maryland School of Social Work, Baltimore, MD, USA
Jackson Park Center, Youth Tutoring Program, Seattle, WA, USA

Part I
Current Employment Patterns
and Demographics

Chapter 1

Setting the Stage: Workplace and Demographic Trends



Sara J. Czaja

1.1 General Demographic Trends

We are witnessing dramatic changes in our population demographics. The number of people in the United States aged 65+ has increased from ~37 million in 2006 to ~49 million in 2016 and is projected to increase to about 98 million by 2060. Importantly, because of gains in life expectancy in the past decade, a fast-growing cohort is the “oldest old” (age 85+); who are projected to number 14.6 million by 2040 (Administration on Aging, Administration for Community Living, 2018; see Fig. 1.1). Similar trends exist worldwide. It is expected that between 2017 and 2050, virtually every country in the world will experience a substantial increase in the size of the older population. In 2012, people aged 65 and older numbered about 562 million or 8% of the global population, by 2015 this number reached 617 million, and by 2050 it will be about 1.6 billion, representing 16% of the world’s population. People aged 85 and older and the number of centenarians are expected to increase tenfold by 2050 (United Nations, 2017).

The composition of the older population in the United States is becoming more racially and ethnically diverse. By 2060, the number of Black Americans in the United States will nearly double, and the number of Hispanic older adults will be more than quintuple. There will also be growth in the Asian and Indigenous populations of older adults as well as in those of more than one race. Overall, older adults from marginalized groups will represent about 40% of the older adult population by 2050.

The aging of the population presents both opportunities and challenges. For example, people in the later decades are more likely to have disabilities such as arthritis, vision and hearing impairments, or mobility restrictions. Cognitive declines

S. J. Czaja (✉)

Center on Aging and Behavioral Research, Division of Geriatrics and Palliative Care,
Weill Cornell Medicine, New York, NY, USA
e-mail: sjc7004@med.cornell.edu

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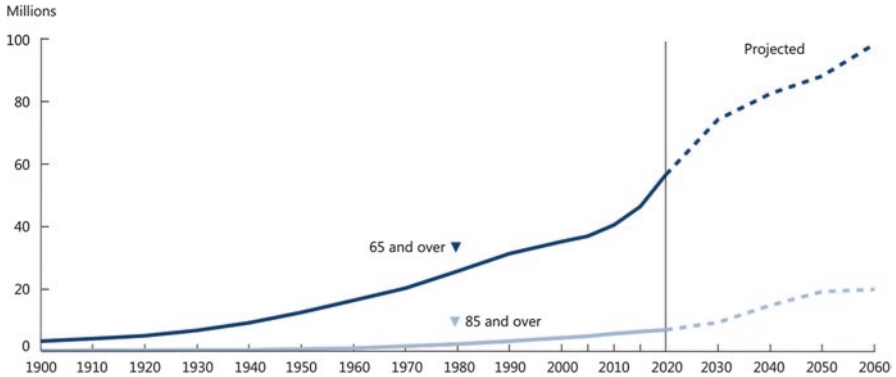


Fig. 1.1 Population projections for the U.S. Source: Older Americans Key Indicators of Well-Being, 2016, Federal Forum on Aging Related Statistics, Washington, DC, U.S. Government Printing Office, August, 2016

and memory impairments are also more common in the older cohorts. However, on average, current generations of older adults are different than prior generations. People are not only living longer but they are remaining more active into older age, have higher levels of educational attainment, and as will be discussed in the next section, are also working longer than previous cohorts of older people.

1.2 Workplace Demographics

The demographic profile of the workforce is also changing and many older adults are working beyond the traditional retirement age. Until fairly recently, workers age 55 and older made up the smallest segment of the US labor force. Now, that picture is changing and the trend towards “early retirement” where workers permanently leave the workforce in their mid-60s has become altered. Workers aged 65–74 and 75+ are projected to have the fastest rates of labor force growth over the next decade. Specifically, between 2014 and 2024, the labor force growth rate of people aged 65–74 is expected to be about 55%, and about 86% for those 75 and older; this trend is in comparison to slower rates of growth for other age groups (see Fig. 1.2). Employment rates for older workers are increasing for both men and women, but tend to be slightly higher for men.

Similar to the older adult population, the labor force is also becoming more ethnically and culturally diverse. In fact, the Bureau of Labor Statistics projects that by 2026, one out of every five workers will be of Hispanic origin (Bureau of Labor Statistics, 2018). Many of these individuals may not be native English speakers, which has implications for the design of entities such as signage, labels, instructions, and training materials.



Fig. 1.2 Growth rate in the US labor force by age. Source: Bureau of Labor Statistics (Toossi & Torpey, 2017)

Older adults are employed in many occupations, with the majority in management and professional occupations or in sales/office or service work. The rate of part-time work is higher among workers aged 65+ (Toossi & Torpey, 2017). Women are more likely to work part-time than men. One reason for this gender difference is that women are more likely to have caregiving responsibilities (Schramm, 2018). Older workers are also increasingly seeking other employment options such as contract work, opportunities to start second (or third) careers, or to start a new business. Reasons for why many older people are working longer are varied and include concerns about retirement income, healthcare benefits, or a desire to remain socially and productively engaged.

1.3 Workplace Trends

As discussed in several chapters throughout this book (see Chaps. 2, 10, 16, and 17), the nature of work and work organizations are also changing. These changes clearly have vast implications for older workers. For example, there is an increased emphasis on teamwork and knowledge work, which gives rise to questions regarding team formation with respect to age, experience, and cultural/ethnic background of the team members (see Chap. 16). Organizations are also moving from vertically integrated structures to more decentralized, specialized firms, and nonstandard employment relationships and work arrangements (e.g., distance work; Karoly & Panis, 2004). These types of changes can give rise to concerns about job security especially among older employees.

Jobs in the service sector will make up the majority of new jobs. This is generally positive for older workers, as these jobs tend to be less physically demanding. However, many of these jobs will require a post-secondary education, so for those workers that were formally in more blue-collar occupations or with lower educational achievements, this requirement may create challenges with skill obsolescence and a need for training and updating of skills. A recent study by the Pew Research Organization (Brown, 2016) found that about 35% of workers perceive that they do not have the education and training they need to advance in their jobs and about 45% indicated that they have pursued extra training to maintain or improve their job skills in the past year.

Technology is also ubiquitous within the workplace and changing at an unprecedented rate, which also creates a need for new learning and training to keep pace with job demands. The pace of technological change is projected to accelerate in the upcoming decade. For example, there will be a growth in artificial intelligence and robotic applications (see Chap. 2). These applications will increase the demand for a highly skilled workforce and the need for retraining and lifelong learning (Karoly & Panis, 2004). These demands can be challenging for older workers in terms of their ability to remain competitive in the workplace. Strategies are needed to ensure that the demands of jobs are commensurate with their skills and abilities and that they are provided with ample opportunities to participate in job training programs.

There is also a strong push within organizations for workers to acquire new job skills on their own using “eLearning,” or computer-based instruction programs. This trend also presents challenges for older adults who have limited technology skills. This is not to suggest that older adults are unable to learn or uninterested in acquiring new skills. In fact, data from our research examining technology-based tasks and from many others presents a fairly positive picture in terms of the continued learning potential of older adults. Older people may take longer or need more feedback or training support than younger people; however, they are able to learn (Chap. 12). Unfortunately, older workers are often bypassed for training and retraining opportunities (Chap. 13). Also, the responsibility for continuing education is being shifted to the individual worker, and technology-mediated learning formats are being promoted as a way to help organizations and individuals meet training and lifelong learning challenges. There is a paucity of research examining the implications of these changes in the training and instructional process for older workers.

1.4 Defining Older Workers

It is always difficult to define or provide an age cutoff for an “older worker” as there is no consensus about who the “older worker” is. Definitions vary according to context and occupation. Policymakers, business and industry standards, older adults, and researchers all have different perspectives on the meaning of the term. The spectrum of ages that falls under the rubric of “older worker” is broad, ranging from 40 to 65 years. For example, in the general literature, someone age 65 and older is

generally referred to as an “older adult.” The United States Department of Labor defines an older worker as someone 55 years or older. The Age Discrimination in Employment Act (see Chap. 5) protects individuals age 40 and older from discrimination in the workplace based on age. Similarly, a report by the National Research Council focusing on the health and safety of older workers (National Research Council and Institute of Medicine, 2004) adopted the age of 45 as the cutoff for defining an older worker. This cutoff is likely related to concerns regarding physical workplace demands relative to normative age-related changes in physical abilities. Sterns and Spokus (see Chap. 13) outline four definitional approaches for the term older worker: functional, psychosocial, organizational, and life span. According to this perspective, the term depends on experience and context and is multidimensional and modifiable. Aging also occurs on many levels and can be described along at least four dimensions: biological, psychological, cognitive, and social. Older adults, however this population is defined, are not homogeneous. Aging is associated with variability, and there are vast inter-individual and intra-individual differences among older adults. For example, workers in their 60s are typically different than those in their 30s with respect to functional abilities. Differences among cohorts are also due to varying life experiences and historical events. Inter-individual differences also reflect differences that occur within an age group; not all 65-year-old adults are alike.

Overall, although chronological age is important and has meaning with respect to functional abilities, what is most important is the health of the individual, their attitudes and preferences about work, and their abilities relative to the job demands. Further, the term “older worker” is likely to continue to be redefined in the future as the perceptions of aging are changing. For example, data from the 2000 American Perceptions of Aging in the 21st Century (National Council on the Aging, 2002) indicate that men are considered “old” at a median age of 70 years whereas women are considered “old” at a median age of 75 years.

1.5 Myths About Older Workers

Unfortunately, many negative stereotypes about older workers still exist among managers and younger workers. Common myths include the beliefs that all older people are alike, tend to be sick, and have higher rates of absenteeism. Older workers are also thought to be less productive than younger workers and less flexible or willing to adapt to changes in the workplace. In addition, older people are thought to be technophobic and unwilling or unable to learn to use new technologies. Further, it is often thought that they are less willing to participate in training programs, and that it is costlier to train older people.

For example, we (Sharit, Czaja, Hernandez, & Nair, 2009) conducted a survey study of managers from a variety of large and small industries about telework and older workers to examine worker attributes thought to be important to working in a telework arrangement. We also examined the degree to which the managers

perceived that younger and older workers differed on those attributes. Overall, the data indicated that trustworthiness, reliability, ability to work independently, and time management were the most important worker attributes to managers for deciding whether to allow a worker to telework. Other important attributes were adaptability and technology skills. In terms of the comparisons between younger and older workers relative to these traits, generally older workers were perceived as being more reliable, trustworthy, and able to work independently. However, they also perceived that younger workers were better suited to teamwork as well as more adaptable, especially with respect to keeping up with needed technology skills (see Chap. 10 for a more complete discussion of this study). A recent meta-analysis (Bal, Reiss, Rudolph, & Baltes, 2011) examining positive and negative perceptions of older workers found that overall age had a negative impact on opportunities for advancement (job development and promotion opportunities), selection (e.g., ratings of job qualifications and hiring outcomes), and general performance evaluations and interpersonal skills, but had a positive impact on perceptions of reliability in the workplace.

As will be demonstrated throughout the chapters in this book, these stereotypes are unfounded. Our work and that of others have clearly shown that older adults are not technophobic and are able to learn to interact with new technologies (e.g., Czaja, Boot, Charness, Rogers, & Sharit, 2018; Taha, Czaja, & Sharit, 2016). However, they often have less confidence and lower self-efficacy using technology than younger adults. This difference is often the result of interactions with poorly designed systems and lack of appropriate training. Nonetheless, although an age-related digital divide remains, the rate of adoption of computers and the internet is increasing substantially among the older adult population. Recent data indicate that within the United States, 66% of older adults use the internet as compared to about 14% in 2000 (Pew Research Center, 2018). Use, however, tends to be lower among those with lower income and educational attainment (Anderson & Perrin, 2017).

As discussed in other chapters in this text (e.g., Chap. 16), despite functional declines associated with increased age such as changes in memory, speed of information processing, and strength and mobility, no substantial literature indicates that job performance is lower among older adults. Further, the relationship between age and job performance is complex and depends on the nature of the job and the performance metric (e.g., speed vs. accuracy). Also, adaptation and acquired knowledge and experience can compensate for age-related changes in abilities. Contextual cues in work environments can also aid performance. In addition, older adults generally have lower rates of absenteeism and lower rates of turnover although in many cases this stability is due to limited opportunities for alternative employment. Older workers also have lower accident rates than younger workers; however, older workers tend to stay off of the job longer if they are injured.

Generally, negative stereotypes about older adults and older workers limit the capacity of employers and organizations to harness opportunities to address skill gaps in the workplace and to take advantage of the expertise that older workers can bring to the workplace. Ageist attitudes can also contribute to a lack of confidence among older adults that they will be able to participate in work training programs or

be able to successfully remain in or reenter the workforce. Results of a focus group study conducted by our group (Lee, Czaja, & Sharit, 2009) with a sample of older adults who wanted to return to work found that common perceptions among the participants with respect to barriers to employment were age and lack of technology skills. A recent survey study of younger, middle-aged, and older workers found that both younger and older workers reported more age discrimination at work than middle-aged workers. Among both younger and older workers, age discrimination at work was significantly related to lower mental health, higher general stress, lower job satisfaction, and elevated turnover intentions. In addition, among the older workers age discrimination was also related to increased desires to retire (Gonzales, Marchiondo, Ran, Brown, & Goettge, 2015). Clearly, strategies need to be developed to prevent age discrimination in the workplace as age biases can lead to outcomes that affect the stability and economic health of the workplace as well as the health and well-being of workers. Such strategies are especially needed given the increase in the number of older workers in the workplace. Work environments and management practices need to be in place to maximize the productivity and health of this growing segment of the workforce. Our hope is that this text will underscore the importance of this issue and help to propel efforts in this area.

1.6 Summary and Organization of this Book

The workplace of the twenty-first century will be shaped by numerous factors resulting in many emerging challenges for employers and workers that require changes in government and organizational policies, work procedures, and educational and training systems. Organizations will need to accommodate an increasingly diverse older work force and be prepared to focus considerably more attention on factors such as design of work teams, training protocols, alternative work arrangements and schedules, and workplaces, both traditional and in the home. Issues regarding worker wellness are also of paramount importance. Equally important is gaining an understanding of how the work impacts the health and quality and general well-being of older adults. Efforts must be directed towards understanding the impact of caregiving on work performance and on developing strategies to help workers balance work and caregiving roles. We also need new performance metrics to reflect the demands of current jobs.

Through contributions from leading scholars and practitioners across the many disciplines that underlie the complex domain of aging and work, this edited volume addresses the importance and multifaceted nature of the challenges confronting an aging workforce and its implications for the work sector and society overall. The chapters included in this volume provide a comprehensive and multidisciplinary treatment of current and future issues regarding work and an aging population. The book is unique in the range of topics that are addressed and in the collection of authors who represent a myriad of disciplines and perspectives. The topics encompass demographic and policy issues, the changing nature of jobs and workplace

design issues, skill acquisition and training, telework, worker wellness and health, and trends in late life entrepreneurial endeavors.

The book is organized according to topical sections. *Part I* focuses on current employment patterns and demographics and includes a discussion of jobs in the twenty-first century and human resource issues. It also includes a comparison of older workers in the United States and Germany. *Part II* focuses on policy issues and includes chapters on age discrimination, policies to support older workers, and retirement income security. The focus of *Part III* is on work performance issues and includes chapters on skill acquisition, training, and worker motivation. One chapter considers aging and work from a human factors engineering perspective. *Part IV* includes chapters on trends in jobs and work patterns. Issues of teamwork, the changing face of retirement, employers' reactions to older workers, and older workers and low paying jobs are discussed. Finally, *Part V* focuses on health and wellness and includes chapters on work and caregiving, disabilities and older workers, and creating age-friendly workplaces from an occupational health perspective.

The book is intended for a broad variety of readers, including researchers and practitioners in academia, government, and industry, and for managers in the private and public work sectors. The overall goal is to summarize what we know about aging and work, to forecast challenges and issues for the future, and to highlight policy and research questions that need to be addressed to prepare for the workplace of the future. We have attempted to address a broad spectrum of issues that have relevance to the workplace of the twenty-first century. As noted throughout this volume, older workers represent an invaluable resource to economic growth and development. However, successfully accommodating an aging workforce will require efforts by the government, private industry, the research community, and individual employees to prepare for the upcoming population and workplace changes.

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Chapter 2

Workplace Aging and Jobs in the Twenty-First Century



Margaret E. Beier, W. Jackeline Torres, and Daniel J. Beal

2.1 Introduction

The global workforce is aging and life expectancies are rising, impacting the relationships between aging, work, and retirement. Consider that a person born in 1950 and retiring at age 62 could expect to live only a few years post-retirement. People born in 1990, however, can expect to live at least a decade into retirement; people born in the current century can expect to live upwards of two decades into retirement given the same retirement age. As a consequence, people may choose to work longer to finance their longer retirements and because of the health benefits associated with work for some workers (e.g., self-efficacy, identity, and subjective well-being; Fasbender, Wang, Voltmer, & Deller, 2015). Indeed, society has an interest in engaging workers longer given that disengaged and unproductive citizens can impose a strain on resources (Czaja, Sharit, Charness, & Schmidt, 2015).

Moreover, expanded life expectancy will impact worker perceptions of how much time they have left to contribute in the workforce. For some workers, work provides meaning and a sense of efficacy and identity that they want to preserve into their later years. As such, the motivation to remain engaged in work may be impacted for older workers regardless of their financial situation (Fasbender et al., 2015). A recent study by the American Association of Retired Persons (AARP, 2014), for instance, sug-

M. E. Beier (✉) · W. J. Torres

Department of Psychological Sciences, Rice University, Houston, TX, USA
e-mail: beier@rice.edu; jackietorres@rice.edu

D. J. Beal

Department of Management, Pamplin College of Business, Virginia Institute of Technology,
Blacksburg, VA, USA
e-mail: dbeal@vt.edu

gested that 72% of workers plan to work during retirement. Of these, almost 30% reported continuing work for enjoyment, 5% to start a new career, and just over 10% to work for themselves. About a quarter (23%) indicated that income would drive the decision to continue working. As such, enjoyment and the possibility to explore new opportunities in the realm of work are the main drivers for continuing to work in retirement. Of course, this pattern may change as the numbers of retirees increase and federal assistance for retirement diminishes, but these data suggest that many people are not ready to give up work in their third age.

Market demands are also affecting the extent to which older workers are desired by organizations. The advantage of older workers is their institutional knowledge and expertise, which organizations need to remain productive. Indeed, the population of younger workers with the same skills and education is neither big enough nor growing fast enough to replace retiring workers (Paullin, 2014). Moreover, even though they have the reputation of being expensive (e.g., a senior employee's salary versus an entry-level salary), retaining and retraining older workers who have institutional knowledge and expertise may in fact be cheaper than hiring and training younger workers. There is evidence, for example, that investment in training older workers may pay off given that older workers are more likely than younger workers to stay at an organization after training, even considering pending retirements. Consequently, many organizations have implemented programs to retain their mature workforce (Economist Intelligence Unit, 2011). In sum, even in the face of economic decline and job shortages, there is evidence that older workers will remain an important and large part of the workforce (Beier, 2015; Paullin, 2014).

The older worker's desire for a longer work lifespan and the organization's need for older worker talents seem like a fortuitous coincidence and a relatively straightforward arrangement. But the arrangement is complicated by the dynamic nature of both the worker and the work. The purpose of this chapter is to explore the characteristics of mature workers in the context of work in the twenty-first century. The discussion is framed in theories that highlight the importance of job design for impacting worker motivation and performance (Parker, 2014) with the underlying assumption that the better a person fits within the demands of his or her job, the better his or her performance, job satisfaction, and health (among myriad positive outcomes; Kristof-Brown, Zimmerman, & Johnson, 2005). Accordingly, we describe lifespan changes in job-relevant attributes (motivation and abilities). Although we are neither economists nor fortune tellers, we present the latest thinking on how jobs—and the labor market—will change in the coming decades and discuss how these changes might affect mature workers.

2.2 Work Design

Work design is defined as “the content and organization of one's work tasks, activities, relationships, and responsibilities...” (Parker, 2014, p. 662). Work design research examines the influence of work features on attitudinal, behavioral,

cognitive, well-being, and organizational outcomes (Morgeson & Humphrey, 2008). Previous meta-analytic research shows that work design can have an impact on individual and organizational outcomes (Fried & Ferris, 1987; Humphrey, Nahrgang, & Morgeson, 2007). The significant effects of work design on outcomes suggest that organizations may be able to influence the experience of workers by strategically designing job tasks, activities, and responsibilities. In this section, we briefly review work design theory; for a more comprehensive review we refer readers to Grant, Fried, and Juillerat (2011), Parker (2014), and to Parker, Morgeson, and Johns (2017).

2.2.1 Work Design Models

The Job Characteristics Model (JCM) is one of the most popular work design models (Hackman & Oldham, 1976). The JCM recognizes a handful of job characteristics that serve to increase the potential of a job to motivate workers to perform successfully and that positively affect worker attitudes. The five core job characteristics are: *task and skill variety* (the ability to use a variety of skills or activities to accomplish job tasks), *autonomy* (the ability to choose how, when, and where work gets done), *feedback* (the ability to gain information about job performance or effectiveness), *task significance* (perceiving the impact work has on other people in or outside the organization as important), and *task identity* (the ability to see work completed from start to finish). These core job characteristics are posited to impact motivation, performance, and satisfaction by triggering critical psychological states—experiencing meaningfulness, feeling responsible for outcomes, and understanding the results of one’s efforts. A meta-analysis by Humphrey et al. (2007) found that these five job attributes were related to job satisfaction, growth satisfaction, and internal work motivation. Although the JCM model has received empirical support, researchers have recently called for a broader view of work design, beyond motivational job tasks (Morgeson & Humphrey, 2006; Parker, Wall, & Cordery, 2001).

More recently, Parker et al. (2001) proposed an elaborated model of work design, which involved antecedents of work design including internal organizational factors (e.g., management style), external organizational factors (e.g., technology availability), and individual factors (e.g., proactive personality). Further, their expanded set of work characteristics included individual-level (e.g., opportunity for skill acquisition) and group-level (e.g., team autonomy) features of work and their interactions (e.g., interdependence and autonomy). In a similar vein, Morgeson and Humphrey (2006) identified a broad set of job characteristics. They proposed three categories to describe the structure of work: (1) motivational work characteristics (i.e., work attributes that make work more motivating; autonomy, task variety, task significance, task identity, feedback from job), (2) social work characteristics (i.e., the social aspects of work; social support, interdependence, feedback from others, interactions outside the organization), and (3) contextual characteristics (i.e., the

physical and environmental work conditions; ergonomics, physical demands, work conditions, equipment use). These expanded work characteristics highlight the complicated and layered aspects of work that workers experience.

Grant and Parker (2009) emphasized two viewpoints of work design that are relevant for the changing nature of work. First, due to the uncertainty of the labor market, proactive perspectives highlight the initiative needed from workers to act in ways that address constant change in the workplace. Second, due to the interdependent nature of work (work roles as part of a larger social system), relational perspectives highlight the social systems and social relationships that exist in the workplace (e.g., teams, interdependent tasks, collaborations), which have been neglected in work design research (Oldham & Hackman, 2010). These perspectives highlight the strengths older workers bring to today's workforce, such as the ability to mentor others and to address new problems through use of prior experience and knowledge.

2.2.2 Age and Work Design

Work design can be used strategically to promote other outcomes, such as mental and physical health, learning and development, and control and flexibility (Parker, 2014). These outcomes can be especially relevant to support aging in the workplace through work design (Truxillo, Cadiz, & Hammer, 2015; Zacher, 2015).

Health Job characteristics may put workers at risk for mental and physical health issues, which can be particularly problematic for older workers. For example, routine and repetitive jobs may lead to musculoskeletal issues (Griffiths, 1999); high-stress jobs can cause anxiety, exhaustion, and depression (Gershon, Lin, & Li, 2002); and overtime work (more than 60 h a week), particularly in physically demanding jobs, can lead to myriad health problems (Allen, Woock, Barrington, & Bunn, 2008). Work design models can offer approaches that buffer workers' negative reactions to stress.

The *job demands-control model* assesses the effects of job demands and job decisions on stress and strain, with strain occurring when job demands are high and job control is low (Karasek, 1979). The implication of the job demands-control model is that work design is relevant to health, and that one way to address such effects is for workers to have a say in how they approach their work. Similarly, the *job demands resources model* is a general model that predicts burnout, exhaustion, and disengagement when demands of the job (e.g., time pressure, shift work) exceed those of resources (e.g., supervisor support, rewards; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The job demands resources model is proposed to be a more generalized model than the job demands-control model because it takes a broader view of what can serve as a resource. These models reveal that resources can buffer the negative experiences of work, such as allowing for more decision-making or promoting social support.

Training and Development There are stereotypes that older adults may not be interested in continued development and training opportunities (Chiu, Chan, Snape, & Redman, 2001). However, older adults are indeed interested in development and training activities, especially when training will help them achieve their work goals (Mitzner et al., 2010). Lifespan development perspectives highlight the goal selection process among older adults. For example, the *selection, optimization, compensation model* is a theory of successful aging that focuses on the process of goal selection and the adaptive approaches used to optimally make use of available resources or compensate for unavailable resources (Baltes & Baltes, 1990). Selection, optimization, and compensation theory highlights the resources older adults may use as they pursue work relevant goals. In addition, socioemotional selectivity theory is a lifespan development theory that can be used to understand how work goals may be chosen (Carstensen, Isaacowitz, & Charles, 1999). Socioemotional selectivity theory predicts that older adults are more present-oriented than younger adults and perceive positive experiences and emotional connections as being more important because they experience time as limited. By contrast, younger adults are thought to be more future-oriented, and view achievement goals as a higher priority because they perceive time as open. Older adults may therefore be more motivated toward achieving workplace goals that emphasize relationship building and applying their expertise (e.g., mentoring opportunities, leadership positions) over achievement (e.g., promotions). For example, Zaniboni, Truxillo, and Fraccaroli (2013) studied two job characteristics (task and skill variety) and their differential effects on burnout and turnover intentions for older and younger workers. Framed under socioemotional selectivity theory, they found that younger workers experienced less burnout and turnover intentions with more task variety (opportunity to work on different tasks) than older workers. By contrast, older workers reported lower turnover intentions than younger adults with more opportunities for skill variety (opportunity to make use of knowledge and skills to complete job tasks).

Flexibility Changes in the workplace may allow for more flexibility about where work gets done, which may benefit workers across all ages. The option of flexibility in the workplace is partly due to changes in technology (e.g., tools available to keep teams connected remotely) and a more global workforce, with more team members spread across the physical space. Flexible work arrangements, such as telecommuting, may be beneficial to workers' stress and health (Halpern, 2005) and can be particularly advantageous for older workers who want to continue working (Ulrich & Brott, 2005).

2.2.3 Summary

Work design is important in the context of the aging workforce because features of work can impact older workers' ability to remain engaged and productive in the labor market. There are a few key elements of work design that organizations can consider when designing for older workers. First, work design should take

advantage of the acquired knowledge, skills, and abilities that are possessed by older workers. Second, work design should emphasize flexible work arrangements. Lastly, work design should consider the opportunities for training and development provided to older workers, especially given that workplace demands will continue to change and require skill updating.

2.3 Moving Targets

The above discussion highlights the importance of job characteristics and the context in which work takes place on worker attitudes, motivation, and performance. However, one important consideration in understanding the fit between the worker and the work is that both the individual and the job are constantly changing in ways that complicate the examination of person-environment fit. Here, we describe these two moving targets: age-related changes in the worker and changes in jobs associated with market demands and the proliferation of technology in industrialized countries.

2.3.1 Person-Related Traits: Moving Targets

It is helpful to define what we mean by “older worker.” There is—after all—incredible variability in aging such that one 50-year old might have the cognitive and motivational profile of a 30-year old and another might resemble the cognitive and motivational profile of a 75-year old. As such, there is actually no precise age at which a worker becomes an older worker. Rather, we describe normative changes in abilities and motivation recognizing that people’s talents, motivations, and abilities will change over the lifespan in incredibly idiosyncratic ways (Beier, Bradshaw, Torres, Shaw, & Kim, 2019).

Age-Related Ability Changes Normative changes in cognitive abilities are relatively well understood. That is, *fluid abilities* are most associated with solving novel problems, working memory abilities, and cognitive processing speed and are expected to decrease throughout the lifespan starting in early adulthood or late adolescence (in the 20s and 30s). By contrast, *crystallized abilities* associated with expertise and education are likely to remain stable or even increase with age (Salthouse, 2010). The decline in fluid abilities and the relative stability in crystallized abilities thus point to an overall net loss in abilities with age.

The perception of an overall net loss in cognitive abilities is somewhat misleading, however, because researchers are not well equipped to measure the idiosyncratic ways in which crystallized abilities develop through adulthood. That is, if consideration of crystallized abilities is broadened to include the knowledge that one acquires throughout the lifespan, then older adults show continuous growth in intellectual abilities rather than decline (Ackerman, 2000). Thus, limitations in how crystallized

abilities are measured mask the continuous development of knowledge throughout adulthood (Beier, Young, & Villado, 2018). Fluid and crystallized abilities are also theorized to work in tandem throughout the lifespan. In particular, investment theories suggest that the intellectual currency of youth (the ability to reason through novel problems, memorize information, and respond quickly—i.e., fluid abilities) is invested in the development of knowledge over the lifespan (i.e., crystallized abilities). This acquired knowledge supports the endeavors of adult life (Ackerman, 1996; Cattell, 1987).

Even though knowledge is the currency of adult intellect (Ackerman, 2000), most organizational scientists have focused on measures of general fluid abilities and measures of general crystallized abilities (e.g., vocabulary, general knowledge) and/or broad general mental ability measures (composed of items spanning both fluid and crystallized domains) for research and selection purposes. This position is unfortunate because general ability measures do not give older workers credit for what they know—the knowledge that makes them successful workers—and renders confusing results when examining the relationship between age and job performance. For example, research has consistently shown a null relationship between age and job performance (Ng & Feldman, 2008; Sturman, 2003). This finding is somewhat perplexing given that cognitive ability accounts for more variance in job performance than any other variable (i.e., 25% of the variance in job performance is accounted for by cognitive abilities; Schmidt & Hunter, 1998) and given that overall cognitive abilities are expected to show a net decline with age. Indeed, if abilities do decline with age, and abilities account for substantial variance in job performance, then age should be negatively correlated with job performance.

Job Complexity in the Context of Changing Abilities One reason that the relationship between age and job performance is not straightforward is because job complexity is not well understood or measured. Most studies include a relatively coarse assessment of complexity, such as the agreement between two raters who “classified each sample occupation into high and low job complexity according to the general intelligence, verbal ability, and numerical ability required to perform the job” (Ng & Feldman, 2008, p. 400). Unfortunately, this approach does not consider ability-related job demands in the context of changes in abilities over the lifespan. If job complexity were operationalized with consideration of the extent to which job tasks tapped fluid and crystallized abilities, then one would expect that the relationship between age and job performance would be positive for those jobs in which most tasks were associated with crystallized and knowledge abilities, and the relationship to be negative for those jobs in which most tasks are associated with fluid abilities (Warr, 1994).

Our research program has attempted to test the feasibility of examining the fluid and crystallized ability demands of jobs. In one study, we used the Occupational Information Network (O*NET; Peterson, Mumford, Borman, Jeanneret, & Fleishman, 1999) to identify the different ability demands of jobs relative to fluid and crystallized abilities (Beier & Beal, 2010). Among other information, the O*NET provides importance ratings for 120 knowledge, skills, and abilities for over 800 jobs. These ratings are provided by job analysts, job incumbents, and occupa-

Table 2.1 Importance ratings for a sample of knowledge, skills, and abilities for the job of industrial and organizational psychologist from the Occupational Information Network (O*NET)

Importance rating	Knowledge	Knowledge description
96	Psychology	Knowledge of human behavior and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioral and affective disorders
95	Personnel and human resources	Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems
89	English language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar
	Skills	Skill description
96	Critical thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems
92	Active listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times
89	Speaking	Talking to others to convey information effectively
	Ability	Ability description
75	Oral comprehension	The ability to listen to and understand information and ideas presented through spoken words and sentences
75	Written comprehension	The ability to read and understand information and ideas presented in writing
75	Oral expression	The ability to communicate information and ideas in speaking so others will understand

Note. Taken from <https://www.onetonline.org/>

tional experts (see <https://www.onetonline.org/> for additional information). An example of the top three knowledge, skills, and ability factors for the job of Industrial and Organizational Psychologist is shown in Table 2.1.

We subjected the knowledge, skills, and ability ratings in the O*NET to a confirmatory factor analysis based on independent ratings of whether the O*NET knowledge, skill, or ability best represented fluid ability, crystallized ability, or some other ability (e.g., perceptual, physical). Two factors—one with abilities most related to fluid ability and one with abilities most related to crystallized ability—emerged in the confirmatory factor analysis (although the fit was not ideal; Beier & Beal, 2010). Interpretation of the factors was difficult, however, because the fluid and crystallized factors were highly correlated (over .90), meaning that jobs that were relatively demanding in terms of one ability were also demanding in terms of the other. To further examine this effect, we created a scatterplot with the extent to which job tasks rely on crystallized abilities on the *x*-axis and the extent to which job tasks rely on fluid abilities on the *y*-axis (both in standardized units; see Fig. 2.1).

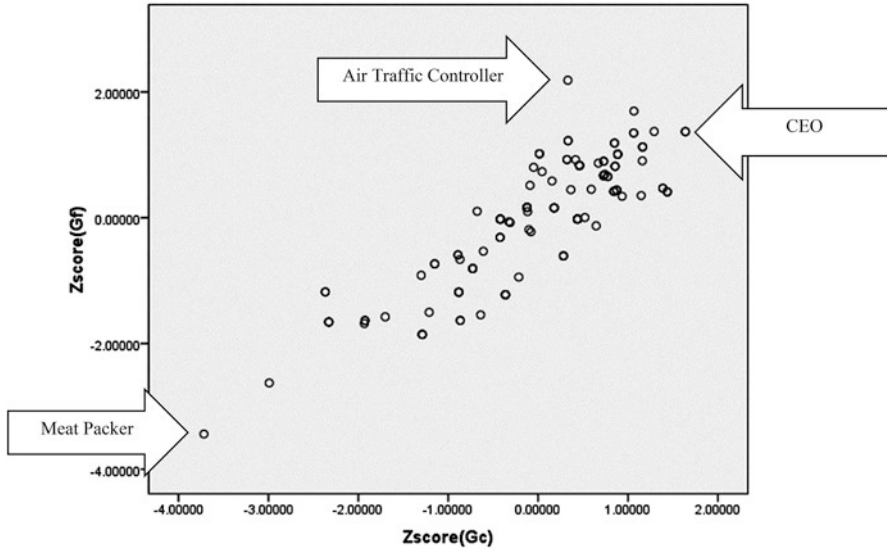


Fig. 2.1 Scatterplot of jobs on the importance ratings of tasks that are related to crystallized abilities (Gc) and tasks that are related to fluid abilities (Gf). Z-scores are charted for each of the abilities. *CEO* Chief Executive Officer

Identifying specific jobs on the scatterplot is illuminating in terms of understanding job complexity related to these two abilities. For instance, the job lowest on both abilities is that of meat packer shown in the lower left-hand corner of Fig. 2.1. From there, job complexity increases linearly in terms of fluid and crystallized demands. One job for which the fluid demands are slightly higher than the crystallized/knowledge demands is that of air traffic controller. These findings are perhaps not surprising given that research suggests that air traffic control is one of the most cognitively demanding jobs in terms of attentional capacity, memory, and processing speed—sub-facets of fluid abilities (Nunes & Kramer, 2009). But air traffic control jobs are also demanding in terms of crystallized demands. For example, air traffic controllers are required to know the rules of engagement and flight patterns in their sectors. Likewise, CEO—the job highest in crystallized abilities—requires extensive knowledge and experience so CEOs can effectively devise and execute business strategy. CEO jobs also require solving novel problems and responding quickly and decisively to crises; that is, these jobs comprise tasks that are also demanding of fluid abilities. Figure 2.1 shows that all jobs rely on both abilities to some extent, and highly complex jobs tend to rely heavily on both fluid and crystallized abilities to a large extent. In retrospect, our original idea that complex jobs could be differentiated in terms of their fluid and crystallized ability demands seems naïve. Indeed, it is difficult to think of a job that relies exclusively on fluid-type abilities and not crystallized/knowledge abilities and vice versa. Thus, one reason researchers fail to find a significant relationship between age and job performance is because work tasks seem to be highly dependent on both fluid and crystallized abilities, particularly at high levels of job complexity.

Age-Related Motivation Changes The ability demands of a job are likely to affect experiences of stress and/or boredom on the job. Job characteristics related to the ability demands of a job will also affect worker perceptions of their own abilities to do the job (self-efficacy and work ability; McGonagle, Fisher, Barnes-Farrell, & Grosch, 2015) and perceptions of the amount of effort involved in executing job tasks. Ability demands of jobs are also likely to interact with age to affect perceptions of how much effort will be involved in executing job tasks, which will also affect work-related motivation (Kanfer & Ackerman, 2004). The motivation theories described above (selection, optimization, and compensation theory and socio-emotional selectivity theory) further suggest that older workers should be more likely than younger workers to focus on goals that capitalize on their existing knowledge, oriented toward socioemotional connections at work, and attracted to work that provides autonomy and flexibility.

Integrating Ability and Motivation Theories Changes in abilities through the lifespan described above can be considered in terms of growth (crystallized abilities) and decline (fluid abilities). Changes in motivation can be considered in terms of a reorganization of goals (Kanfer & Ackerman, 2004). With growth, decline, and reorganization in mind, Kanfer and Ackerman described functions relevant to work motivation for older workers that take into consideration worker perceptions of effort, utility, and the value of the outcomes. In essence, the models state that as workers age, they will need to expend more effort to accomplish tasks related to fluid versus crystallized abilities. As such, their perceptions of the amount of effort required to engage in such tasks will be negatively affected, which will reduce motivation and self-efficacy for these types of job tasks. In essence, changes in abilities will not only negatively affect a person's ability to accomplish tasks related to fluid abilities as they age, but it will also (and relatedly) negatively influence their motivation for these tasks. In contrast to tasks that rely heavily on fluid abilities, workers should perceive that tasks associated with their existing knowledge do not necessarily require increased effort as they age. Indeed, crystallized-based tasks should be perceived as easier as a worker acquires expertise.

How do these changes in abilities and motivation with age interface with job characteristics? In general, research suggests that as people age, they will be less likely to have the ability and motivation to engage in constantly learning novel tasks. However, abilities and motivation to engage in well-learned knowledge-based tasks or tasks that require interpersonal or socioemotional skills will not be diminished with age (Beier et al., 2018; Kanfer & Ackerman, 2004).

2.3.2 Jobs and Their Tasks: Moving Targets

The Labor Market The impact of changes in abilities and motivation that occur throughout the lifespan on work must be understood within the context of the labor market and the availability of certain types of jobs (Bureau of Labor Statistics,

2017b). Indeed, the shift from manufacturing jobs (e.g., assembly line jobs) to knowledge jobs (e.g., manager/supervisor) over the past 50 years is partly a function of technological innovation. This change in the labor market suggests that the availability of jobs that rely heavily on physical abilities will continue to decrease, while the need to operate technology and thus the need to constantly update technological skills will increase. The shift from physical to knowledge work is promising for older workers who will be able to apply the vast repertoire of knowledge gained through past experiences to their current jobs (Beier et al., 2018). Nonetheless, the need for constant skills updating may disadvantage older workers who may be less motivated for continuous training and who may experience decrements in learning abilities associated with age when the content to be learned is novel (Beier, Teachout, & Cox, 2012).

Along with the general trends of decreases in the availability of manufacturing jobs and increases in knowledge jobs, demographic shifts that affect the aging of the labor force will also affect the types of jobs that are available to that labor force. In particular, the aging of the population in many industrialized countries will significantly impact the availability of jobs related to healthcare. According to the Bureau of Labor Statistics (2017a), four out of five of the fastest growing industries—in terms of percent increase in workers—over the decade between 2016 and 2026 are expected to be in social services and healthcare (i.e., individual and family services, outpatient care, other health practitioners, and medical and diagnostic labs). The percent change in the workforce is significant for these industries and ranges from 39 to 27%. With the exception of the physical aspects of many healthcare jobs (e.g., nurses who lift patients and work on their feet all day), the proliferation of jobs in healthcare should positively affect the labor market for older workers, owing to the necessity of interpersonal skills for many of these jobs. Older workers should—for instance—be more oriented toward occupations that focus on helping others, according to socioemotional selectivity theory. Moreover, if one conceptualizes interpersonal skills as a type of knowledge that a person can develop through the lifespan (Beier, Bradshaw, et al., 2019), older workers should have well-developed interpersonal skills and knowledge about dealing with difficult people and for handling difficult situations (Bal & Smit, 2012; Scheibe, Spieler, & Kuba, 2016). All of these attributes align well with the demands of work in healthcare.

Recall that four of the five fastest growing industries are related to social services and healthcare, which should provide some advantage to older workers. The fastest growing industry overall, however, is information technology, which permeates all other industries (e.g., healthcare, customer service, sales, farming, and manufacturing). Unlike healthcare, the growth in information technology may not be good news for older workers in that jobs in this sector are reliant on constant skill updating and innovation rather than existing knowledge, experience, and interpersonal skills (Brooke, 2009; O'Connor, 2017). This is not to say that older workers will have no place in technology industry—organizations will always benefit from business expertise, management skills, and so on—but there should generally be more of an advantage for younger workers in the technology sector (Wickre, 2017; Wright, 2017). The bottom line is that organizations and workers should expect

technology to significantly change the jobs that are available and the tasks that comprise those jobs.

Job Tasks Even though organizational scientists have examined the extent to which job characteristics affect motivation and performance, surprisingly few have attended to the dynamic nature of job tasks. Economists and computer scientists, however, have highlighted the impact that technology has had—and will continue to have—on the nature of work over the coming decades. The current version of the O*NET provides a taxonomy for the array of knowledge, skills, abilities, as well as the work activities and tasks required by jobs (Peterson et al., 1999). Frey and Osborne (2017) applied a novel algorithm to these job attributes to understand the extent to which the jobs in the O*NET were susceptible to computerization. They reviewed the job tasks and abilities listed in the O*NET as essential for jobs and identified those that would be bottlenecks to computerization. That is, they identified the job attributes that could not be easily replaced by technology, and linked those to the job attributes in the O*NET.

Frey and Osborne's algorithm classifies job tasks in a 2-by-2 matrix that crosses routine versus non-routine tasks and cognitive versus physical job tasks. Furthermore, they identified routine work activities as likely to be automated and non-routine, emotional, and creative skills as less likely. Some of the routine tasks identified by Frey and Osborne (2017) as ripe for computerization may be surprising. That is, the list of job tasks that are easily automated include not only routine physical tasks, but also routine decision-making and cognitive tasks that can be accomplished by applying big-data and decision algorithms as well as tasks such as the sentencing of criminals, fraud detection, and disease diagnosis.

Bottlenecks to computerization were organized across three categories: (a) *perception/manipulation*, which includes finger and manual dexterity and the ability to work in cramped spaces and/or in awkward positions from the O*NET; (b) *creative intelligence*, which includes originality (i.e., the ability to develop novel solutions/ideas given a topic or problem), and knowledge of fine arts from the O*NET; and (c) *social intelligence*, which includes social perceptiveness, negotiation and persuasion skills, and assisting/caring for others from the O*NET (Frey & Osborne, 2013, 2017). Further, different waves of computerization of jobs were identified based on the algorithm and the bottleneck categories described above. The first wave will supposedly happen in the relatively near future and will include jobs in the first category (perception and manipulation) because technology is evolving quickly and will soon be able to easily manipulate or perceive non-standard objects or work in small/cramped spaces. In summary, the first wave of automation will eliminate administrative support and other office jobs as well as many labor and production jobs (Frey & Osborne, 2017).

The second and third bottlenecks, however, are not susceptible to short-term automation according to Frey and Osborne (2013, 2017) owing to the fact that technology cannot easily replace creative and social job tasks. Nonetheless, creative tasks are not immune to computerization. For example, books and movies are now being written by artificial intelligence. However, these endeavors are more success-

ful when artificial intelligence is performing more routine and mundane work, while people are central to the creative process (IBM, 2015). Using this algorithm, Frey and Osborne estimate that 47% of jobs will be eliminated over the next few decades. Whether whole jobs will be eliminated or just job tasks is still up for debate (Frey & Osborne, 2017).

Regardless of whether the stark estimate of 47% of jobs eliminated in the next 25 years is correct, technology and automation will significantly impact the types of jobs that will be available over the next three decades. That is, jobs that tap creativity and social skills will remain relatively safe from automation, but many medium and lower skilled workers should expect some disruption in their work—if not total replacement. Thus, many workers may find themselves moving from relatively higher paying service, construction, and manufacturing jobs into lower paying jobs due to technological innovation (Frey & Osborne, 2017).

The doom and gloom of Frey and Osborne's (2013, 2017) estimates of job automation should be tempered, however, with some common sense about work and workers. These authors admit that—as in past industrial revolutions—technology will result in new inventions, regulations, and technological breakthroughs that will affect the labor market in unforeseen ways. Thus, it is difficult to imagine that technological innovation would eliminate almost half of the jobs in an economy without replacing them with different jobs. Second, it is important to note that Frey and Osborne's algorithm is far from perfect. For instance, using their algorithm, they estimate that the job of bartender has a 77% probability of being computerized over the next 25 years (i.e., high probability of computerization). And although many people are currently flocking to bars that employ robot bartenders (Jones, 2017), it is likely that the novelty of these experiences will wear off as people realize how boring it is to interact socially with robots. In essence, the idea that robots will replace bartenders misses the social reasons people go to bars in the first place and misses the social aspects of a bartender's job. This scenario is just one example of how applying algorithms to understand labor market trends may miss important nuances in job tasks; there are likely many more. Nonetheless, it is clear that automation will significantly impact the availability of jobs and job tasks, particularly the availability of low-skill, routine, and physical labor jobs. Unfortunately, the most vulnerable workers will likely be most negatively affected by technological innovation.

Technology also promises to continue to change the social aspects of work. Technology has already provided workers opportunities to work remotely and at all hours of the day and night. These advances have advantages in terms of providing workers with flexibility and autonomy in how they approach their work, which can be motivating to workers (Humphrey et al., 2007). However, remote work can also be lonely and have negative effects on relationships with coworkers (Gajendran & Harrison, 2007). Furthermore, the flexibility of when to work that is afforded by technology can soften the boundary between home life and work life, leading to the impression that workers are available for work during all hours of the day, which can lead to burnout (Hoeven, Zoonen, & Fonner, 2016; Maier, Laumer, & Eckhardt, 2015).

Technology that impacts the ability to work flexibly and remotely and that impacts the social context of work may be experienced differently by younger and older workers. As stated above, the ability to work flexibly will appeal to older workers, but not if it means that they will be on call around the clock. Socioemotional selectivity theory further suggests that older and younger workers would be motivated by different aspects of work; older workers would find opportunities to experience positive relationships at work more appealing than younger workers, and younger workers would find opportunities for promotion and growth to be more appealing than older workers (Carstensen et al., 1999).

2.4 Conclusions and Future Research

2.4.1 *Implications of an Aging Workforce in the Twenty-First Century Workforce*

Above we have described the importance of job characteristics and person-job fit for organizational performance, motivating workers, and for worker health and well-being. That is, when job tasks outpace the skills and abilities of the worker, workers may experience lower job performance, less motivation, and health detriments related to stress. When job tasks do not match the abilities of the worker, workers may experience boredom and a different type of stress (Kristof-Brown et al., 2005). Work design models can be understood in the context of the interplay of changing abilities and motivation through the lifespan with changes in the labor market and job tasks due to technological innovation described above. For instance, the shift in the labor market from physical to knowledge jobs should benefit the maturing workforce. Likewise, jobs that focus on the socioemotional aspects of work, which might include mentoring or caring for others, will also be good matches for mature workers. Thus, the increase in healthcare jobs—particularly those that require less physical work—and the continued need for interpersonal skills regardless of technological innovation should benefit older workers. But jobs in the technology sector (the fastest growing segment of the job market in developing countries) may present barriers to older workers. Jobs that provide flexible work arrangements may also be appealing to the aging workforce, and flexibility may be a method for organizations to engage expert older workers (Beier, 2015; Paullin, 2014).

In the context of the preferences and skills of the mature workforce, technology has much to offer; but it is a double-edged sword. As technology facilitates flexible work arrangements, it also potentially disrupts the social fabric of work—the informal interactions that may impact worker well-being and the interpersonal connections that might motivate older workers and keep them engaged in the workforce longer. Innovation that permits flexible work arrangements also facilitates working at all hours of the day or night, which will be less appealing to workers as they shift from achievement to socioemotional goals with age. Technology will also increase

the value of knowledge jobs that require extensive expertise, which should benefit older workers. At the same time, however, an increased technological infrastructure will require constant skills updating on the part of workers to keep pace with innovation. Constant skills updating will disadvantage the older worker, particularly to the extent that new skills are completely novel and not relatable to existing ways of doing things (i.e., transformative innovation).

History suggests that fears about the elimination of jobs through automation are unfounded (Manyika et al., 2017); but the types of jobs that people have will change significantly with technological innovation into the twenty-first century. For all workers, technology will make low-skill jobs relatively less available as these jobs are the most vulnerable to automation. Workers without significant knowledge or expertise (whether it be in a trade, the arts, or in business strategy) will find themselves at an even greater disadvantage in the labor market of the future than today. The trend toward fewer low-skill jobs will potentially produce high unemployment—a glut of low-skilled workers—which will further constrict wages for those few jobs available (Manyika et al., 2017). High unemployment is particularly problematic for older workers given that finding jobs as one advances in age becomes increasingly difficult (Wanberg, Kanfer, Hamann, & Zhang, 2016).

Future Research As described above, the potential for technology to disrupt the experience of work for all workers is immense. Unfortunately, organizational scientists have not focused extensively on the dynamic nature of work, so much research is needed to answer questions about the automation of different jobs and job tasks. Above, we provided theoretical background for understanding how older workers will fit with jobs in the twenty-first century. In particular, we call for research that examines person-job/person-environment fit with an eye toward aging. It may be, for example, that the experience of mis-fit—when the ability demands of the job are greater than the abilities of the work—is different for older workers than it is for younger workers. For example, it may be that mis-fit when person abilities outweigh job demands may result in boredom that might spur a younger worker to consider changing jobs while older workers might consider job-related boredom a benefit that permits them to focus on other aspects of their lives that are more important to them (e.g., cultivating relationships with friends and family). Conversely, mis-fit when demands outweigh abilities might be stressful for older workers, but it might present younger workers with opportunities for desired stretch assignments. Recently, organizational scientists have begun theorizing about person-job fit throughout the working lifespan (Zacher, Feldman, & Schulz, 2014), but very little empirical research has examined specific questions related to age and fit. Our first recommendation for researchers is to begin examining the relationship between person-job fit and age and the environmental factors that could contribute to engaging the aging workforce for a longer period of time.

As stated above, jobs in the twenty-first century are going to require constant skills updating to ensure that workers keep up with the rapid pace of innovation/automation. Although learning novel skills becomes increasingly difficult with age (Kubeck, Delp, Haslett, & McDaniel, 1996), evidence demonstrates that adults do

learn in training, particularly when the training environment allows ample time and/or is self-paced (Callahan, Kiker, & Cross, 2003). There are likely other ways in which training environments might be modified to meet the unique needs of the older learner, and as technology continues to proliferate in the workplace, more research on age and training is needed. For excellent reviews, see Czaja and Sharit (2012) and Wolfson, Cavanagh, and Kraiger (2014). Our second suggested research area is a greater emphasis on how to design training interventions to train the skills needed for twenty-first century work, with a focus on training older workers. The good news is that training that benefits older workers tends to be training that benefits all workers (i.e., it tends to be straightforward, clear, and allows ample time for learning; Beier et al., 2012).

Our third suggested area of research is a focus on the social aspects of work. Above we describe how jobs will likely change in ways that will affect the social context of work. For example, work teams may be more likely to include robots in the future; technological innovations will make remote work increasingly popular, changing the dynamics of the work team. Even outside of work tasks themselves, technology will affect how much work is done alone (or in the company of technobots) and how much is done in the company of other humans. There is evidence that the presence of others is important for productivity and well-being (Triplett, 1898). The social context of work may be especially important for older workers who will be increasingly motivated by socioemotional goals and will want to engage in mentoring and other generative activities (Carstensen et al., 1999). We thus call for more research in organizational science investigating the impact of technology on the social context of work.

2.4.2 Conclusion

There is no question that jobs are changing rapidly and with them the psychological experience of work. The confluence of two factors—the impact of technology on the workplace and the aging of the global population—promise to affect not only the types of jobs that are available but the types of workers. Due to age-related changes in abilities and motivation with age, it is likely that older workers will choose to engage in different opportunities than younger workers, and more mature workers have a unique set of skills and abilities to offer. We hope to have provided some insight about particular issues that might arise and fruitful areas of future research related to engaging older workers in the jobs of the twenty-first century.

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Chapter 3

Leveraging Aging Workforce and Age Diversity to Achieve Organizational Goals: A Human Resource Management Perspective



Ariane Froidevaux, Valeria Alterman, and Mo Wang

3.1 Introduction

As fertility rates decrease and life expectancy increases (OECD, 2018), developed countries all over the world currently experience shifts in the age of their workforce, so that the integration of seniors into society and work has been emphasized as one of the major challenges of the twenty-first century (Shultz & Adams, 2007). With the numerous workers comprising the baby-boomer generation (i.e., those born between 1946 and 1964), late careers are of concern to an increasing number of workers (over the age of 55; Greenhaus, Callanan, & Godshalk, 2009; Wang & Wanberg, 2017), and have thus become an important area of research. In addition, age diversity is likely to increase in today's workforce due to changes in retirement support and higher education that lead employees to work longer and hence to an older age, and increase the presence of younger workers entrants in the workplace (Burke, 2015). Given this aging trend in the labor force, reaching a better understanding of how human resource management (HRM) practices can support the age-diverse workforce and facilitate the maintenance of their collective job performance is becoming crucial (von Bonsdorff et al., 2018).

Such understanding is especially important given that previous research reported that employers are often lukewarm about hiring and retaining older workers, as they assume a gap between the costs related to these employees and their productivity (Henkens et al., 2018). Such doubts about hiring older employees can be explained by the numerous stereotypes related to age that exist in the

A. Froidevaux (✉) · V. Alterman · M. Wang
Department of Management, Warrington College of Business, University of Florida,
Gainesville, FL, USA
e-mail: ariane.froidevaux@warrington.ufl.edu; valeria.alterman@warrington.ufl.edu;
mo.wang@warrington.ufl.edu

workplace and that tend to generalize both positive and negative attributes (Rudolph, Toomey, & Baltes, 2017). For instance, stereotypical ideas include that older workers are more resistant to change, are more costly, encounter more difficulties to learn, and are poor performers (Posthuma & Campion, 2009). However, research evidence has mostly failed to confirm such stereotypes. Indeed, almost 20 years ago, Greller and Simpson (1999) already recognized that aging, in addition to implying significant inter-individual differences, could be better understood as a process of several discrete transformations rather than a continuous decline; that cognitive decline related to age was not sufficient to influence job performance; and that distinguishing older workers' specific strengths could lead to increased productivity. More recently, in a meta-analysis, Ng and Feldman (2012) evaluated six common stereotypes about older workers (less willing to participate in training and career development, less motivated, more resistant to/less willing to change, less healthy, less trusting, and more vulnerable to work-family conflict) and only found evidence (and a small effect) consistent with the stereotype that older workers are less willing to participate in training and career development, but not for the other stereotypes.

In contrast to the aforementioned detrimental role of not hiring older workers due to stereotypes, HRM practitioners can develop formal company practices that enhance a more age-diverse workplace by influencing employees' job tasks (Rudolph et al., 2017). Indeed, HRM practices have been linked to organizational performance in a multilevel perspective (Jiang, Takeuchi, & Lepak, 2013). Put differently, "organization-level HRM systems impact organization-level outcomes by influencing individual-level employees' idiosyncratic HRM experience and reactions" (Li, Wang, van Jaarsveld, Lee, & Ma, 2018, p. 6). For instance, providing training and development was observed to increase employees' perceived work capacity (Ilmarinen & Tuomi, 2004). This thus represents a top-down perspective in which HRM practices are responsible for shaping individuals' attitudes and behaviors.

Accordingly, in this chapter we build on previous research to address a recent call made by Henkens et al. (2018) to examine successful and unsuccessful HRM practices for an aging workforce. In particular, we propose an HRM perspective to examine how organizations can leverage an aging workforce and age diversity to achieve strategic goals (see Fig. 3.1). Having broadly described the HRM perspective, we then explore how the aging workforce and the increasing trend of age diversity may impact organizational achievement in terms of performance. Then, having summarized the general age-specific HRM practices existing in previous literature, we expand these practices using a broader lifespan view on age that considers how age-neutral HRM practices can be important at all career stages (e.g., Rudolph et al., 2017). In sum, we examine how HRM practices can address firms' strategies and environmental constraints in a way that meets the needs of employees at various career stages (i.e., early, mid, and late careers; Wang, Olson, & Shultz, 2013).

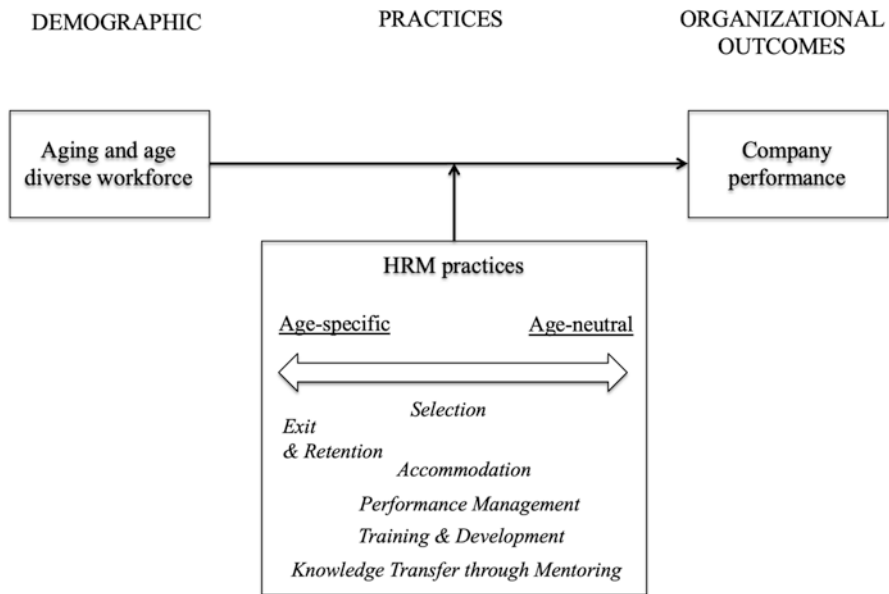


Fig. 3.1 A Human Resource Management perspective on the relationship between age diversity and company performance. The typical HRM practices are placed on the continuum between age-specific and age-neutral practices: while selection, accommodation, performance management, training and development, and knowledge transfer through mentoring can be translated into both; exit and retention only relate to age-specific HRM practices (Adapted from Deller et al., 2018)

3.2 A Human Resource Management Perspective

Human Resource Management (HRM) encompasses “the policies, practices and systems that influence employees’ behavior, attitudes, and performance” (Noe, Hollenbeck, Gerhart, & Wright, 2017, p. 4). These practices have also been referred to as *people practices* because when managed effectively, they can accumulate human capital resources in an organization. In particular, human capital resources are created from the collection of individuals’ knowledge, skills, abilities, and other characteristics (KSAOs; Ployhart & Moliterno, 2011). The more KSAOs each individual employee brings into the organization, the greater the accumulation of human capital within an organization. Moreover, by the process of interpersonal communication, information, and resource exchanges (Kozlowski & Klein, 2000), individuals’ raw KSAOs are combined, and thereby the company’s overall human capital resource expands.

The HRM practices that organizations typically implement include recruiting, selection, training and development, compensation, and performance management. Ideally, each specific practice is formulated and implemented with the company’s goals and objectives in mind. When the strategic need that drives these practices is best fulfilled, organizational performance can improve as a result. For instance, at

Tesla Motors, HRM recruitment practices emphasized finding the most talented employees who are on the same page about a fast-paced culture as Elon Musk, the former CEO. As such, their training guidelines meet both company and employee needs via meaningful, short, and just-in-time learning (Noe et al., 2017). By implementing such recruitment and training HRM practices, the organization can continue with the employee quality it needs without wasting unnecessary time or effort on these essential components of the organization. Taken together, strategically chosen HRM practices can help a company create and maintain a competitive advantage in the market. This position is possible due to the parallelism between the company's goals and objectives and those of the HRM perspective.

Concretely, HRM practices often stem from public policies, as employers need to abide by the laws enforced by agencies such as the Equal Enforcement Opportunity Center (EEOC). In the United States, the Age Discrimination in Employment Act (ADEA) of 1967 prohibits discrimination in employment against individuals 40 years of age and older for organizations with 15 or more employees. As such, organizations' HRM practices need to reflect their adherence to this Act in order to avoid unnecessary legal battles. Taken together, ADEA and public policy highlight the importance of considering both legal and socioeconomic perspectives that may affect older workers' decisions to remain in the workforce. For instance, if employers make layoff decisions despite workers' ages, as ADEA suggests, older workers may be more inclined to remain in the same environment. Therefore, for all workers, and in particular for older workers, employers must take into account the "public policies affecting different aspects, such as flexibility and adaptation of the labor market, discrimination practices, and the level of skill of older workers" prior to developing their HRM practices (Peiró, Tordera, & Potočnik, 2013, p. 525). Such public policies not only help maintain a "workable" (i.e., feasible) environment for older workers but also simultaneously allow organizations to have knowledge regarding the level of accommodation that other organizations are implementing, which allow them to remain competitive.

Finally, HRM practices are often used by organizations to signal to their employees what they value in terms of attitudes and behaviors. Aligned with organizations' strategic values and goals, their HRM systems can be targeted to impact employee attitudes and behaviors that promote their business strategies (Jackson, Schuler, & Rivero, 1989; Wright, Smart, & McMahan, 1995). This capability is particularly important because organizations have distinct business goals and objectives, and it is their employees—managed by the HRM practices—who differentiate organizations from each other in the market. For instance, HRM practices specifically targeted at older or younger workers can be strategically used to create and later foster an age-diverse friendly organizational culture. Promoting the inclusion of all workers in the aforementioned typical HRM practices (e.g., training and development opportunities) can signal to all employees the value of the mature and entrant workforce in the organizations' operations aimed at achieving goals and objectives (Armstrong-Stassen, 2008a). In particular, implementing specific HRM practices signals that the employer not only understands, but also cares, about the different needs, assets, and inclusion of subgroups of employees (Armstrong-Stassen, 2008b).

3.3 The Impact of an Aging Workforce on Company's Performance

Maintaining work performance represents a significant concern when managing an aging and age-diverse workforce (Wang et al., 2013), especially given the possibility of culture change, as well as the loss of knowledge (e.g., leadership), talent, abilities and skills, personal contacts, and relationships (Burke, 2015). Before developing performance at the company level, we briefly review existing knowledge on job performance at the individual and team levels.

3.3.1 *Individual Job Performance*

Previous studies examining the impact of age on job performance have primarily focused on the individual level and have reported mixed findings. Taken together, objective measures of performance (i.e., higher levels of production) suggest that older workers perform better than their younger colleagues, while subjective evaluations from supervisors suggest that older workers perform worse than their younger colleagues (Wang et al., 2013). In addition, in a meta-analysis including ten factors of employees' performance in terms of actions and behaviors, Ng and Feldman (2008) reported that age was not related to core task performance, creativity, and performance in training programs, but was indeed positively related to organizational citizenship behaviors such as helping colleagues in need and not engaging in negative behaviors at work (e.g., complaining). Finally, in extensive reviews, it was skills level and health status (Posthuma & Campion, 2009), and age-related biases and discrimination (Beier & Kanfer, 2013), which best predicted individual job performance rather than age.

A key question relates to the potential influence of HRM practices on the relationship between the aging workforce and performance. Very recently, Taneva and Arnold (2018) addressed this issue at the individual level. They found that HRM practices (e.g., training, financial incentives to remain in the workforce) were indirectly related to individual job performance through the use of selection (i.e., disengaging from unattainable goals and prioritizing goals), compensation (i.e., resources development to attain goals), and optimization (i.e., replace loss resources by new ones): SOC strategies. Indeed, HRM practices focusing on accommodation and development (e.g., constructive feedback from managers) can increase the use of SOC strategies. In addition, Taneva and Arnold (2018) found an indirect effect of thriving at work (i.e., vitality and learning) on the relationship between available HRM practices and individual job performance in terms of task proactivity, in-role and extra-role performance; as well as an indirect effect of surviving at work (i.e., meeting job demands and maintaining the status quo) on the relationship between available HRM practices and individual job performance in terms of extra-role performance. Indeed, HRM practices—by providing employees with an access to chal-

lenging and interesting jobs, and with additional skills—can boost energy and learning (i.e., thriving at work) and reduce the tendency to avoid challenge and change (i.e., surviving at work); in turn, individual job performance is reduced by surviving at work, and increased by thriving at work, respectively.

3.3.2 Teamwork Performance

Kunze and Boehm (2013) recently reviewed the relationship between age and performance at the team level. They concluded that age was not related to work team innovation, turnover, and absenteeism among team members; and inconsistent findings were reported regarding top-management teams, communication, and conflict. Further, age diversity has been negatively associated with team performance (Boehm, Baumgaertner, Dwertmann, & Kunze, 2011). Concretely, in line with their previous study (Wegge et al., 2012) and current findings among more than 700 age-diverse German teams in three occupational sectors, Ries et al. (2013) proposed seven recommendations for an effective use of age-diverse teams: provide complex team tasks without high time pressure, reduce age diversity salience in teams, establish a positive team climate, promote high appreciation of age diversity in teams, reduce age stereotypes and age discrimination from supervisors, promote the use of age-differentiated leadership, and improve the ergonomic design of workplaces within teams.

3.3.3 Company Performance

As emphasized by Henkens et al. (2018), to date not much is known about the extent to which HRM practices influence overall organizational performance, that is, using a multilevel perspective focusing on the employees' aggregated job performance at the company level. Thus, currently companies lack knowledge on how age diversity may affect their performance, and how to manage a multi-generational and age-diverse workplace (Henkens et al., 2018). According to Burke (2015), generational differences may positively affect organizational performance because they may bring more diverse ideas, better decision-making, more creative problem solving, and a better reflection of companies' clients to the organization. However, age diversity may also negatively affect organizational performance because of higher levels of tensions or conflicts, different approaches or preferences in terms of leadership, valuing different rewards, and different views on change and use of new technologies.

Recent research has explored the relationship between company age diversity and firm-level performance. For instance, besides finding no significant direct relationship between age diversity and organizational performance, Choi and Rainey (2010) observed that in companies with high results-oriented cultures, higher age

diversity increased organizational performance. In addition, Kunze, Boehm, and Bruch (2011) observed that increased age diversity was related to higher levels of age discrimination climate, which reduced affective commitment and thus company performance. Very recently, von Bonsdorff et al. (2018) addressed this issue by exploring the mediating role of company work ability of the joint impact of company average age, average use of SOC strategies, and high-involvement work HRM practices—which aim to increase employees' levels of motivation, knowledge, and information about job performance (Guthrie, 2001)—on company performance evaluated by CEOs compared to their competitors. These authors define “company work ability” as an aspect of organizations' human capital (i.e., collective knowledge, skills, abilities, and other characteristics, or KSAOs), which emerges from the work ability of individual employees. Indeed, focusing on work ability at the company level allows capturing the contextual influence of HRM practices at the same level.

Specifically, first von Bonsdorff et al. (2018) argued and found that higher company average age diminished company average work ability because a higher average aged company has more resource loss (e.g., physical resources, certain types of cognitive resources) to perform work-related tasks, than gain (e.g., expertise), among its employees. Second, it was argued and found that employees' average use of SOC strategies buffers the negative relationship between company average age and company work ability; however, such use was not directly related to company work ability. This result is because the use of SOC strategies allows for better coping with job demands and/or resource loss; for instance, refocusing energy may ensure that employees successfully meet their job requirements. Third, von Bonsdorff et al. (2018) argued and found that high-involvement work HRM practices increased company work ability, but found no evidence of such practices moderating the negative relationship between company average age and company work ability. The direct negative effect can be explained by the fact that these HRM practices enhance job autonomy, which allow employees to decide on the best strategies to successfully mobilize their resources to fit job demands. Fourth, these authors argued and found that company work ability increased company performance because of a reduced likelihood of experiencing health problems and thus of being absent from work, and also because of an increased likelihood of learning more from working with their colleagues and from dealing with non-routine tasks and challenges. Finally, von Bonsdorff et al. (2018) reported that the negative relationship between company average age and company performance was mediated by company work ability.

3.4 Human Resource Management Practices

We now turn to HRM practices that aim to increase company performance in the context of an aging and age-diverse workforce. Specifically, we describe age-related HRM practices, defined as “the organization HRM dimensions employed to manage

human resources with an explicit focus on the demands of an ageing workforce” (Boehm, Schröder, & Kunze, 2013, p. 216), which can be both (1) *age-specific* and (2) *age-neutral*. These two categories of HRM practices reflect two different models of HRM practices related to workers and their aging processes (Yeatts, Folts, & Knapp, 1999). On the one hand, the *depreciation model* posits that an employee’s highest value rests at the beginning of his/her career, and thus, their value depreciates with time, eventually dropping to zero at the time of retirement. As such, workers, and in particular older workers, are seen as costs. From this perspective, age-specific HRM practices are developed to counterbalance such traditional and stereotypical negative views on older workers. On the other hand, with the *maintenance model*, employers consider all workers regardless of age as assets to their organization. These assets should be well trained, educated, and managed, and if they are not, it is worth the investment of developing them. For instance, the award of the Age Smart Employer (2014) has been recently created to recognize New York City businesses and non-profit organizations that have implemented HRM policies to hire, retain, and engage four generations of workers. We now develop (1) age-specific and (2) age-neutral HRM practices, which we categorize in terms of the aforementioned typical HRM practices. As illustrated in Fig. 3.1, most can be translated into both age-specific and age-neutral practices, and are thus positioned in the middle of their continuum (i.e., selection, accommodation, performance management, training and development, and knowledge transfer and mentoring), whereas one only relates to age-specific practices and is thus placed towards this end of the continuum (i.e., exit and retention).

3.4.1 Age-Specific Practices Focusing on Older Workers

3.4.1.1 Selection

Selection refers to “the process by which an organization attempts to identify applicants with the necessary knowledge, skills, abilities, and other characteristics that will help it achieve its goals” (Noe et al., 2017, p. 224). Despite laws that prohibit it, age discrimination continues to be prevalent in many industrialized countries (Lahey, 2010), which can be observed in organizations’ HRM selection practices (Truxillo, Finkelstein, Pytlovany, & Jenkins, 2015). In particular, previous research has demonstrated that older interviewees may be given shorter interviews and receive fewer job offers than younger interviewees (Bendick, Brown, & Wall, 1999)—thus providing evidence of age discrimination. Furthermore, Oude Mulders, Henkens, and Schippers (2017) reported that while top managers’ beliefs on equal treatment regardless of age (i.e., age equality norms) affected HRM practices targeted to older workers *before* normal retirement age (i.e., recruitment of older workers from outside the organization before normal retirement age, and encouraging retention of older workers until retirement), top managers’ beliefs about when older workers are expected to retire (i.e., retirement-age norms) seemed to affect HRM

practices targeted to older workers *after* they have been through the normal retirement age (i.e., encouraging retention of older workers beyond normal retirement age, and rehiring formal employees who retired).

Moreover, in an attempt to explain the unfair treatment of older workers (i.e., age discrimination) in hiring practices, Fasbender and Wang (2017b) built on the theory of planned behavior (Ajzen, 1991) to posit that negative attitudes towards older workers leads to avoidance of hiring them, which in turn is negatively related to the likelihood of selecting the oldest equally qualified applicant. However, these authors found that when the decision-maker had high core self-evaluations (e.g., high self-esteem), he or she was less susceptible to the threat of an older worker and thus less likely to discriminate against them, which resulted in less biased decisions. Indeed, these negative attitudes were suggested to be due to the threat that younger workers feel towards older workers' knowledge and seniority, as it may remind them of aging and death (Nelson, 2011). In turn, these negative attitudes may result in depletion of cognitive resources; thus, people may be more likely to try to avoid situations in which they expect to work with older workers (Fasbender & Wang, 2017a). In addition, similar to the desensitization phenomenon in psychology, intergroup contact has been proposed as one of the most promising solutions for these anxiety-provoking situations (Allport, 1954). Specifically, Fasbender and Wang (2017a) found evidence supporting the notion that quality of intergroup contact (i.e., the "actual face-to-face interaction between members of clearly defined and distinguishable groups"; Pettigrew & Tropp, 2006, p. 754) may alleviate the negative feelings associated with hiring and working with older workers. Such results are in line with previous findings showing that intergenerational contact may create a shared identity and facilitate positive views towards older workers as outgroup members (Henry, Zacher, & Desmette, 2015; Iweins, Desmette, Yzerbyt, & Stinglhamber, 2013).

Thus, in practice, organizations may address the issue of existing negative attitudes or norms towards hiring older worker through developing different HRM practices. First, if the organization aims to bring in novel and experienced workers (i.e., recruit older workers from outside the organization *before* retirement age), it should utilize top managers who value equal treatment across age-diverse workers, and not necessarily those who have strong beliefs about when older workers should retire (Oude Mulders et al., 2017). Second, companies may offer opportunities for high quality exchanges between decision-makers and workers of different ages (Fasbender & Wang, 2017a). Third, HRM practices may target the negative attitudes towards older workers that impede their selection (Fasbender & Wang, 2017b). Notably, such practices may promote an age-friendly organizational culture that may combat the negative stereotypes associated with older workers, and even foster positive attitudes towards them. Finally, as recruitment involves finding appropriate applicants both in the internal and in the external labor markets, whenever a position opens up that could be targeted for older workers already employed in the organization or older retirees, employers should be aware of the opportunity to place mature employees who already carry a wealth of knowledge (Rudolph et al., 2017). In the

end, this strategy may save the organization money in recruitment and training efforts.

To conclude, at the national level, some countries have developed governmental policies that support the selection of older workers and thus the development of age-specific HRM policies towards selection. For instance, in Singapore, the Retirement and Re-employment (Amendment) Bill 2016 introduced an option to allow certain older employees to be re-employed by another organization, with the aim of increasing labor market flexibility and alleviating responsibility for organizations (Ministry of Manpower Singapore Government, 2017).

3.4.1.2 Exit and Retention

Overall, the aging workforce and increased life expectancy at 65 years old (OECD, 2018) require the development of specific HRM practices to retain older employees. While attracting the best workers is an important component of organizational success, it is important for organizations to be able to retain talent. Notably, by preventing unwanted turnover, organizations can avoid unnecessary recruitment and its associated costs. In fact, key positions in organizations such as managers, supervisors, and executives are typically filled by older workers with vital organizational knowledge (United States General Accounting Office, 2001). Therefore, organizations should strive to retain the talents of these kinds of employees to avoid losing important human capital, especially knowledge. Therefore, succession planning as part of retention represents an important HRM practice that helps organizations plan smooth transitions for individual positions by considering potential individuals who may develop and replace those who may be leaving (Rau & Adams, 2013). This method is especially useful for anticipating the exit and replacement of valuable employees near retirement, as it allows employers to maximize the time before older workers exit while minimizing knowledge loss by encouraging interaction, collaboration, and mentorship to younger workers (Erdheim & Lodato, 2013).

Continuing to work at older ages is indeed not only beneficial to companies but also follows the wishes of an increasing number of workers. In fact, approximately 80% of US employees 50 years old and above show interest in staying in the workforce past their retirement age (Jackson, Schuler, & Werner, 2018). According to continuity theory, it is indeed beneficial for the individual to ease into retirement gradually (Kim & Feldman, 2000), that is, progressively withdraw from work, or withdraw and then return part-time (De Vaus, Wells, Kendig, & Quine, 2007). In particular, this path to retirement allows individuals to supplement their income while maintaining a sense of purpose in life by continuing with their work roles and potentially experience a positive change in health (Calvo, Haverstick, & Sass, 2009; De Vaus et al., 2007).

Despite employers' perceptions of older workers as more conscientious, less neurotic, and higher in organizational citizenship behaviors than their younger counterparts (Bertolino, Truxillo, & Fraccaroli, 2013; Truxillo, McCune, Bertolino,

& Fraccaroli, 2012), employers are not typically proactive in their methods of retaining older workers. In particular, Armstrong-Stassen (2008a) suggested that the lack of employers' proactivity can be explained by the fact that employers often hold negative attitudes towards older workers, and that these stereotypical views tend to result in discriminatory behaviors such as laying off older workers near retirement (e.g., Fasbender & Wang, 2017b). Indeed, several factors have been identified in previous research as driving organizations to implement HRM practices to retain older workers. According to Walker and Taylor (1999), first, labor shortages represent a leading cause for organizations to consider maintaining their current human capital, including the talent provided by older workers. Second, changes in public policies have dictated changes in practices aimed at mature workers. For instance, a reduction of early exit subsidies can motivate organizations to offer partial rather than full early retirement to their employees. Third, a culture of *good practice*, that is, "providing an environment in which each individual is able to achieve his or her potential without being disadvantaged by their age" (Walker & Taylor, 1999, p. 64) creates a standard that managers can follow for future decisions.

Thus, in practice, organizations may address the issue of retaining older employees through developing different HRM practices. First, phased retirement allows current employees to continue working at a reduced workload (Rau & Adams, 2013). Instead of working a full-time job, retirement-age employees typically work 20–29 h per week (Erdheim & Lodato, 2013). Indeed, such practice can be particularly effective in retaining older workers given that previous research has shown that long working hours may be an important factor in older workers' decisions to retire (Peiró et al., 2013). Second, contingent work arrangements differ in that workers are fully retired before they are "rehired" as independent contractors or temporary workers (Rau & Adams, 2013). Third, comprehensive benefits packages (e.g., health care options), job flexibility (discussed in the Sect. 3.4.1.3 below), and professional growth and development (discussed in the Sect. 3.4.1.4 below) represent additional strategies to attract and retain older workers (Cleveland & Maneotis, 2013). Fourth, HRM age-inclusive practices can create an age-friendly culture that combats age barriers and encourages parallelism between its policies, practices, and day-to-day operations (Walker & Taylor, 1999). Finally, as employees' preferred practices change throughout their careers, older workers may not be attracted (i.e., retained) by the same benefits as younger workers. In particular, while younger workers may be more motivated by benefits such as compensation and status, older workers tend to prefer non-monetary benefits such as job security, schedule flexibility, and opportunities to mentor (Rau & Adams, 2013). Thus, such practices signal a high level of value and respect towards older workers and have thus been reported to be the most consequential in individuals' decisions to remain with the current organization (Armstrong-Stassen, 2008a). For instance, succession planning may indicate that the individual holds a key position within the organization and allows them to mentor the younger generations as they prepare to exit.

3.4.1.3 Accommodation

Accommodation refers to “workplace measures that compensate for the possible fall in the physical and cognitive capacities that accompany the process of aging” (van Dalen, Henkens, & Wang, 2015, p. 816). Accommodation HRM practices can affect older workers directly by improving their physical and cognitive well-being, as well as indirectly by demonstrating an organizational climate that cares for the safety and health of its workers (Newnam, Griffin, & Mason, 2008). In particular, HRM practices aimed at accommodating older workers can not only make employees more efficient and effective while at work, but also encourage them to stay working longer (Rau & Adams, 2013). Overall, accommodation measures are worth implementing given that they are free of cost for employers, and that the alternative might be to lose human capital.

There are several ways that an employer can make accommodations for their older workers through HRM practices (Di Pierro, Villosio, & Alberto, 2009). The general idea is that older workers need more flexibility to take care of aging-related needs (e.g., attending one’s or other’s doctor’s appointments). Concretely, autonomy of place and time is not the only kind of freedom being offered to older workers. Job autonomy—the freedom to perform work roles—can signal value and support from the organization to older workers (Cleveland & Maneotis, 2013). Job crafting, characterized by individuals modifying their tasks at work in order to improve their person-job fit (Tims, Bakker, & Derks, 2012), represents another form of accommodation. Indeed, previous research reported that such modifications may result in successful aging at work by allowing older workers to continuously adjust their jobs (Kooij, Tims, & Kanfer, 2015).

Examples of job crafting-accommodation practices first entail older workers mentoring younger employees within the organization. Second, based on the biological approach to job design (Noe et al., 2017), HRM practices can involve ergonomic changes in the workplace that can alleviate the physical decline, especially for those working in physically demanding jobs. Some of these changes may include better equipment such as larger or higher quality computer screens, or adjustments to the job design to minimize physical strain on the worker, including rearranging the physical space to reduce repetitive movements. Third, another option often offered to older workers is teleworking (i.e., telecommuting), which allows individuals to work from home with the help of the internet. Allowing older workers to work *where* and *when* is most convenient for them gives them the freedom they need to continue working and postpone retirement (Peiró et al., 2013). Lastly, employers can accommodate older workers’ needs by considering job reassignment on an as-needed basis. Job reassignment refers to the reassignment of older workers to less demanding jobs if preferred or needed (Armstrong-Stassen & Schlosser, 2011). One example of job reassignment related to scheduling work hours requires employers to switch older workers from night shifts to day shifts.

3.4.1.4 Performance Management

Performance management refers to “the means through which managers ensure that employees’ activities and outputs are congruent with the organization’s goals” (Noe et al., 2017, p. 321). Here as well, unfortunately, the negative stereotypes referenced above influence managers’ perceptions of older workers’ productivity, reliability, and adaptability (Peiró et al., 2013). Another part of the problem may arise from the distinct motivators for the employees of different age groups (Wang, Burlacu, Truxillo, James, & Yao, 2015). While higher compensation packages may motivate younger employees to perform better, this same technique may not work well with older workers (Rau & Adams, 2013). Finally, as highlighted by Wang et al. (2013), a specific issue lies in the fact that older workers are increasingly likely to have younger supervisors. It is thus necessary that older workers remain open to feedback when they discuss their performance with a younger supervisor, rather than assuming that their years of work experience (e.g., higher job tenure) may automatically lead them to the correct answer to a problem. In this context, a trusted and reliable relationship between managers and employees may thus be particularly advantageous.

Thus, in practice, organizations may address the issue of older employees’ performance management through developing different HRM practices. First, it is desirable that organizations develop HRM practices that motivate older workers to contribute to organizational performance. Such practices could be based on (1) cognitive evaluation theory (Deci & Ryan, 1991), which suggests that high autonomy, self-efficacy, and relatedness all have a positive impact on older workers’ motivation; and (2) goal setting theory (Locke & Latham, 1990), which argues that older workers are motivated when they are given clear goals that are simultaneously challenging and time-related. Second, older workers with responsibilities regarding mentoring others, passing along their knowledge, and receiving recognition for these efforts may result in highly motivated employees (Rau & Adams, 2013).

3.4.1.5 Training and Development

Training (i.e., the “planned effort to facilitate the learning of job-related knowledge, skills, and behavior by employees”; Noe et al., 2017, p. 265) and development (i.e., “the acquisition of knowledge, skills, and behaviors that improve an employee’s ability to meet changes in job requirements and in client and customer demands”; Noe et al., 2017, p. 379) HRM practices are those aimed at increasing employees’ abilities. For older workers in particular, training and development are essential in today’s technologically driven workforce. The fast-paced changes in technology at work may leave older workers’ capabilities behind, as they are less able to learn by themselves as younger employees may be. Thus, older workers’ skills may be rendered obsolete when they cannot keep up with changing environments. Since employees’ KSAOs are combined to create an organization’s human capital, it is important that organizations play a key role in the development of older workers.

Indeed, these workers require special attention, especially but not limited to the technology-related developments at work.

Unfortunately, training for older workers is not typical for most organizations, as only a small number of employees aged 45 and over receive training from their employers (Peiró et al., 2013). More specifically, younger employees (25–49 years old) are twice more likely to receive training than those 50 years old or more (Dibden & Hibbett, 1993). Previous literature provides recommendations for organizations to design age-specific training and development HRM practices. According to França, Rosinha, Mafra, and Seidl (2017), first, to better target older workers' needs in terms of development, employers should at least offer equal access to training for all employees. Second, in addition to encouraging all employees to participate, employers should maintain a certain level of monitoring to ensure that learning is happening for employees of all ages. Third, whenever applicable, employers should allow older workers to take on the role of trainers, as they surely have knowledge that younger employees may not. Fourth, according to Wang et al. (2013), to attract older workers, learning content should be designed as being practically relevant to their work, and older workers should be given sufficient time to practice the new skills so that the implementation to their tasks could be done more easily. Indeed, these aspects need to be given emphasis not only during the training but also when the training is advertised.

3.4.1.6 Knowledge Transfer Through Mentoring

There are several types of knowledge that an employee may possess within an organization: explicit (i.e., easily expressed knowledge), tacit (e.g., known by an individual but difficult to express), intellectual (focused on information, facts, and concepts), and social (focused on interpersonal relationships and access to social networks; Nahapiet & Ghoshal, 1998; Peterson & Spiker, 2005). Despite these different types of knowledge, likely some amount of accumulated knowledge will be lost when an employee leaves the organization, and in particular, when an older worker retires (DeLong, 2004). Therefore, transferring knowledge across generations represents a major concern for organizations. Indeed, in a recent survey by MetLife (2009), 71% of US employers surveyed reported that loss of knowledge due to retirees was a main concern.

The most efficient method for an organization to keep track of knowledge presence and potential transfer situations is via a knowledge transfer process. According to Rau and Adams (2013), not all positions within an organization need HRM involvement as part of a knowledge transfer processes. Put differently, only the key positions having the potential to impact organizational performance should be considered for the knowledge transfer process, and these may not all need to be managed simultaneously. Moreover, the decision of where the knowledge transfer is most needed within an organization is dependent on different factors, such as the knowledge level of the individual in the position and his/her demographics, and the presence of a successor and his/her demographics.

In particular, employers can provide knowledge transfer tools to help the process. First, documenting processes are helpful for task-based jobs requiring explicit knowledge. The knowledge transfer for these jobs can include written descriptions that hold the knowledge (e.g., procedure manuals) for future employees to learn from. Second, interpersonal processes are more appropriate for jobs that require tacit and/or social knowledge. These processes focus on knowledge transfer via interpersonal interactions between employees who have, and those who need, the knowledge (e.g., who to ask for advice at work). Third, the organization can foster the knowledge transfer process by facilitating an organizational culture that values communication and collaboration across employees from different generations. Indeed, the three key elements of an organizational culture that fosters knowledge transfer include valuing older workers' knowledge accumulation, fostering respect among the generations, and emphasizing the importance of learning and development at work (Slagter, 2007).

Based on such culture, it is likely that older workers will create roles for themselves as mentors of younger, less-experienced employees (i.e., job crafting). This kind of interaction would encourage knowledge transfer, while creating meaning and providing a sense of purpose at work for the older worker (Calvo et al., 2009; De Vaus et al., 2007). Indeed, to be given the opportunity to mentor and transfer knowledge emerged as one out of nine desired forms of organizational support in a recent qualitative study among older workers (Taneva, Arnold, & Nicolson, 2016). As a result of intergenerational exchanges of information, younger employees may feel less prejudice against the idea of aging and working with the older workers (França et al., 2017). These kinds of exchanges of information would prompt a positive cycle of knowledge transfer, where older workers share their experiences with younger workers, leading to more positive associations across the two groups and more intergenerational contact at work, thus culminating in more knowledge transfer.

3.4.2 Age-Neutral Practices

Overall, age-specific HRM practices reflect the traditional view on age management, which consists of applying positive discrimination practices towards older workers (see previous section) to counterbalance youth-centric practices (i.e., the “direct and indirect discrimination of older workers in recruitment, training, and career development”; Schroder, Flynn, & Muller-Camen, 2011, p. 103). As recently advocated by Rudolph et al. (2017), it becomes increasingly necessary to adopt a broader work-lifespan view about age management, including practices targeted at employees from early- to late-career stages. As explained by Schroder et al. (2011), age-neutral HRM practices are holistic and intergenerational, and target the productivity, well-being, and employability of the entire workforce over the lifespan. Indeed, employees at different career stages bring unique opportunities for company effectiveness and performance: while older

workers have experiences and networks (e.g., clients), younger workers having just graduated possess up-to-date knowledge (e.g., the most recent evidence-based best management practices).

In addition, adopting more age-neutral HRM practices is critical because age norms in organizations (e.g., an age for promotion or retirement) have been suggested to impact the development of discriminatory practices in terms of negative attitudes towards specific age groups (Peiró et al., 2013). Notably, in their study, Hennekam and Herrbach (2015) reported that a significant part of older workers perceived age-specific HRM practices as “a stamp” recognizing their belonging to a devalued social group, thus leading to stigmatization and discrimination. Specifically, older workers explained that while they wanted employers to accommodate their needs, they also wished they did so without them and others perceiving that they needed special attention as a group.

Consequently, Oliveira (2018) has suggested general strategies to diminish the risk that age-specific HRM practices towards older workers lead to stigma for this age group. First, HRM practices should emphasize positive social identities shared by older workers and their colleagues, rather than proposing a special treatment for them. For instance, positive social identities can be related to the work-related identity and to individuals' specific occupation or the firm, notably in terms of the company's mission and values. Second, HRM practices should be based on the equal treatment of all age groups, which would provide older workers with the “identity safety” of being integrated with others and their full potential being developed. As such, age-awareness HRM practices should be replaced by general age-neutral HRM practices available to all employees, with no age limitation to guarantee their access. In other words, the organizational culture should include an equality of opportunity so that conditions should be the same for employees regardless of age, for instance in case of downsizing or access to training (Deller, Finkelstein, Wilckens, Wöhrmann, & Adams, 2018).

Thus, adopting age-management strategies within a lifespan view (i.e., a continuum from early to late careers) allows avoiding the tricks of adopting a comparison mindset (i.e., between early- and late-career workers), which has been shown to be particularly detrimental when comparing two groups (compared to three, four, and so on; Oh, Chung, & Labianca, 2004). In contrast, such a view promotes an understanding of aging as an individual change process in terms of motivation, values, competencies, and behavior (Deller et al., 2018). Age-neutral practices further address the concern raised by previous findings, according to which employers' positive attitudes towards older workers regarding their commitment, flexibility, and work motivation was often to the detriment of younger workers (Loretto & White, 2006). Indeed, in a recent qualitative study among HR managers and older workers aimed at identifying HRM practices that contributed to successful aging in the workplace, both age-specific and age-neutral practices emerged in the findings (Taneva & Arnold, 2018). Key findings included age-specific practices such as the recognition of the significant role older employ-

ees can play, financial incentives to remain in the workforce instead of retiring, and opportunities to work past retirement on the one hand, and age-neutral practices such as training to learn new skills, training to update current job skills, challenging and meaningful tasks, useful feedback from managers, and unpaid additional leave on the other hand. We now describe these non-age-specific practices in greater detail.

3.4.2.1 Selection

Selection can be used to target an age-diverse workforce, as organizations need to think about increasing age diversity by recruiting both younger and older workers in addition to mid-career workers. Indeed, to address worker shortages, organizations are increasingly hiring both younger and older workers (Burke, 2015). In a national study, Pitt-Catsouphes, Smyer, Matz-Costa, and Kane (2007) reported that around 62% of US organizations had taken steps towards the selection of an age-diverse workforce. Indeed, recent research reported that such choice is based upon the business strategy of companies, notably benchmarking (i.e., comparing one's set of policies with peers') and compliance (i.e., laws and regulations) strategies (Ollier-Malaterre, McNamara, Matz-Costa, Pitt-Catsouphes, & Valcour, 2013).

Recently, Rudolph et al. (2017) suggested a different selection of HRM practices aiming at increasing age diversity among employees. First, an age diversity audit needs to be conducted, which aims to collect information about the current climate regarding age in the company in order to better define the recruitment strategy. Notably, surveys or interviews can focus on perceptions of how the organization supports employees across the work lifespan. Second, recruitment should be done with a specific awareness as to which messages are conveyed in the job postings, so that these contain information that highlights the strengths and need for both younger and older applicants, rather than discouraging older or younger (e.g., emphasis on accumulated work experience) applicants. Concretely, job postings may convey a sense that non-work experiences (e.g., volunteerism, internships) are valued by the employer, that support is provided by training and development opportunities, and that mentoring programs are in place to emphasize how younger workers can gain knowledge while at the same time emphasizing the accumulated experience from older workers.

Third, selection of an age-diverse workforce can be done through age-conscious job analysis with specific attention to job-relevant experience in terms of work and non-work experiences, education, and training, which benefits both older and younger workers (Rudolph et al., 2017). Notably, experience-based interviews, training and experiences evaluations, and biographical data can be used as selection tools with the awareness of exploring applicants' previous experience not only in terms of quantity (e.g., number of previously held occupations and associated tenure) but also quality (e.g., personal attitudes, personality, and interests, and involving not only past actions and results but also critical analysis of hypothetical situations).

3.4.2.2 Accommodation

While accommodation HRM practices have been traditionally been focused towards older workers with declining physical capabilities, those practices can also be applied to employees across the lifespan, notably with health promotion and illness prevention focuses. The index for active aging in organizations (Deller et al., 2018) suggests two pillars related to accommodation. First, work design HRM practices should include flexible work-time arrangement (e.g., switch to part-time, possibility of unpaid leaves), flexible workplaces (e.g., working from home), work according to capabilities, and ergonomic working conditions (e.g., using a specific mouse that relieves muscular pain in the wrist). Second, health management HRM practices should involve the availability of physical exercise (e.g., bike-to-work initiatives, special agreements including reductions for employees at partnered gyms) and nutrition opportunities (e.g., labels and associated menus guaranteeing a balanced diet at the company's canteen), workplace medical treatment (e.g., wellness programs including yoga classes during lunch breaks), and health promotion (e.g., information campaign on burnout, encouraging a sustainable work-life balance). As illustrated by these various examples, these practices can and should (Deller et al., 2018; Oliveira, 2018) be addressed to employees across the work lifespan. Notably, flexible work-time arrangements allow a better integration of the work and family domains and can be useful to employees over the life span, from caring young fathers and mothers to caring for a spouse, parent, and grandchildren in mid and later life.

3.4.2.3 Performance Management

Overall, performance review practices should feature age-neutral performance appraisals (Armstrong-Stassen & Schlosser, 2011; Kooij, De Lange, Jansen, & Dijkers, 2008). In particular, while the characteristics of effective performance management processes are the same regardless of employee age, a risk of inequality exists in their use (Wang et al., 2013). According to these authors, individuals of all ages need to possess a clear understanding of their goals; their needs in training and coaching should be equally provided, and their performance fairly evaluated across the work lifespan. As the effectiveness of the performance management process has been reported to be directly related to the relationship between managers and employees (Daniels, 1999), concretely age-neutral HRM practices may imply the optimization of this relationship through managers' training. Specifically, relying on Wang et al. (2013), such training may involve enhancing behaviors from managers towards employees that help (1) understand their managers' precise expectations towards their work and how their performance will be evaluated, (2) contribute to employees' success by helping them solve problems and have access to key resources, (3) develop an understanding of their employees' talents so that they can assign them with work tasks matching these specific strengths and thus improve their performance, (4) provide feedback that focuses on what goes well and

concrete suggestions for improvement, and (5) ensure the organization of regular meetings allowing meaningful and constructive feedback.

In addition, according to Deller et al. (2018), leaders are responsible for promoting the potential of employees of all ages, which can be done through considering employees' strengths in terms of an accrued responsiveness to individuality (e.g., work space wishes, individual life circumstances), and appreciation for their talents and contributions. These aspects need to be explicitly recognized through increased job autonomy and responsibility as well as milestones celebration. Such a perspective is in line with talent-based performance management processes, which aim to optimize individual performance through using specific talents to achieve specific goals (Wang et al., 2013). Such an approach implies more autonomy for the employee; that is, while the manager assigns the task, the employee decides how to accomplish it, according to his or her personal talents. Concretely, age-neutral HRM talent-based performance management practices may imply that managers conduct discussions that allow them to fully understand their employees' talents and career aspirations, and that encourage employees to share their best practices at solving a specific task that may help other employees to successfully solve them as well (Wang et al., 2013).

3.4.2.4 Training and Development

Overall, age-neutral training and development HRM practices aim to avoid dequalification through life-long learning (Schroder et al., 2011). Indeed, being provided with equal access to learning and development opportunities emerged as one of nine desired forms of organizational support in a recent qualitative study among older workers (Taneva et al., 2016). It is thus particularly important that companies avoid differentiated access to training based on age, as support for training and development has been reported to decline rapidly with worker age, and is associated with minimal investments in those approaching retirement (Burke, 2015). As most organizations offer training available to all their employees to improve their performance such as socialization and information towards new employees, skills update training, leadership skills training, computer-based training applications, or sexual harassment and workplace bullying (Wang et al., 2013), additional training could be provided specifically on age awareness and diversity, and cross-generational relationships (Boehm et al., 2011; Burke, 2015). Indeed, such age-awareness trainings may not only diminish potentially negative views about specific age groups from the organizational culture and climate but also reduce tensions and conflict (Burke, 2015). This kind of training would be especially beneficial given that previous research has demonstrated a positive relationship between age diversity and increased age discrimination climate (Beier & Kanfer, 2013).

In the development of an index for active aging in organizations, Deller et al. (2018) suggested that individual development HRM practices should include continuous development planning, appropriate solutions for training and development, and enabling development steps and job changes. Specifically, these authors

emphasized that development planning should be done at all ages and stages of the work life, and could be concretely undertaken by individual meetings between employees and managers as well as through professional workshops enhancing self-reflection on abilities, competencies, and goals. Further, they suggested that appropriate training may include internships, conferences, and continuous education for workers of all ages, with support from the organization in terms of tuition reimbursement. Finally, regarding job changes, these authors highlighted that employees may change positions to better reflect their evolving specific competencies and development interests, for instance in terms of responsibilities, inclusion in new projects, and positions in other departments.

3.4.2.5 Knowledge Transfer Through Mentoring

Besides the aforementioned HRM practices targeting knowledge transfer from older to younger workers through mentoring, considering these practices in an age-neutral perspective broadens the reflection towards inter-generative collaboration in terms of global knowledge management. Indeed, Deller et al. (2018) suggested that knowledge management represents one of the pillars of the index for active aging in organizations. Specifically, inter-generative collaboration implies that companies should focus on mutual knowledge transfer between generations, thus highlighting the two directions it may take; that is, both young-to-old and old-to-young. In other words, in today's work environments and sustainable careers (De Vos & van der Heijden, 2015), it is no longer possible to assume that roles of mentor and protégé are defined by chronological age (Wang et al., 2013). Concretely, while organizations can implement formal practices of mentorship or leaders can select an age-mixed team for a project, such interactions can also take place in a more informal environment in terms of intergenerational pairs of workers exchanging ideas about a specific task (Deller et al., 2018).

Indeed, the effectiveness of the mentoring relationship has been observed to depend on mutual learning (Wang et al., 2013). According to these authors, key ingredients for mentoring effectiveness between generations involve an optimal matching between late and early career colleagues so that both believe that they have something to learn and to teach in the relationship. For instance, while the younger colleague may teach current technical knowledge to their older counterpart, he or she may learn from the older worker the political nuances behind organizational decisions and how communication about them is made, both explicitly and implicitly. Another key ingredient relies on clarifying the roles and communicating expectations as a general framework (i.e., form) guiding the sharing of content-related knowledge, which aims to avoid situations where colleagues "tell others what to do" (p. 139) and/or imply that their strategies are inadequate. Finally, strong support from supervisors of both the early and mid- or late-career employees is necessary, in terms of regular checks to ensure that mentoring is actually working (Wang et al., 2013).

3.5 Conclusion

In this chapter, we developed a Human Resource Management perspective on the relationship between an aging and age-diverse workforce, and company performance. As illustrated in Fig. 3.1, HRM practices may moderate the relationship between an aging and age-diverse workforce and company performance. As argued by Henkens et al. (2018), there is a need to advance HRM research and practice through offering evidence-based guidelines as to how to best deal with an aging and diverse workforce. We have answered this call by reviewing which age-specific and age-neutral HRM practices can successfully directly and indirectly impact company performance. In accordance with recent work (Loretto & White, 2006; Oliveira, 2018; Rudolph et al., 2017; Schroder et al., 2011), we advocate for a more systematic use of age-neutral HRM practices.

Overall, further research is needed to test our general perspective. As reviewed by Kunze and Boehm (2013), current research findings regarding a moderation effect of HRM practices on the relationship between age diversity and company performance remain inconsistent. Indeed, while Choi and Rainey (2010) found that when employees perceived their supervisor as being engaged in pro-diversity initiatives, the relationship between age diversity and performance became significant, other studies found non-significant moderation effects for general group diversity (e.g., Jehn & Bezrukova, 2004). Furthermore, future research efforts need to take into account the fact that, in addition to specific sectorial contexts, cross-national differences lead to nationally distinct HRM practices in terms of institutional context (Schroder et al., 2011). Finally, distinctions between the effects of age-friendly (i.e., age-specific HRM practices) and age-neutral practices on company performance constitute an interesting avenue for future research. As suggested by Rudolph et al. (2017), workplace communication regarding these practices may represent a mechanism mediating this relationship. Another interesting mechanism could be the maximization of psychological forces (e.g., mentoring opportunities) and removing of environmental constraints (e.g., work time arrangements).

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Chapter 4

Integrating the German and US Perspective on Organizational Practices for Later Life Work: The Later Life Work Index



**Max R. Wilckens, Anne M. Wöhrmann, Caitlin Adams, Jürgen Deller,
and Ruth Finkelstein**

4.1 Introduction

Fed by the demographic change in many countries and increasing life expectancies, later life work (see Chap. 1) is on top of the agenda for not only older adults and politicians, but also for business. By hiring and employing older employees under appropriate working conditions, organizations are the enablers of later life work. This implies new perspectives to actively and successfully participate in work life through meaningful and age-friendly employment for employees aged 55 and above, as well as individuals in retirement age. Differences in labor market regulations and social systems between countries, however, require organizations to prioritize different organizational practices in order to allow for successful later life

M. R. Wilckens

Institute of Management and Organization, Leuphana University of Lüneburg,
Lüneburg, Germany

A. M. Wöhrmann

Federal Institute for Occupational Safety and Health (BAuA), Dortmund, Germany
Leuphana University of Lüneburg, Lüneburg, Germany

C. Adams

South Bronx United, Bronx, NY, USA

Mailman School of Public Health, Columbia University, New York, NY, USA

J. Deller (✉)

Leuphana University of Lüneburg, Lüneburg, Germany

Silver Workers Research Institute, Berlin, Germany

e-mail: deller@uni.leuphana.de

R. Finkelstein

Brookdale Center for Healthy Aging, Hunter College, City University of New York,
New York, NY, USA

work within their respective regulatory frame. Literature on the impact of countries' legislation, regulation, and work culture on the organizational practices required is so far, however, very limited. In order to understand how to cope with and successfully leverage later life work from an organizational perspective, it is important to extend the debate on organizational practices and conditions with an understanding of the country-specificity of the practices required.

The debate on how to manage later life work within organizations is still ongoing (Henkens et al., 2017), but the potential of employment for older employees prior to and beyond their retirement age has generally been acknowledged on several levels: on a societal level, later life work relieves social systems by generating its own, independent income and decreases poverty among the elderly. Moreover, older employees solve labor and skill shortages, which are existent particularly in rural areas today already (European Commission & Economic Policy Committee, 2017). On the organizational level, older employees contribute their expert knowledge, not only regarding the growing customer group of older people, but also for their long-term experience, which is beneficial for specific tasks (Göbel & Zwick, 2013). Finally, on the individual level, flexible models of retirement work ("bridge employment") ease the life-changing event of being retired and increase well-being (Dingemans & Henkens, 2015). Thereby, adequate work for older employees positively impacts physical, mental, and cognitive health (Hershey & Henkens, 2014; Staudinger, Finkelstein, Calvo, & Sivaramakrishnan, 2016).

On the other hand, successful later life work requires dedicated organizational practices and work conditions to leverage older employees' potential. While many organizational conditions for successful employment obviously apply to employees of all age groups such as ergonomic work design (see Chap. 10), individual development, knowledge management, and a supportive leadership style, some are specifically relevant for older employees or need to be specified for older employees, such as an age-friendly organizational culture and management of the transition into retirement. Research has come up with country-specific perspectives on the organizational antecedents of successful later life work. Within Germany, Wöhrmann, Deller, and Pundt (2018) developed the *Silver Work Index* (SWI), which is intended to serve as a diagnostic tool for organizations to assess their capabilities regarding successful employment of older employees. The index includes elements of organizational culture, leadership, and specific human resource (HR) practices, which are defined conceptually, but are yet to be operationalized for use as an assessment tool. In the USA, organizational conditions for successful later life work have been identified by the Age Smart Employer Award (cf. Finkelstein, Roher, & Owusu, 2013). The award honors employers in New York City that implement practices to engage, successfully employ, and retain older workers.

By comparing organizational practices for later life work identified by the SWI in Germany and the Age Smart Employer Award in the USA, this chapter firstly provides a revised version of the index representing the German as well as the US perspective on later life work, and secondly identifies country-specific practices and conditions for Germany and the USA. Inter-rater reliability results confirm the index's revised category system. Thereby, this chapter contributes towards a final,

intercultural index for good organizational management of later life work. Future project phases will include the operationalization of the indicators as well as the validation of the index.

4.2 Differences in Demographics, Work Culture, and Legislation

Steadily increasing life expectancies within our societies pose the question of how to manage extended working lives. However, the severity of the demographic problem and the prerequisites to solve the problem differ significantly between countries. Work practices in Germany and the USA are based on different legal labor market systems and work customs. Compared to Germany, the US labor market is substantially more flexible, which is best characterized by the in- and outflows of unemployment. Across periods of economic prosperity and recession, in- and outflow rates of unemployment in Germany are lower by a factor 5–10 than in the USA (Hertweck & Sigrist, 2015; Jung & Kuhn, 2014). Consequently, the average employee in Germany stays with the same employers twice as long as employees in the USA (cf. Bureau of Labor Statistics, 2016; Eurofound, 2015). Differences are reasoned by higher employment protection and union bargaining power, higher unemployment benefits, as well as a lower matching efficiency (longer search periods) in Germany (Jung & Kuhn, 2014). Unionization has a historic tradition in Germany leading to strong regional collective employment agreements between employer associations and the unions for many industries, which limit freedom for individual negotiations and focus on job stability. Stability also results from statutory co-determination, which—contrary to the USA—provides the works councils of companies larger than 2000 employees with just under the half of the company’s supervisory board’s seats. Work practices moreover differ as US social security systems are less comprehensive than in Germany. Besides higher unemployment benefits, most employees are mandatorily enrolled in public health insurance and pensions system, whereas the latter’s future pension level becomes increasingly uncertain for the next generation due to the demographic change (cf. Börsch-Supan & Wilke, 2004).

The demographic development towards longer lives in Germany is paired with constantly low birth rates leading to a substantially increase in the share of older employees over the next decades. This increase is driven by aging “baby boomer” age groups, but also influenced by a higher labor market participation rate of older employees. Studies prove a significant increase in retirees working beyond the official retirement age (Eurofound, 2012). And this effect is further escalated by the politically raised standard retirement ages in Germany and many other European countries. Consequently, the European Commission & Economic Policy Committee, 2017 projects a 35% increase in employees aged 55–74 between 2016 and 2030 raising the share of this age group among all employees from 18 to 24% (see Chap. 1). Not only politics, but also leading industries have declared extension of working

lives and retention of older employees to be a key priority in human resource management. Especially for industries and rural areas with skilled labor force shortages, working beyond retirement age becomes more and more common. However, in Germany for example, retirement age legislation and regulation are still very inflexible for many industries. The standard retirement age is defined by the beginning of public pension payment, which has been at the age of 65 historically and will now be gradually increased to 67 by 2029 (European Commission & Economic Policy Committee, 2017). Despite the fact that retirement is not required by law at that age, many collective agreements foresee retirement at the beginning of pension payment (European Commission & Economic Policy Committee, 2017).

In the USA on the other hand, employees aged 55 and above already account for 22% of the civilian workforce, predicted to increase moderately to 24% in 2026 (Bureau of Labor Statistics, 2018). A more balanced population pyramid and historically higher flexibility in retirement age lead to much smaller changes to the workforce age distribution compared to the EU. However, the older age groups nevertheless account for highest growth rates also in the USA, with an absolute increase between 2016 and 2026 of 18% for the 55+ age group and 58% for the 65+ age group. Similar to the trend in the EU, sectors of agriculture and skilled trades (e.g., tailoring) have some of the highest median ages as fewer young people are choosing or being trained to work in these industries (Bureau of Labor Statistics, 2017). As life expectancy has increased, the US retirement age has also been increasing gradually from 65 to 67 for people born after 1959. This is the age where a person can begin collecting the full amount of their social security benefit (Social Security Administration, 2018). Unlike most countries within the EU, the USA has abolished mandatory retirement ages (OECD, 2017) and are not affected by far-reaching collective agreements with mandatory retirement age, and thus the transition to retirement is more flexible than in Germany. Aside from social security benefits, access to retirement savings plans, employer contributions, and pensions are hence largely dependent on the employer and the individual employment contract. In the USA as well as in the EU, organizations face an aging workforce, and so it is in the interest of both industry and society to retain and develop the potential of older employees.

4.3 Later Life Work from an Organizational Perspective

While much research has been carried out on the individual antecedents and preferences for older employees and post-retirement work in recent years (Davis, 2003; Fasbender, Deller, Wang, & Wiernik, 2014; Wang & Shultz, 2009; Wang, Zhan, Liu, & Shultz, 2008), it is not yet understood how successful employment of older employees can be enabled by the organization (Henkens et al., 2017). In contrast to the common opinion that a higher share of older employees lowers organizational productivity, recent studies have shown that this is not necessarily the case.

Cross-sectional as well as interventional longitudinal studies found individual organizational measures such as re-designing the assembly line and ergonomic adoption of the workplace to sufficiently counteract the productivity disadvantages caused by older employees (Göbel & Zwick, 2013; Loch, Sting, Bauer, & Mauermann, 2010). Organizational practices have shown to improve performance, work ability, and motivation of older employees, even leading to increased willingness to continue working beyond retirement. Areas of action range from leadership and organizational culture to health promotion, knowledge management, and work design (Armstrong-Stassen & Templer, 2006; Klaffke, 2014; Kunze, Boehm, & Bruch, 2013; Naegele & Walker, 2006; Schuett, 2014; Zacher & Yang, 2016). Moreover, older employees show lower error rates leading to quality advantages if leveraged by appropriate work design practices, as in mixed teams of younger and older employees, so that competencies and capabilities of younger and older employees complement each other (Börsch-Supan & Weiss, 2016; Göbel & Zwick, 2013).

The effects of appropriate organizational practices and work conditions on organizational outcomes have theoretically been reasoned by both a resource-based perspective on the organization leveraging human capital as well as a behavioral perspective leveraging the practices' effect to encourage productive behaviors from the employees (Jiang, Lepak, Hu, & Baer, 2012). Accordingly, studies found skill-, motivation-, and opportunity-enhancing practices to positively influence financial outcomes of the firm mediated by human capital and employee motivation (Jiang et al., 2012). Thus, those practices have also been found to reduce negative effects of age on work ability and subsequently organizational performance (von Bonsdorff et al., 2016). Kooij et al. (2012), however, showed that practices' impact on performance differs with age. Moreover, organizational commitment as a key antecedent of organizational performance is influenced by different sets of organizational practices dependent on the employee's age (Conway, 2004). While many organizational practices, for example, a supportive leadership style is beneficial for employment of all age groups, it is hence argued that older employees require dedicated practices in certain domains.

In practice, however, later life work is substantially retarded by age stereotypes and norms at the workplace (Posthuma & Campion, 2009). Henkens (2005) found that managers stereotype older employees regarding their productivity, reliability, and adaptability. Stereotypes result from differing age norms and from related work ability and productivity assumptions about older employees (Conen, Henkens, & Schippers, 2012; Karpinska, Henkens, & Schippers, 2013). Employers recognize a link between an aging workforce and an increased gap of labor cost and productivity (Conen et al., 2012). And this connection is also supported by research findings. Within their review, Boehm and Dwertmann (2015) analyzed 22 studies on the relationship between age diversity and productivity and found eight studies reporting a negative effect of increased age diversity on productivity, as well as ten studies with a null effect. Only three out of 22 studies reported a positive impact of age diversity. However, these studies do not test specific organizational practices as potential moderators, which have shown to be effective in many cases.

In order to face stereotypes in practice, a more thorough understanding of the moderating levers for successful employment of older employees is required. Qualitatively, Wöhrmann et al. (2018) began to collect and define organizational practices for later life work within the SWI, however, based on a German perspective so far. The SWI's structure consisting of organizational culture, leadership, and specific HR practice elements is also supported by Boehm and Dwertmann's (2015) review, in which they hypothesized organizational conditions moderating the relationship between age diversity among the workforce and organizational productivity. First, they identified leadership—including elements of transformational leadership, health-focused leadership, and top management leadership—as an important moderator. Second, they proposed a moderating effect for an organizational climate that values age diversity and inclusion. And third, they found a positive influence of “age-specific and age-inclusive human resource practices” that tailor human resource management towards older employees while allowing for individuality within the employment conditions. Taken together, these three categories of organizational measures are theoretically reasoned and partially empirically proven to positively influence the effect of age diversity on organizational performance and hence provide a valuable framework for further research. Going beyond Boehm and Dwertmann's (2015) focus on age diversity and performance, the SWI is intended to identify organizational practices positively impacting not only performance, but also on illness absence rates and employee fluctuation given an aging workforce. Figure 4.1 outlines the organizational-level model in which the three categories of organizational measures are hypothesized firstly to impact organizational outcomes directly, and secondly to moderate the impact of increased age diversity and average age of the workforce on organizational outcomes. Thereby, those measures would support organizations to achieve high levels of organizational results despite an older and more age-diverse workforce.

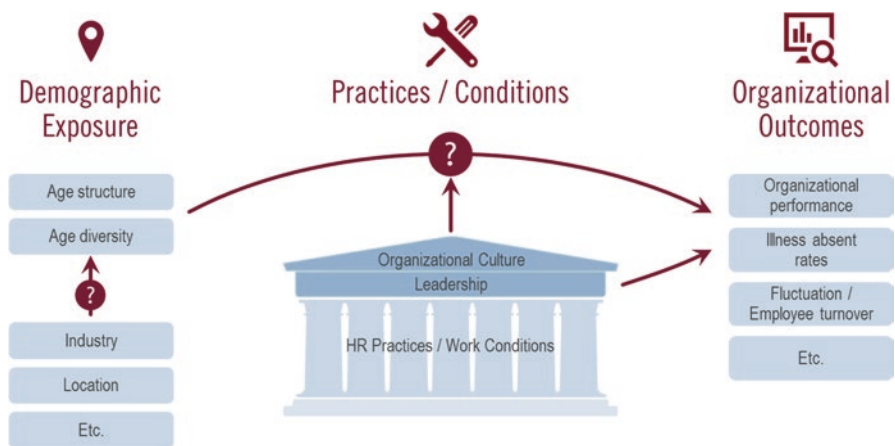


Fig. 4.1 Proposed moderating effect of organizational later life work practices on the effect of demographic exposure on organizational outcomes (based on Boehm & Dwertmann, 2015). Published with kind permission of © Max R. Wilckens, Anne M. Wöhrmann, Jürgen Deller 2019. All Rights Reserved

4.4 The German Perspective: Silver Work Index (SWI)

So far, organizations lack profound tools to assess their readiness and capabilities to leverage older employees' potential. In order to cope with an aging workforce and enable later life work successfully, moderating organizational practices need to be validated as well as accessible in practice to be effective and reduce current stereotyping. Wöhrmann, Deller, and Pundt (2018) hence proposed the Silver Work Index (SWI), integrating the most relevant organizational practices regarding later life work. As a diagnostic tool for organizations, the SWI is intended to allow for assessment, comparison, and evaluation of organizational conditions identified as good practices regarding later life work. Thereby, organizations shall be enabled to firstly assess their individual areas for improvement among the index dimensions internally, and secondly to benchmark results against peers on industry or regional levels.

The specific organizational measures needed vary, for example, between different industries, organizational size, and different age structures within the organization. In order to fully cover relevant perspectives, the index dimensions and indicators were developed in an iterative process based on 27 expert interviews. Interviewees were researchers from various disciplines (demographics, economics, gerontology, HR management, and psychology) as well as employees of retirement age, HR executives, HR managers, management consultants, executives of placement agencies for paid and voluntarily later life work, and representatives of strategic and operational management in various industries. All experts were either able to share personal experience regarding later life employment or had dealt with later life employment as part of their job responsibilities or in research.

The interviewees were aged 35–83 years ($M = 52.7$; $SD = 10.6$). Most were male (74%). Experts had, on average, 28 years of professional experience ($M = 28.4$; $SD = 11.4$; range 7–59 years). The experts worked in various industries: 29% professional, scientific, and technical; 26% finance and insurance; 15% manufacturing; 15% administrative, support, and other services; 11% human health and social work activities; and 4% information and communication. The industry heterogeneity of the sample was intended to cover a variety of viewpoints on the research topic.

The interviewees were asked for characteristics of good organizational management practices in order to successfully involve employees aged 60 and older as well as indicators and methods to measure the characteristics in practice. Supplementing the open question section, the interviewees were systematically presented with additional aspects related to good organizational management practices concerning employees nearing retirement age and that had earlier been identified through an analysis of the relevant body of literature, if not mentioned by the expert independently. These aspects were: perception of age/aging; ways of structuring and designing the work/workplace; procedures in place for retiring or resigning; individual financial situations; methods of guiding older employees; available health management and promotion resources; and the information on the range of possibilities for continued employment after retirement age. The interviews took 30–60 min and were audio-recorded and transcribed; then, the content of the transcripts were analyzed by Wöhrmann and colleagues to derive

the initial system for categorizing organizational practices for later life work. To further sharpen the content analysis results, the authors conducted an expert workshop with a subset of the original interviewees and additional experts with the same backgrounds as the initial interviewees in 2015 leading to the published version of the SWI.

In line with several studies (Armstrong-Stassen, 2008; Armstrong-Stassen & Schlosser, 2011; Cheung & Wu, 2013; Hennekam & Herrbach, 2013), organizational culture and leadership were identified as the two overarching and most important dimensions for successful and motivational work up to and beyond the retirement age, supported by several underlying dimensions for working conditions and processes: work design, health management, individual development, knowledge management, transition to retirement phase, and employment during retirement phase. While providing a first version of the SWI, Wöhrmann et al. (2018) also reported the need for further improvements to increase the inter-rater reliability of the construct. Single index dimensions revealed some improvement potential in clarity of the definitions, wording, and distinction of the indicators. Moreover, the index was based on the German dataset described above, which allowed for a thorough identification of practices important for the German legislation and work culture but lacked generalizability for other countries. Consequently, the SWI requires further revision and must be checked against other work environments.

4.5 The US Perspective: Age Smart Employer Award

An opportunity to test the SWI in an international context arose from data on organizational practices regarding later life work gathered during the 2014 and 2015 edition of the Age Smart Employer Award, a culture-change strategy to honor New York City businesses whose practices engage and retain workers of all ages with a specific focus on older workers (cf. Finkelstein et al., 2013). The award was initiated by the Robert N. Butler Columbia Aging Center and The New York Academy of Medicine in 2012 as an extension of the Age Friendly NYC initiative, a public-private partnership to make New York City a better place to grow old. It honors New York City employers whose policies and practices promote generational diversity in the workforce and highlights the positive contributions of older workers.

The first Age Smart Employer Awardees were chosen from a pool of 20 applicants and honored in 2014. Following the initial cycle of the Awards, it was recognized that the literature-based *Compendium of Strategies and Practices* that formed the basis of the application and selection processes focused almost exclusively on large business practices, while small businesses comprise 98% of all employers in New York City. Based on semi-structured interviews with more than 100 small busi-

ness owners and 160 employees, as well as several expert interviews, the compendium was hence complemented by five industry-specific guides comprising more specific small business practices to recruit, train, and retain older employees. Specific industries were selected based on prevalence of older workers in the sector in NYC, opportunities for older workers to solve business owners' perceived staffing problems (as identified in interviews), and lack of attention to older workforce issues in the sector (Finkelstein et al., 2013). Identified practices included recruitment strategies, training, job restructuring, work flexibility, benefits, and phased retirement.

Based on the practices identified, two different semi-structured free-text application forms for the awards were developed: one for larger businesses including all practices initially identified and one for smaller business based on qualitative primary research. The questionnaires provided a range of domains to consider including recruitment, productivity and performance, engagement, retention of workers, and the transition to retirement, but also explicitly asked for practices not covered by these domains.

Organizations and businesses interviewed for the guides yielded the first tranche of applicants and promoters for the awards. The outreach strategy included presentations to organizations, webinars, and personal networking. In 2015, due in part to the momentum built in the previous year, 52 businesses applied. The awards have been well received by the business community and national press and have led to interest from other US cities to implement similar strategies.

Basis for this integration were practices identified within 61 New York-based organizations that applied for the 2014 or 2015 edition of the award. The sample was widespread across industries and company sizes so that a holistic view on organizational practices from a variety of viewpoints could be obtained. Among the 61 companies analyzed, 23% were active in the food industry, 18% in health care, 15% in social services, 13% in general services, 13% in manufacturing, 7% in entertainment, 7% in education, and 5% in retail. Overall, 22 companies (36%) were non-profit and 27 (44%) were family-owned. The years in business differed from 3 to 261 years ($M = 59.69$; $SD = 50.51$). The number of employees ranged from 4 to 200,000 ($M = 7819.85$; $SD = 28,900.19$).

The content of the applications was analyzed by a selection committee resulting in a lengthy categorized list of practices (see Appendix 2 for details). The committee included experts in workforce development, human resources, executive education, small business services, diversity, aging, and communications. After the committee identified "finalists," staff conducted employee surveys at each business or NYC establishment of a larger firm to validate the policies and practices described in the applications. The committee then used survey response rates, survey results, and the original applications to identify award winners. The award has been repeated in 2018 with a combined application and assessment for both smaller and larger companies.

4.6 Integrating Both Perspectives

By means of integrating the German and the US findings on organizational practices for later life work, we intend to revise the initial SWI from an intercultural perspective and to further sharpen its definitions of dimensions and indicators. For this we joined in an international collaboration. Two of the authors contributed with extensive knowledge on the SWI as they were part of the initial SWI development in Germany. Two additional authors contributed with the US perspective as they were initiating and managing the Age Smart Employer Award.

For both the German and the US perspectives, the original empirical qualitative data was leveraged for the integration. Initially, an independent researcher compared both systems of categorizing organizational practices for later life work in order to identify similarities and differences. For this, experts involved in the Age Smart Employer Award were interviewed regarding the practices identified. Within the 90-min semi-structured interview, each practice was explained in detail. That interview was transcribed for the comparison with the SWI. For the SWI practices, the existing documentation was used for the comparison. Ambiguities for both category systems were clarified in direct conversations with the respective experts involved in the initial content analysis. The researcher who was independent of the SWI and the Age Smart Employer Award then systematically identified differences between the practices explained in the interview and the SWI. This step resulted in a matching table highlighting corresponding practices as well as practices where further alignment was needed.

In a second step, all five authors met for a workshop in Germany to jointly discuss identified differences and to agree upon necessary changes to the SWI in order to reflect both the German and the US perspectives. Following general alignment on required changes to the index, the indication and dimension definitions were iteratively derived in a process of back-and-forth translation between German and English and thereby further improved. Finally, all five authors agreed on the final definitions of dimensions and indicators within a revised index of organizational practices for later life work, as depicted in Fig. 4.2. The revised index is named *Later Life Work Index* (LLWI). The definitions of dimensions and indicators can be obtained from Appendix 1.

Inter-rater reliabilities (cf. Krippendorff, 2013) were computed to validate the revised category system. Two individuals who were not involved in the project but are knowledgeable on human resource management practices independently coded the 27 interviews from the SWI dataset as well as the interview conducted with the two individuals involved in the Age Smart Employer Award. The revised category system detailed the aligned definitions and was used as the rating instructions. The two coders were asked to assign each paragraph to all categories that reflect practices mentioned as being important for later life work. Krippendorff's alpha ranged from .65 to .92 for the nine dimensions, which reveals further opportunities for improvements, but can be considered acceptable given the multidimensionality of the category system and the high complexity and amount of rating material.

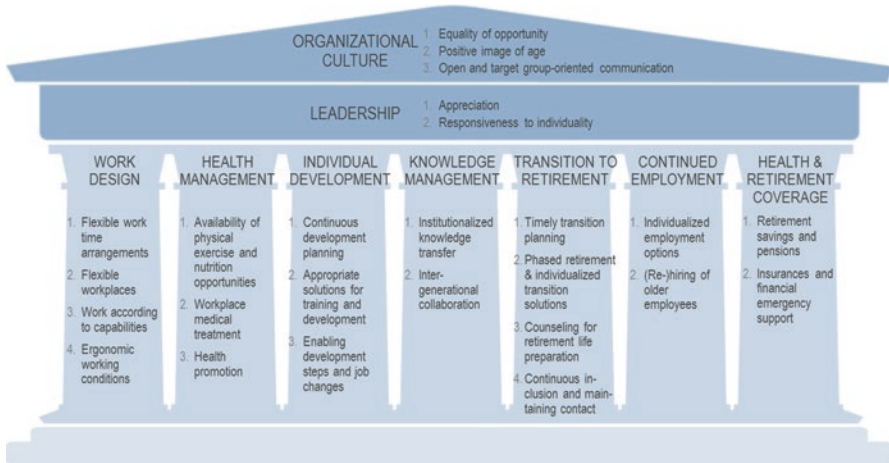


Fig. 4.2 Later Life Work Index (LLWI). Published with kind permission of © Max R. Wilkens, Anne M. Wöhrmann, Jürgen Deller 2019. All Rights Reserved

The revised LLWI differs from the SWI published by Wöhrmann et al. (2018) in two aspects: First, an additional dimension for *Health and Retirement Coverage* was added to the index. The dimension accounts for organizational support in terms of retirement savings and insurance coverage for an organization’s employees, in case not sufficiently provided by public systems. Requirements vary due to different regulations and social systems. In Germany, the support may be a direct financial benefit or put into practice as individual planning and assistance. Indicators are *retirement savings and pensions*, as well as *insurances and financial emergency support*. The *retirement savings and pensions* indicator offers coverage to employees for retirement savings if not sufficiently covered by public systems. Organizations may include pensions and retirement saving accounts in their full compensation packages, offer optional saving possibilities to be opened by the employees individually, and support their employees in timely planning and organization of their retirement savings. *Insurances and financial emergency support* describe offers for health-related insurance coverage, if not sufficiently covered by public systems. This includes (additional) health, disability, long-term care, or life insurances, which particularly cover risks that increase with age. Additional financial support may be offered in case of family emergencies, as in a case of nursing care or child sickness.

Secondly, several dimensions and indicators were sharpened and rephrased. Most importantly, the dimension *Employment during Retirement Phase* has been renamed to *Continued Employment* and its indicators have been restructured. This was necessary to account for the more flexible retirement age in the USA so that it describes the offer of employment options more generally for all employees who would have already been retired in their former job. This dimension includes former employees of the organization as well as external employees seeking continued employment. Rephrased indicators are *individualized employment options* and *(re-)hiring of older employees*. The *individualized employment options* indicator reflects the positive

effect of employment opportunities for individuals, who would otherwise be fully retired. To ensure employment options are meaningful for both the organization and the employee, integration of those employees into the organization should be strategically planned and systematically framed. For example, organizations might define areas and activities suited for continued employment, for which employees might be brought in on a temporary basis at peak workload times. Tasks, working conditions, and work time should be adaptable to the individual employee. This adaptability can be achieved through alternative contract forms such as consulting or mentoring activities, work on specific projects, or holiday replacement. The majority of the experts held the opinion that the arrangements should be temporary and should involve fewer hours than a full-time position. The *(re-)hiring of older employees* indicator reflects a finding especially from the US data. Older individuals, particularly including already and almost retired employees, should be specifically addressed by job marketing, hiring, and re-employment processes. This is achieved through age-friendly, open, and transparent communication of job offers and the use of alternative marketing paths to address external as well as internal individuals. This indicator explicitly includes employees with long careers in other industries or companies.

In other dimensions additional examples were added to include the US perspective. For example, tuition reimbursement and apprenticeships for older employees were included in the *Individual Development* dimension as they had not been identified as relevant practices within the German version. Moreover, “phased retirement” and “job changes” were emphasized by explicitly stating them in the indicator titles.

Overall, the revision led to an index of organizational later life work practices that are applicable in both Germany’s rather regulated work environment with a strong public social system as well as in the rather free market-driven US work environment. Although the index now accounts for both perspectives, identified differences showed that practices are not equally important and that it is hence required to attach country-specific importance to specific dimensions.

4.7 Discussion

This integration provides an additional incremental step towards a well-founded index for good organizational management of later life work. Prior to operationalization and quantitative validation of the LLWI, this study adds an intercultural revision based on the comparison of the initial Germany-based qualitative study and a second US dataset from the New York Age Smart Employer Award.

Overall, both perspectives on organizational practices for later life work were very similar. Both datasets show that good organizational management of older employees is a complex, multidimensional subject including both environmental dimensions as organizational culture and leadership, and specific practices regarding work conditions and arrangements. Results confirm that many aspects of good organizational management of employees of this particular age group are not spe-

cific to older adults. However, work design and health management, for example, are dimensions of growing importance with age, while other dimensions such as knowledge management and individual development need to be tailored towards older employees. Thus, retirement practices are relevant for older employees only.

Findings support the emphasis put on appreciative and individualized leadership as one overarching dimension. As already identified by the initial SWI, “feeling valued” has also been identified as one of the most important aspects in US-based organizations. Having a “family-like” environment with a “leadership style that makes it seem like it’s not a leadership style,” flexibility in designing work conditions, and the willingness to consider individual needs are the most important levers for retaining employees in the organization who are nearing retirement age or older. Moreover, both datasets emphasize the importance of providing the possibilities of reducing work hours and phased retirement, changing the focus of the work content, as for example in projects or by job-rotation.

However, two divergent aspects have been identified by the collaboration between Germany and the USA. First, differences between the social security systems of the two countries result in diverging importance of financial benefits granted by the organizations. While German experts attached little importance to organizational health and retirement coverage, the US data emphasized that taking care of aging employees within the organization also in a financial manner is a crucial part of good organizational management of employees nearing and beyond retirement age.

Second, the meaning of “being retired” differs given the backgrounds of the two cultural and social system. In Germany, the nationwide “retirement age” will be continuously increased from the age of 65–67 in 2029. Upon reaching that threshold age, employees receive public pension so that being retired at that age is common practice in most employment contract agreements. While the first version of the SWI was hence focused on regular employment up to that age and “during retirement age,” dimensions and indicators of the LLWI have now been broadened to reflect continued employment independently of a particular retirement age and explicitly include practices to (re-)hire older employees.

4.7.1 Implications

Despite a general improvement and sharpening of dimensions and indicators within the index, this study shows that small amendments qualify the revised index for application beyond Germany. Once operationalized, the LLWI will allow research to holistically compare moderating practices on the effect between workforce demography and organizational outcomes. From a business perspective, it will be important to understand the relative impacts of moderating factors to ensure focused allocation of resources and efforts. By integrating the German and the US perspectives, the LLWI may serve as a foundation for further inter-country comparisons of organizational practices for later life work. Certainly, further validations in different work cultures and legal frameworks are required and might potentially match as

well as it was possible for Germany and the USA. However, striving for a common basis for later life work practices simplifies further comparisons.

From a practice perspective, the LLWI will allow organizations to access their own capabilities in terms of practices regarding the employment of older employees. Organizations facing the challenge of an aging workforce either due to labor force shortages or political requirements may use the LLWI as a diagnostic tool to identify improvement opportunities for the management of older employees. By allowing for industry and regional benchmarks, the LLWI has the potential to raise awareness for later life work not only in business, but also in the political debate. Benchmark results can support the identification of best practices and thereby support the organizations' management in handling aging issues. Thereby the importance of each dimension within the entire index may differ from industry to industry, region to region, and country to country. Specific recommendations on effective practices will be the results. Within the proposed theoretical moderation model for the effect of workforce age on organizational outcomes, it is to be expected that different organizational circumstances will require certain combinations of index dimensions as moderating levers to be pulled in order to drive organizational outcomes.

4.7.2 Limitations and Future Research

For the German dataset, the selection of a heterogeneous group of interviewees ensured a variety of viewpoints regarding the subject (Wöhrmann et al., 2018). For the US dataset, the significant public attention for the Age Smart Employer Award led to the conclusion that applicants belong to the forefront of good management practices for employees nearing retirement and beyond. Heterogeneity regarding size and industry of the organizations supports the assumption that derived management practices are exhaustive. However, it must be noted that the US data originates from establishments in the City of New York only.

Data analysis was conducted systematically. The comparison of practices identified in the US data and the dimensions and indicators of the LLWI were determined in a data-oriented manner and were therefore generated empirically. It can hence be assumed that the revised dimensions and indicators of the construct are content-valid. However, this study also proves that country-specific differences due to differences in laws and regulations exist and that future studies need to test required amendments for additional countries. Reliability has significantly improved since the first version of the index but needs to be rechecked in case of further revisions.

Going forward, operationalization and validation of the LLWI in a cross-organizational study is intended. Assessment is planned as a combination of fact-based questions on an organizational level (e.g., share of employees offered or working in phased retirement) and questions on culture and leadership in employee samples (e.g., the image of age, equality of opportunity, appreciation). The external validation of the index shall link the index to employee- and organizational-level outcomes.

Appendix 1: Dimensions and Indicators of the LLWI

Table 4.1 Dimensions and indicators of the Later Life Work Index

Dimensions and indicators	
OC Organizational Culture	
The organizational culture dimension includes the set standards and actions of an employer shaped by the mission and values of the organization. An organizational culture that fosters good management of employees just before and in retirement age especially promotes equal opportunities and a positive image for all age groups. Indicators are:	
	OC1 Equality of opportunity: Initial conditions should be the same for every employee regardless of age. Further, no discrimination or stigmatization due to age should occur. Each employee therefore has the same opportunities, for example, participation in training and professional qualification or in the need of downsizing
	OC2 Positive image of age: Prevailing beliefs and attitudes regarding older employees are shaped by a positive attitude within the organization. Aging should be understood as an individual change process of competencies, motivation, values, and behavior. Opportunities should be recognized, valued, and realized. For example, by identifying and assigning tasks which correspond to the specific competencies of older individuals
	OC3 Open and target group-oriented communication: The organization is characterized by a differentiated image of age that is communicated through external and internal representation of the organization. This explicitly includes open and transparent exchange between employees and their managers regarding retirement and/or continued opportunities for work. Positive images representing all age groups within the employee magazine, on the intranet or website, is another example
LE Leadership	
The leadership dimension includes the responsibility of organizational executives to harness the potential of employees at all ages and particularly just before and in retirement age. This is achieved through the consideration of each individual employee's strengths and by showing appreciation for their talents and contributions. Indicators are:	
	LE1 Appreciation: Managers of an organization should have an appreciative attitude towards their employees of all ages, manifested through a consistent demonstration of respect and kindness. Managers should reward the experience and achievements of their employees by offering higher levels of job autonomy and responsibility. Celebrating milestones and farewells is another way to convey gratitude, particularly when an employee is going into retirement
	LE2 Responsiveness to individuality: Managers of an organization should be sensitive to individual needs and events that occur at different life stages. They should also take into account each individual's personality and performance capability. Managers are responsible for recognizing and harnessing individual potential regardless of age and for creating performance-enhancing conditions. Among other factors, this includes the consideration of employees' wishes and suggestions regarding the design of their work space as well as the consideration of individual life circumstances, such as the need to care for family
WD Work Design	
The work design dimension includes the adaptation of work location, time, and physical space to fit the individual needs and abilities of employees, relieve strain, and increase job satisfaction and efficiency. Indicators are:	

(continued)

Dimensions and indicators	
	WD1 Flexible work time arrangements: The organization should allow employees to change their work time depending on individual needs. Specific solutions will depend on the nature of an employee’s work. Options for flexibility could include a long- or short-term switch to part time, offering flextime, job sharing, the possibility of swapping shifts, and unpaid leaves
	WD2 Flexible workplaces: When possible, employees should be able to choose their work location based on their individual needs and what is most efficient. Examples include the facilitation and technical support of home-office solutions or the installation of silent work places within the office
	WD3 Work according to capabilities: Employees should have adequate jobs corresponding to their individual physical and mental performance capability and resilience. If not the case, this could be realized through a temporary or permanent change to another role that is less straining. Swapping jobs or reconsidering and adapting work flows should also be taken into consideration
	WD4 Ergonomic working conditions: The work place should be designed according to ergonomic requirements and should also take into account the individual circumstances of the employee. For example, occupational safety measures should be taken and supportive equipment and/or tools should be provided
HM Health Management	
The health management dimension includes all organizational activities that aim to maintain and promote employees’ health and work ability. Health management should be characterized by a holistic approach addressing not only specific interventions but also health-promoting work design and leadership. Indicators are:	
	HM1 Availability of physical exercise and nutrition opportunities: Initiatives to strengthen health and work ability should be offered, such as company sports activities, active breaks, and nutritional guidance
	HM2 Workplace medical treatment: Measures should be taken to help employees avoid medical conditions and assistance to aid in the recovery of sick employees should be offered. Examples include company doctors, on-site medical check-ups and physical therapy, along with wellness programs
	HM3 Health promotion: Measures should be taken to disseminate knowledge about healthy behaviors to help employees make responsible and healthy decisions. This could be done by providing information on healthy living. Moreover, managers should act as role models for healthy behaviors and promote a healthy work environment. This includes taking part in physical exercise, nutrition opportunities, and related programs themselves, as well as encouraging a sustainable work-life balance
ID Individual Development	
Employees should be supported in their professional and personal development during their entire work life. A special emphasis is put on the importance of lifelong learning through continued education and training. There should also be opportunities for career development through internal advancement and promotions. Indicators are:	
	ID1 Continuous development planning: Planning for each individual employee’s future should be done on an ongoing basis at all ages and stages of the work life. This could be done through individual meetings between managers and employees and by providing professional workshops that allow for self-reflection on abilities, competencies, and goals

(continued)

Dimensions and indicators	
	<p>ID2 Appropriate solutions for training and development: The organization should provide further training and education aligned with the individual employee’s professional, educational, and life experience as well as with organizational goals. Further, training content and methods should be targeted towards specific groups. Examples of appropriate training and development solutions are workshops, seminars, and industry conferences, training for new technologies or equipment, cross-training, and internships for people of all ages. These training and development opportunities can be facilitated on-site or through reimbursement of tuition or fees</p>
	<p>ID3 Enabling development steps and job changes: Modifications to an employee’s current position, function, or job should be made possible to reflect the specific competencies and development interests of an individual. For example, this could be achieved by increasing job responsibilities, inclusion into other projects, or a horizontal or vertical change of position, which could also mean an additional apprenticeship or a new job within a different department</p>
KM Knowledge Management	
<p>The knowledge management dimension includes procedures for the transfer, exchange, and conservation of knowledge between different generations of employees. Indicators are:</p>	
	<p>KM1 Institutionalized knowledge transfer: Institutionalized structures that transfer knowledge from experienced employees to their successors should be in place. This can be achieved through mentoring and “buddy” programs or through a systematic knowledge transfer process before employees leave the organization for retirement</p>
	<p>KM2 Inter-generative collaboration: The organization should allow for mutual transfer of knowledge and experience between generations. This transfer goes in both directions, young to old and old to young. Its structure is not necessarily determined by the organization. For example, collaboration can happen within intergenerational pairs or age-mixed teams</p>
TR Transition to Retirement	
<p>The transition into retirement dimension includes the necessary conversations, planning, and workplace solutions for any employee who is on the verge of retiring. Information and counseling should be provided to help the employee transition. Indicators are:</p>	
	<p>TR1 Timely transition planning: Managers should talk with employees about their personal plans for entering the retirement stage, including a succession plan. Potential transition scenarios should be actively discussed to find individual solutions, for example, through annual employee interviews</p>
	<p>TR2 Phased retirement and individualized transition solutions: Generic solutions for the transition into retirement should be tailored according to employees’ individual needs. Flexibility and imagination should be present when designing the employee’s individual transition into retirement. Phased retirement through a gradual reduction of working time should be offered companywide. Phased retirement can take place over a shorter or longer period of time, depending on needs</p>
	<p>TR3 Counseling for retirement life preparation: Organizations should support their employees in preparing mentally for the life change of retirement by providing advice and counseling. Employees should be motivated to actively design their retirement life prior to transition. For example, individual preparation can be fostered through a structured approach that reflects individual expectations and plans. There may also be opportunities to establish alternative activities beyond employment</p>

(continued)

Dimensions and indicators	
	TR4 Continuous inclusion and maintaining contact: Tools should be in place to maintain contact with employees even after their retirement and to help them stay engaged as part of the organization. This could be facilitated through an active management of relationships by means of an alumni network, invitations to organizational events, or by allowing for voluntary work
CE Continued Employment	
The continued employment dimension includes the organizational design and employment options for employees at retirement age. This includes former employees of the organization as well as external employees looking for continued employment	
	CE1 Individualized employment options: Employment options for individuals, who would otherwise be fully retired, should be offered systematically. To ensure employment options are meaningful for both the organization and the employee, integration of those employees into the organization should be strategically planned. For example, they might be brought in on a temporary basis at peak production times. Tasks and work time should be adaptable to the individual employee. This can be achieved through alternative contract forms such as consulting and mentoring work or flexible work time arrangements with generally fewer hours than a full-time position
	CE2 (Re-) hiring of older employees: Older individuals, particularly including already and almost retired employees should be specifically addressed by job marketing, hiring, and re-employment processes. This is achieved through age-friendly communication of job offers and the use of alternative marketing paths to address external as well as internal individuals. This explicitly includes employees with long careers in other industries or companies
CC Health and Retirement Coverage	
Organizations should support their employees with retirement savings and insurance coverage, if not sufficiently provided by public systems. Requirements vary due to different regulations and social systems. The support may be a direct financial benefit or put into practice as individual planning and assistance. Indicators are:	
	CC1 Retirement savings and pensions: Employees should be offered options for retirement savings, if not sufficiently covered by public systems. Organizations may include pensions and retirement saving accounts into their full compensation packages, offer optional saving possibilities to be opened by the employees individually, and support their employees in timely planning and organization of their retirement savings
	CC2 Insurances and financial emergency support: Organizations should offer health-related insurance coverage, if not sufficiently covered by public systems. This includes (additional) health-, disability-, care-, or life insurances, which particularly cover risks that increase with age. Additional financial support may be offered in case of family emergencies, as for example, in a case of nursing care or child sickness

Appendix 2: Practices Identified by the Age Smart Employer Award

1. **Flexibility** (a) Employees can choose/swap shifts, (b) Work hours can change as needed, (c) Employees can work from home/telecommute, (d) Employees can take unpaid leave
2. **Benefits** (a) Profit sharing/bonuses, (b) Paid time off, (c) Health insurance, (d) Retirement savings account, (e) Pension, (f) Tuition Reimbursement, (g) Wellness program, (h) Financial planning assistance, (i) Caregiver support program, (j) Paid family leave
3. **Environment** (a) Ergonomic working conditions, (b) Employees can make adjustments/suggestions
4. **Work Atmosphere** (a) Supportive/team mentality, (b) Celebrates milestones, (c) English as a second language classes offered, (d) “Family-like” environment, (e) Fund/financial held for employee emergencies
5. **Training** (a) Apprenticeships/Internships, (b) Cross-training, (c) Mentorship/paired learning, (d) Classes/licensure are paid for, (e) Workshops/seminars during the workday, (f) Employees can attend industry conferences/events, (g) Training for new technology or equipment
6. **Job Restructuring** (a) Job sharing, (b) Roles change based on the ability of employee, (c) New roles created based on the ability of employee
7. **Retirement** (a) Has a succession plan, (b) Can dial-down/up work as an employee needs, (c) Retirees can do part-time/consulting work, (d) Retirees can volunteer
8. **Hiring** (a) Hires people who have retired from other company, (b) Actively recruits older workers 50+, (c) Hires people with long careers in other industries, (d) Promotes from within/develops staff

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Part II
Policy Issues and an Aging Workforce

Chapter 5

Time for a Twenty-First Century

Understanding of Older Workers, Aging, and Discrimination



Cathy Ventrell-Monsees

5.1 Introduction

“Age discrimination is the last acceptable prejudice” (Maher, 2014) and “is the only form of discrimination that enjoys widespread social approval within corporate life.”¹

[The] statement that “there comes a time when we have to make way for younger people”... reflects no more than a fact of life and as such is merely a “truism” that carries with it no disparaging undertones.²

As we mark 50 years of the Age Discrimination in Employment Act (ADEA), which took effect in June 1968, it is an appropriate time to examine whether perceptions of older workers and age discrimination have changed over time. When Congress passed the ADEA in 1967, it expected the law to change employment practices and policies to ensure equal opportunity for older workers, just as Title VII of the Civil Rights Act of 1964 had sought to do. In the 1960s, age limits denying

¹*Improving the Age Discrimination Law, A Working Paper*, U.S. Senate Special Comm. On Aging, 93rd Cong. 1st Sess. 5 (1973) (hereinafter “Committee on Aging”). The working paper quotes Frank P. Doyle, former senior vice president of industrial relations for Pan American Airways, who testified:

No one ever said racial discrimination was good idea. No one ever said religious discrimination was a good idea. But how many times have you seen a manager praised and promoted because he headed an organization that was filled with young tigers; old lions just don't seem to boost you up the corporate ladder.

²Judge James Harvie Wilkinson III in *Birkbeck v. Marvel Lighting*, 30 F.3d 507, 511-512 (4th Cir. 1994).

This article presents the author's personal views and does not represent the views of the U.S. Equal Employment Opportunity Commission.

C. Ventrell-Monsees (✉)

U.S. Equal Employment Opportunity Commission, Washington, DC, USA

e-mail: Cathy.Ventrell-Monsees@EEOC.gov

jobs to workers age 45 and older were common, as was the unfounded assumption that age negatively impacted ability (U.S. Department of Labor, 1965). Congress recognized that changing attitudes about older workers was as important as changing employment practices to prohibit the use of age to disqualify workers from a job. Congress believed that providing facts about aging and work would help change workplace culture as well as employment practices (Committee on Aging, 1973).

With 50 years of the ADEA, have workplace practices and attitudes about aging improved employment opportunities for older workers? The results are mixed. The ADEA has eliminated most explicit age-based practices. But negative stereotypes about older workers persist, particularly the belief that age negatively impacts ability. Employers and judges justify the firing of older workers in their 50s and 60s as the “natural order” of the workplace for the old to make room for the young. They explain as rational an employer’s failure to hire someone in their 50s based on an assumption the person is likely to retire soon. They reject supervisors’ age-related comments as merely “stray remarks” rather than as evidence of bias. They accept ageist stereotypes about the elderly and extend them to workers in their 50s and 60s, without any consideration of the individual older worker before them.

Why has the ADEA failed to change outdated assumptions about older workers? In part, it is because judges’ and employers’ understandings of older workers, aging, and discrimination are stuck in a 1960s framework. They rely on an outdated view that age discrimination is “different” from other protected classes and deem age discrimination as more acceptable. They have a 1960s “Mad Men” view of an older worker as a lifelong, company man who retires in his early 60s, which simply does not reflect the older worker of today. They also have an outdated view of how bias operates in the twenty-first century. In part, it is because society has not challenged or rejected ageist stereotypes as it has sexist or racist stereotypes.

This chapter proposes that a contemporary framework for understanding aging, work, and discrimination would help change cultural and workplace perspectives and practices about older workers and age discrimination. It examines and challenges the arguments underlying the view that age discrimination is different from other forms of discrimination. Employers and judges need to be better informed of the research on aging, work, and discrimination to update their views and decisions, which presents an opportunity as well as an obligation for experts in these fields. Thus, the chapter concludes with recommended strategies for bridging the gaps in knowledge of employers and judges. To help workers and decision-makers recognize and reject ageism in the workplace, it recommends deploying the strategies used to confront sex discrimination to challenge age discrimination, as older women face the most significant level of age discrimination.

5.2 Outdated Views of Aging, Older Workers, and Discrimination

Age discrimination in the workplace is common and accepted based on the following premises: (a) that age discrimination is derived from the belief that age impacts ability, while other forms of discrimination derive from hostility and intolerance; (b) that the “natural order” of the workplace requires moving older workers out to make room for younger workers; and (c) that Congress’ decision not to include age in Title VII of the Civil Rights Act of 1964 meant that age discrimination was different.

The first two premises are flawed in that they are based on outdated notions of aging, discrimination, and labor. Research and experience confirm that age does not predict performance on the job (Howelson, 2015; McEvoy & Cascio, 1989; Schaie, 1983; Staudinger, Cornelius, & Baltes, 1989). Contemporary discrimination against all groups is derived more from stereotyping than historical prejudices (Reskin, 2000). Finally, Congress’ enactment of a separate law to prohibit age discrimination in the workplace was intended to ensure robust enforcement, not to relegate the ADEA to second-class status (Senn, 2012).

5.2.1 *The Unfounded Assumption That Age Predicts Ability and Performance*

In the 1960s when Congress was considering national legislation to prohibit age discrimination in the workplace, many believed that age impacted physical capability. In a survey of over 500 employers, they cited the effect of age on physical ability as the most prominent single reason for age limits on jobs, which three of every five employers maintained at the time (U.S. Department of Labor, 1965). Seventy percent of employers who used age limits to bar workers as young as age 45 said they had no factual basis for the selected age limit and whether it actually related to the ability to perform the job (U.S. Department of Labor, 1965). Indeed, many other employers hired and retained older workers for the same jobs at the same ages for which these employers barred them (U.S. Department of Labor, 1965, referred to herein as “the Wirtz Report”). The Wirtz Report concluded that employers were arbitrarily barring older workers from a wide range of jobs without any assessment of whether age affected ability to perform generally, in jobs that were not physically demanding, and without any consideration of an individual older worker’s abilities.

The central conclusion of the 1965 Wirtz Report was that age discrimination “revolve[d] around the nature of the work and its rewards, in relation to the ability or presumed ability of people at various ages” (U.S. Department of Labor, 1965). In contrast, the report stated that discrimination based on race, national origin, and

religion derived from “dislike and hostility,” specifically “feelings about people entirely unrelated to their ability to do the job” (U.S. Department of Labor, 1965).

One of the central purposes of the ADEA was to prohibit employers from making employment decisions based on the assumption that age impacted the ability to perform a job successfully. As Senator Javits, one of the leading sponsors of the ADEA, explained:

[A] great deal of the problem stems from ignorance: there is simply a widespread irrational belief that once men and women are past a certain age they are no longer capable of performing even some of the most routine jobs. (113 Cong. Rec. 31254, 1967)

Thus, the ADEA requires an assessment of the individual’s abilities and qualifications for a job without regard to age. Indeed, the first regulations implementing the ADEA in 1968 explicitly rejected the use of age-related assumptions about physical ability.³

Yet, for the first 20 years of the ADEA, Congress essentially perpetuated the belief that age affected ability⁴ by having an age cap on the ADEA’s protections that permitted employers to deny jobs and force workers to retire based solely on age. Whether this contradictory message was due to the prevailing belief that age impacted ability or was due to Congress’ inability to amend the law is not clear. When Congress finally gathered the political will in the 1986 amendments to the ADEA to protect workers age 40 and older,⁵ it laid out the scientific research that job performance is not correlated with age. The House and Senate Reports cited to a 1985 study by psychologists Waldman and Avolio that “found that contrary to popular belief, older workers can be just as productive as their younger counterparts” and found little support for the belief that job performance declines with age (Eliminating Mandatory Retirement, 1986; Working Americans, 1986).

Congress also relied on overwhelming public support to end mandatory retirement based on age, as 90% of Americans surveyed agreed that nobody should be forced to retire because of age (H.R. Rep. No. 99-756, 1986).

If the facts are clear and the law requires that each individual be judged based on ability, why are stereotypes about older workers still so common and accepted? In

³The regulations permitted a “differentiation based on a physical examination, but not one based on age” only for jobs with “stringent physical requirements” that involved safety or hazardous work conditions. Conversely, the regulations interpreted the ADEA as prohibiting practices that assumed “every employee over a certain age in a particular job usually becomes physically unable to perform the duties of that job.” 33 Fed. Reg. 9172 (June 21, 1968), codified at 29 C.F.R. §§ 860.103(f)(1)(ii), (iii) (1970). The regulation continued: “There is medical evidence, for example, to support the contention that such is generally not the case. In many instances, an individual at age 60 may be physically capable of performing heavy-lifting on a job, whereas another individual of age 30 may be physically incapable of doing so.” *Id.*

⁴Congress extensively studied and debated the legitimacy of mandatory retirement policies for years, issuing major reports in 1977 (Mandatory Retirement 1977; Next Steps 1977). Following these studies, Congress removed the upper age limit for federal employees in the 1978 ADEA amendments. Pub. L. No. 95-256, §5(a), 92 Stat. 191 (1978).

⁵Age Discrimination in Employment Amendments of 1986, Pub. L. No. 99-592, 100 Stat. 3342 (October 31, 1986).

part, the answer is because decision-makers are stuck in 1960s views of older workers and discrimination. Second, these outdated views underlie three rules that judges often use to dismiss evidence of age discrimination.

5.2.2 The Outdated View That the Natural Order of Labor Requires Moving Older Workers Out to Make Room for Younger Workers

The widespread cultural perception that ability declines with age bolstered the view that older workers should retire to make way for younger workers. In the same 1986 survey in which 90% of the public said that no one should be forced to retire because of age, 37% said that “Older people should retire when they can to give younger people more of a chance on the job” (H.R. Rep. No. 99-756, 1986). This view that the continued employment of older workers impedes opportunities for others continues today⁶ and permeates several negative stereotypes about older workers. For example, some continue to assume that younger workers are a better investment than older workers because the young will stay with a company longer than will an older worker whom they assume is likely to retire in their 50s or 60s.⁷ Not only it is illogical to assume someone applying for a job is likely to leave it within a short time to retire, but the assumption that younger workers will stay longer is simply contrary to the work patterns of average Millennials, who typically hop from one job to another in less than 3 years (Future Workplace, 2012).

Another flaw in this stereotype is this assumption that most workers in their 50s or 60s will soon retire. Current data refutes this assumption. Today, nearly three out of four employed US adults plan to continue working beyond retirement age (Gallup, 2017), and 85% of GenXers expect to work until age 70 (see Chaps. 1 and 18; Collinson, 2015; Future Workplace, 2012). This stereotyping also impedes the continued employment of older workers. For example, in *Kirkland v. New York City Transit Authority* (2015), an older worker was terminated when her director made clear to her that “people who are eligible to retire should retire and make room for the younger generation.”

⁶For example, in arguments before the U.S. Court of Appeals for the Fourth Circuit in January 2018, Judge Wilkinson reflected a common view:

The future of the country probably doesn't rest with the gray hairs either. The future of the country rests with the X generation and the millennials and the rest it doesn't rest with people like us. Is that discriminatory?

Waters v. Logistics Management Institute (January 23, 2018) recording of the argument at <http://coop.ca4.uscourts.gov/OAarchive/mp3/16-2353-20180123.mp3>

⁷John Challenger, CEO, Challenger, Gray & Christmas, one of the premier outplacement firms in the country, noted that employers often make a common mistake of assuming that younger workers have longer tenures and provide employers with a greater return on investment, when data shows they do not (Challenger, 2017).

This view of the “natural order” is also premised on outdated hierarchical structure of career progression in the workplace. It sees an older worker as the loyal “company man” who spent his career working his way up at one company. But today’s older worker is just as likely to be a woman who has had many jobs over her career with lateral movement and multiple career changes. This view is also flawed because it presumes labor is a “zero sum” equation where older worker employment means lower younger worker employment. However, research refutes the premise of a zero-sum equation. There is simply no evidence that the employment of older workers reduces employment opportunities or salaries of younger workers (Munnell & Wu, 2012).

5.2.3 *Outdated View of the Causes of Discrimination*

A fundamental premise for the view that age discrimination is “different” comes from the comparison in the 1965 Wirtz Report of age discrimination to discrimination based on race, national origin, and religion. This comparison was incomplete at that time and is outdated in terms of how discrimination operates today. While there is no question that race discrimination in the 1960s derived from “dislike or intolerance,” the truth is that it also originated from views of white superiority and presumptions about the inferiority of people of color. For example, in a study by Bettelheim and Janowitz (1964), only 59% of Southern white Americans believed that “Negroes are as intelligent as Whites.” Those perceptions correlated to negative views and stereotypes about the abilities of workers of a specific race, which led to the exclusion and job segregation of African–American workers. It may have been politically expedient for the 1965 Wirtz Report not to mention racist views about inferior ability,⁸ but this omission undermines a fundamental premise of the report.

Another flaw in the Wirtz Report is its failure to explain how the different origins of discrimination matter when applied to sex discrimination. While sex discrimination has a long history, it is not one driven primarily by hostility and intolerance, but by the subjugation of women as inferior. In the 1960s, people believed that sex impacted one’s abilities, interests, and qualifications,⁹ just like age. And like age discrimination, sex discrimination does not derive from the type of prejudice, malice, dislike, or intolerance as does race discrimination. Sex discrimination typically results from stereotypes about women’s abilities and on assumptions about the appropriate roles of women in the workplace and society, for example, the view that women are the “weaker sex” and not capable of performing certain jobs. But the Wirtz Report did not even consider this inconsistency in its conclusion that age

⁸ “[D]iscrimination—negative behaviors enacted toward members of a particular group—typically stem from prejudiced attitudes and stereotypes” (Duke, 1991; Settles, Buchanan, & Yap, 2010).

⁹ A 1969 Harvard Law Review article on equal protection typifies this outdated view that “biological differences between the sexes are often related to performance” (Developments in the Law, 1969).

discrimination was different. If the origins of age discrimination made it “different” as the Wirtz Report concluded, then the origins of sex discrimination would logically also make it “different.” Yet the proposition that sex discrimination should be acceptable because of its origin seems ludicrous.

The likely response is that even if sex discrimination was viewed as “different,” Congress included it in the same prohibitions in Title VII of the Civil Rights Act of 1964. The proponents of this view would say this is evidence that Congress recognized the same protections and standards would apply to sex discrimination as to discrimination based on race, national origin, and religion. This conclusion leads to the third premise used by the proponents that age is different—that Congress did not include age in Title VII but put it in a separate law because of perceived differences.

5.3 The ADEA Mirrors Title VII’s Purposes and Prohibitions: Making Them More Similar Than Different

If Congress intended for age discrimination to be viewed differently than race or sex discrimination by enacting a separate law, it would not have used the exact same words it used in Title VII of the Civil Rights Act of 1964 to prohibit discrimination.¹⁰ By using the same words in the ADEA’s prohibitions as it did in Title VII’s prohibitions, Congress made the historical origins of the discriminatory motive irrelevant. Congress also adopted the exact same words in the ADEA as it used in Title VII¹¹ to permit employers to use age, sex, national origin, or religion to limit employment opportunities when the factor was a bona fide occupational qualification reasonably necessary to the operation of the business.¹²

One could infer from Congress’ decision to model the ADEA on Title VII’s prohibitions as indicative of Congress’ view that the ADEA should have the same application, force, and effect as Title VII. And for about the first three decades of the ADEA, that is how the Supreme Court interpreted the ADEA.¹³ Those who argue

¹⁰ “[T]he prohibitions of the ADEA were derived *in haec verba* from Title VII.” *Lorillard, Inc. v. Pons*, 434 U.S. 575, 584 (1978). The Court cited to both prohibitions in Title VII §703(a)(1) and (2), 42 U.S.C. §2000e-2(a)(1), (2), in comparing the almost identical language in the ADEA’s prohibitions §§4(a)(1), (2), 29 U.S.C. §§ 623(a)(1), (2). 434 U.S. at 584, n. 12.

¹¹ Title VII § 703(e)(1), 42 U.S.C. § 200e-2(e)(1) permits an employer to explicitly use religion, sex, or national origin in an employment practice if the employer can demonstrate it is a bona fide occupational qualification (BFOQ). Title VII does not allow for race or color to be used and justified as a BFOQ.

¹² ADEA § 4(f)(1), 29 U.S.C. § 623(f)(1).

¹³ In a 1978 decision, the Supreme Court acknowledged:

“There are important similarities between the two statutes, to be sure, in their aims—the elimination of discrimination from the workplace—and in their substantive prohibitions.” *Lorillard, Inc. v. Pons*, 434 U.S. 575, 584 (1978). The following year, the Supreme Court reaffirmed its view

that Congress must have viewed age and age discrimination as different because Congress did not include age discrimination in Title VII ignore the significance of Congress' decision to import verbatim Title VII's prohibitions into the ADEA.

However, over the past decade and half, several Supreme Court cases have focused on differences between the ADEA and Title VII rather than their shared purposes to impose extra burdens on older workers pursuing age discrimination claims. In *General Dynamics Land Systems, Inc. v. Cline* (2004), the Supreme Court held that the ADEA's prohibition against discrimination "because of age" did not reach discrimination against younger workers over age 40. In *Smith v. City of Jackson* (2005), the Court interpreted the ADEA to permit a claim of disparate impact, but held that the ADEA provided an easier statutory defense. In *Kentucky Retirement Systems v. EEOC* (2008), the Court held that a disability plan was not facially discriminatory even though age was an explicit factor that determined the amount of benefits. In *Gross v. FBL Financial Services, Inc.* (2009), the Court held that victims of age discrimination are subject to different standards of proof than individuals with race or sex discrimination claims under Title VII. The ruling in *Gross* is extremely problematic for older women and older minorities, as the different standards make litigation even more complex for the increasing number of workers who pursue claims under both the ADEA and Title VII.

While the issues and results in the first three Supreme Court cases described above reach only a small portion of the most common ADEA cases,¹⁴ these cases are also significant because of the harmful message they send. They signal to lower courts that it is more difficult to prove unlawful age discrimination, even when the Supreme Court explicitly states there is no heightened evidentiary standard under the ADEA.¹⁵ Cumulatively, the cases reflect the view of the current Supreme Court

that the ADEA and Title VII share "a common purpose: the elimination of discrimination in the workplace" in *Oscar Mayer & Co. v. Evans*, 441 U.S. 750, 756 (1979). In two decisions in 1985, the Supreme Court held that interpretations of Title VII are to be applied with "equal force" to the ADEA's substantive provisions. See *Trans World Airlines, Inc. v. Thurston*, 469 U.S. 111, 121 (1985); *Western Air Lines, Inc. v. Criswell*, 472 U.S. 400, 414, n.19 (1985). In the 1990s, the Supreme Court conveyed its view of the import of the ADEA as part of the national effort to eradicate workplace discrimination:

The ADEA, enacted in 1967 as part of an ongoing congressional effort to eradicate discrimination in the workplace, reflects a societal condemnation of invidious bias in employment decisions. The ADEA is but part of a wider statutory scheme to protect employees in the workplace nationwide. See Title VII of the Civil Rights Act of 1964 (citations omitted). *McKennon v. Nashville Banner Publishing Co.*, 513 U.S. 352, 357-58 (1995).

¹⁴The Court's decision in *Gross v. FBL Financial Services, Inc.* (2009) has the most far-reaching effect as it impacts the majority of age discrimination cases which allege disparate treatment discrimination.

¹⁵In *Gross v. FBL Financial Services, Inc.*, 577 U.S. 178, n.4 (2009) the Supreme Court emphasized that the Court would not imply a heightened standard of proof in age cases as there "is no heightened evidentiary requirement for ADEA plaintiffs to satisfy their burden of persuasion that age was the "but-for" cause of their employer's adverse action."

that age discrimination is different and that the ADEA is weaker than Title VII. They also lend fuel to the following judge-made rules that seem to be used with a heavy hand to routinely dismiss age discrimination cases.¹⁶

5.4 Judge-Made Rules Inferring No Discrimination Are Premised on Outdated and Flawed Assumptions About Older Workers and How Bias Operates

5.4.1 “Stray Remarks” Are Often Ageist Comments

The courts’ outdated and skeptical views of age discrimination are most prevalent in their assessment of whether age-related comments are evidence of age discrimination or are irrelevant “stray remarks.” Courts are supposed to apply the same standards to determine the relevance of a comment related to age as they apply to a comment related to race or sex. However, some courts have openly acknowledged they apply more stringent standards in age cases without any legal basis. For example, in *Blair v. Henry Filters, Inc.* (2007), the court acknowledged it had required more of a nexus between an ageist comment and the adverse action, and contrasted that treatment to cases where the circuit had found racial and ethnic slurs to be evidence of discrimination.

Trial judges frequently dismiss ADEA cases by rejecting evidence of comments that indicate age bias. Take the following case¹⁷ in which the comments were made by a company director shortly before he terminated an older worker:

Supervisor: *Can you retire?*

Employee: [After she composed herself from the shock of his question, she replied] *With a penalty. I am not of the age to retire, and I don’t want to retire.*

Supervisor: *People who are eligible to retire should retire and make room for the younger generation.*

The district court found this evidence insufficient to send the case to a jury to consider whether there was discrimination. However, the appellate court viewed

¹⁶The stray remarks doctrine and same-actor and same-group inferences are used by courts to dismiss all kinds of discrimination cases. While there are many examples of questionable race or sex discrimination cases in which these theories were applied, it is the author’s view that these theories are more routinely and widely applied to dismiss age discrimination cases.

¹⁷*Kirkland v. New York City Transit Authority*, 2015 WL 5164827, *15 (S.D.N.Y. 2015), *rev’d in part, aff’d in part*, *Martinez v. New York City Transit Authority*, 672 Fed.Appx. 68 (2nd Cir. 2016) (not for publication).

these same words as “an open declaration of bias” and “a highly discriminatory attitude.”¹⁸

Employer statements that some courts characterize as “neutral” actually reflect ageist attitudes when paired with ageist stereotyping. In *Baker v. Becton, Dickinson and Co.* (2013), the 58-year-old plaintiff reported to a supervisor in his 30s who commented that the plaintiff was “too old and lack[ed] energy and eagerness,” that he was “not the kind of sales rep that [Becton] want[s] to build its future on,” that he was “too old and too slow,” and that he “did not want anyone over 40 in sales.” The district court viewed the statements as “stray remarks” that did not indicate age discrimination. Yet the appellate court viewed these same words as clear evidence of age discrimination:

[W]hile of course a person may lack energy and eagerness regardless of age, Nugent’s comments are clearly made in relation to Baker’s age. The comments also refer to Nugent’s hopes for his sales team in the future, which he hoped would include no one over forty years old. (*Baker*, 532 Fed. Appx. at 603.)

Judges exclude age-related statements that were not made close in time to or were made outside the context of the adverse action, reasoning that the remoteness of the statement makes it an unlikely reflection of the decision-maker’s animus. But this logic is contrary to social science research about bias, stereotyping, and workplace behavior (Levy & Banaji, 2002; Stone, 2012). Supervisors are trained and generally know not to make discriminatory remarks when taking an adverse action. When they make comments reflecting a bias at any time, it is a snapshot of what they really think and believe.

Courts also infer a lack of bias if the discriminatory remark was made remote in time to the adverse action reasoning that one’s biases may change with time. But this logic is at odds with the next judge-made rule, the same-actor inference, discussed below, where courts reason that a person’s inherent biases do not change over time.¹⁹ Courts use the same-actor inference to infer no bias when years separate the same actor’s hiring and firing of an individual worker. If courts can infer no discrimination in a present situation based on past incidents of non-discrimination that occurred years ago, they should be consistent and infer discrimination in a present situation from a previous discriminatory comment.

¹⁸*Martinez v. New York City Transit Authority*, 2016 WL 7036823, *3 (2nd Cir. 2016) (not for publication).

¹⁹The Seventh Circuit noted this illogical disconnect between the stray remarks temporal requirement and the same-actor inference in *Perez v. Thorntons, Inc.* (2013). The court reasoned that a discriminatory comment made a year before the plaintiff’s termination should be heard by the jury as part of the evidence of pretext, just as the jury could consider that the same actor hired and fired the plaintiff.

5.4.2 *The Same-Actor Rule Is Contrary to Social Science Research on Bias and Presumes Static Work Conditions and Relationships*

The same-actor inference supports a finding of no discrimination when the same decision-maker who took an adverse action against the employee previously took a positive action toward that employee (Miller, 2015). It presumes that an actor inclined to discriminate will do so overtly at every opportunity (Miller, 2015). In other words, judges say it is “common sense” that a decision-maker does not hire someone from a group that he is biased against. This assumption is also premised on an understanding that bias flows from beliefs about “in” and “out” groups (Miller, 2015). The courts that created and rely on the same-actor theory do not cite any empirical research for their presumption. In fact, this judge-made rule is inconsistent with research from contemporary social psychology, human motivation, and organizational behavior.²⁰

One premise for this presumption of no discrimination is the faulty assumption that a person acts consistently and at every opportunity to express a stereotype or prejudice against all individuals in a protected group (Miller, 2015). Yet research shows that discriminatory actions are neither consistently nor consciously expressed (Miller, 2015). Today, many discriminatory decisions result from implicit bias and stereotyping, rather than from overt “in” and “out” group decisions.

The same-actor inference is also premised on static conditions and a static relationship. In other words, it presumes that bias and beliefs are inherent and unchanging, that relationships and people do not change over time, and that business conditions remain static.

The flaws in these premises are obvious. Biases and beliefs can and do change over time. Age is a relative concept and people’s attitudes about age can certainly change over time. As the Tenth Circuit noted in *Paup v. Gear Products, Inc.* (2009):

Age is unusual in that it is a protected class in which an employee becomes more susceptible to unlawful discrimination over time. Simply because an employer harbors no age animus toward forty-five-year-old employees does not necessarily mean it feels the same about fifty-eight-year-old employees.

An employer’s assumptions about an older employee can easily change between the time she was hired and years later when she is terminated. In *Filar v. Board of Educ. of City of Chicago* (2008), the court explained why there should not be an inference

²⁰“The same-actor inference is rooted in fundamental misunderstandings on the part of judges and fact-finders that directly contradict social psychological evidence” (Miller, 2015). “[T]he implicit behavioral theories underpinning the same-actor doctrine have been discredited by decades of psychological science on aversive racism, implicit bias, and moral licensing.” (Martin, 2008). “One of the most egregious examples of the epistemological and material tension between federal employment discrimination law and psychological science is the doctrine known as the same actor inference of nondiscrimination” (Quintanilla & Kaiser, 2016).

drawn against discrimination because the same supervisor hired and fired the plaintiff:

An employer may assume an over-forty employee is productive when hired but not years later. It may be reasonable to assume that Dr. Garvey did not have an ‘aversion to older people’ because he hired Filar when she was 62. But it’s just as reasonable to assume that Dr. Garvey viewed Filar as productive at 62 but not at 69.

Second, business conditions can change dramatically in short periods of time, particularly with mergers, acquisitions, and reorganizations.²¹ The flawed premises for the same-actor inference should caution courts to limit its application in discrimination cases. As the Seventh Circuit recently recognized in *McKinney v. Office of the Sheriff of Whitley County* (2017), a race discrimination case, “[t]here are many ... occasions ... where it is unsound to infer the absence of discrimination simply because the same person both hired and fired the plaintiff-employee.” In other words, a presumption of no discrimination is unfounded. Rather, the fact that the same person hired and fired an individual alleging discrimination should only be considered as one piece of evidence for a jury to consider in determining whether the law was violated.

5.4.3 *The Same Group Inference Against Discrimination Is Also Flawed*

Courts have extended the same-actor inference to situations where the actor taking the adverse action is a member of the same protected class as the employee, based on an assumption that one does not harbor negative stereotypes or discriminatory animus toward another in one’s own group.²² The Supreme Court has explicitly rejected the premise that one does not discriminate against members of one’s group in race and gender cases.²³ The same reasoning should apply in age cases, arguably with greater force as the courts often note the marked differences and wide variety in members of the age 40+ workforce. Several courts have rejected employer arguments to expand the “same actor” inference to instances based solely on the

²¹ See *Johnson v. Group Health Plan, Inc.*, 994 F.3d 543, 548 (8th Cir. 1993) (declining to apply an inference against discrimination from the same actor theory in the context of an acquisition).

²² In *Davis v. CSC Logic, Inc.*, 82 F.3d 651 (5th Cir. 1996), the court affirmed summary judgment in an RIF case when the plaintiff was hired at age 54 by a 56-year old and was fired by the same person four years later. The Second Circuit applied the same reasoning in *Graves v. Deutsche Bank Securities, Inc.*, 2013 WL 6246358, *1 (2d Cir. 2013), to infer no discrimination where the supervisor who had hired plaintiff was almost a decade older than the plaintiff.

²³ In *Castaneda v. Partida*, 430 U.S. 482, 499 (1977), the Supreme Court noted that “[b]ecause of the many facets of human nature, it would be unwise to presume as a matter of law that human beings of one definable group will not discriminate against other members of that group.” Similarly, in *Oncale v. Sundowner Offshore Services, Inc.*, 523 U.S. 75, 80 (1998), the Supreme Court held that Title VII permits a claim of sex discrimination committed by a supervisor of the same sex as the employee.

supervisor's membership in the protected age group, recognizing that it is "common and natural for older people to exempt themselves from what they believe to be the characteristic decline of energy and ability with age."²⁴

5.5 A Contemporary Framework: Aging, Older Workers, and Discrimination

It is time to put to rest the outdated notion that age impacts one's ability. Decades of research document that age does not predict ability or performance. Aging and its effect on cognitive abilities is highly individualized, as ability, agility, and creativity vary widely among people of the same age (Kenny, Groeller, McGinn, & Flouris, 2016). Many older people outperform or perform as well as young people (Howelson, 2015). While speedy thinking may decline over time, middle-aged brains adapt to reach solutions faster, make sounder judgments, and better navigate the complex world of today (Strauch, 2010). Levels of innovation and creativity span the age spectrum as well. Research shows that twice as many tech entrepreneurs start ventures in their 50s as do those in their early 20s (Wadhwa, Freeman, & Rissing, 2008).

Physical ability also varies from person to person and from one person's age to another person's age. The effects of aging on an individual's physical abilities are dependent on genetics, lifestyle, fitness, and health status, and can also vary considerably from person to person (Kenny et al., 2016).

It is also time for society, employers, and judges to update their views about older workers and work, which are no longer the 1960s world of *Mad Men*—white men in their 50s in white collar jobs at one company for their careers in a hierarchical structure. Today's older workers, as well as those who face age discrimination,²⁵ are more racially and ethnically diverse than previous generations (see Chap. 1).²⁶

We see an even more dramatic change in the gender of older workers over the past 50 years. The Bureau of Labor Statistics (BLS) projects that by 2024, twice as many women over 55 will be in the labor force as women ages 16–24 (Toossi & Morisi, 2017). Additionally, women age 65 and older will make up roughly the same percentage of the female workforce as older men do of the male workforce

²⁴In *Kadas v. MCI Systemhouse Corp.*, 255 F.3d 359, 361 (7th Cir. 2001), the Seventh Circuit recognized that the "relative ages of the terminating and terminated employee are relatively unimportant" in assessing whether the decision-maker was motivated by age bias. In *Danzer v. Norden Systems, Inc.*, 151 F.3d 50, 55 (2d Cir. 1998), the Second Circuit held that the "proposition that people in a protected category cannot discriminate against their fellow class members is patently untenable."

²⁵For example, twice as many Blacks and Asians filed age discrimination charges with the EEOC in fiscal year 2017 than filed age charges in 1990. And the percentage of charges filed by whites has declined by one third.

²⁶The share of the Black labor force age 55 and older nearly doubled from 1990 to 2016, according to the Bureau of Labor Statistics (Toossi & Joyner, 2018).

(see Chap. 1; Toossi & Morisi, 2017). And research and data suggest that older women are experiencing age discrimination in greater numbers than older men²⁷ (Neumark, Burn, & Button, 2015).

In sharp contrast to the one “company man” of the *Mad Men* era, today’s older workers have typically had an average of a dozen jobs over their lifetime,²⁸ and have had large numbers of short duration jobs even in middle age.²⁹ Twenty-two percent of adults age 50 years and older have searched for a job in the last 5 years (NORC, 2013). Today’s older workers are in all kinds of jobs including knowledge-based jobs as well as service, construction, and other physically demanding jobs (NORC, 2013). Older employees are the most engaged cohort in the workplace, in contrast to the stereotypes that they are ready to give up working for retirement.³⁰

It is also time for judges to update their views about how discrimination operates in the workplace. In contrast to the 1960s view that most discrimination was based on dislike and intolerance, contemporary discrimination in the workplace flows most commonly from stereotypes (Reskin, 2000; Waller, 2001). This indicates that contemporary discrimination—whether based on age, race, or sex—share more similarities than differences.

The legal community is woefully ignorant of valuable social science research about aging, work and discrimination, and the significance such research could have in age discrimination cases. For example, judges do not seem to appreciate the harm of age discrimination. Yet research shows that perceived ageism has more serious health consequences than perceived racism or sexism (Sutin, Yannick, Carretta, & Terracciano, 2015).

One strategy to bridge this gap is for researchers and experts to educate employers and the legal community about the contemporary understanding of aging, work, and discrimination. Experts and advocates could increase and expand their outreach efforts to educate the public, employers, and the legal community about the benefits of the multi-generational workforce, the necessity of continued employment for older workers, and the economic and sociological harm of age discrimination (James, 2017).

²⁷ Since 2010, the number of ADEA charges filed with the EEOC by women has surpassed the number of ADEA charges filed by men. The age of those filing ADEA charges has also increased significantly. In 2017, more charges were filed by workers ages 55–64 than the younger age cohort, and the percentage of workers age 65+ filing age charges doubled from the number of charge filed in FY1990.

²⁸ The average person born in the latter years of the baby boom (1957–1964) held 11.9 jobs from age 18 to age 50, according to the U.S. Bureau of Labor Statistics. Nearly half of these jobs were held from ages 18–24 (Bureau of Labor Statistics, 2017).

²⁹ Of those between the ages of 40 and 46 who started a new job, 33% of employments lasted less than a year, and 69% ended in less than 5 years (Bureau of Labor Statistics, USDL-12-1489, November 2017). Research by AARP in 2017 reports that one-fifth of adults age 50 and older in the labor force looked for a job in the past year (Kerman & Thayer, 2017).

³⁰ Sixty-five percent of employees age 55 and up are “engaged,” compared to 60% of younger employees. It takes only a 5% increase in engagement to achieve a 3% increase in incremental revenue growth (Hewitt, 2015).

Another strategy is a concerted response to ageist stereotyping and comments that mirror the current cultural response to sexist or racist stereotyping and slurs. Our culture, particularly in the workplace, teaches us to question and reject stereotypes about race or sex. For example, most have received training in the workplace with instructions not to make assumptions about someone's interests or abilities based on one's gender. But making an assumption about a person's interests or abilities because she has reached a certain age is not routinely questioned or condemned.

The law commands that an employment decision must be based on an assessment of an individual's abilities and cannot be based on a generalization or stereotype about her group—whether the generalization is true or not. But consider how this reasoning plays out in the context of ageist stereotyping and age discrimination. Most decision-makers do not question the validity of an ageist stereotype or its relevance to a specific individual. For example, the frail and declining health or mental capacity of those in their 80s or 90s is applied to workers in their 50s and 60s, even though older workers today are healthier and living longer than previous generations (FIFAR, 2012).

Many stereotypes have a kernel of truth—in that there is likely someone of the protected group who embodies the stereotype. On the other hand, any individual in a group may not conform to that stereotype. The ADEA and other employment discrimination laws are based on the fundamental proposition that employment decisions must be founded on an individual's abilities and cannot rely on generalizations or stereotypes about the group to which they belong. For example, the stereotype that women are weaker than men or that women live longer than men may be true generalizations in the aggregate. But most know it is clearly unlawful to make an employment decision based on such a generalization. The same cannot be said for the stereotypes or generalizations routinely applied to older workers.

For those of us who deal with the range of discrimination issues, we see parallels between sexual harassment and age discrimination. Like sexual harassment, age discrimination disproportionately impacts women. Like sexual harassment, it is too common, not confronted, and too accepted. Like sexual harassment, age discrimination is an open secret. Since the fall of 2017, we are experiencing a cultural reckoning confronting sexual harassment with the #MeToo and #TimesUp movements. Will we ever see a reckoning to finally confront and reject age discrimination for the scourge it is? Efforts by researchers and advocates in the aging community to educate employers and judges would be a meaningful step forward.

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Chapter 6

Extended Working Lives: Feasible and Desirable for All?



David Lain, Mariska van der Horst, and Sarah Vickerstaff

6.1 Introduction

Governments across the OECD are seeking to promote extended working lives in response to population ageing (Lain & Vickerstaff, 2014; OECD, 2011). As the proportion of older people increases, it is argued that it is increasingly important for countries to ensure that the ratio between non-workers and workers does not become too imbalanced (OECD, 2011). There now seems to be a broad political consensus that people will have to work longer on average than was the case in the recent past (Phillipson, Vickerstaff, & Lain, 2016). Whilst this is often presented in terms of individual responsibility to work longer, the reality is more complicated. Extending working lives raises some serious ethical questions. To what extent is it the responsibility of *everyone* to continue working in older age, when significant numbers of older people have health conditions that severely limit their employment prospects (Lain, 2016)? To what extent should we expect people in physically demanding jobs, who often started working at a young age, to work as long as people who entered the labor market later because they spent longer in education and who had less physically taxing working lives? Is it always a successful outcome if individuals manage to remain in work, or are there circumstances when it would be preferable ethically to *not* expect them to be employed? This chapter explores the question

D. Lain (✉)

Newcastle University Business School, Newcastle upon Tyne, UK
e-mail: David.Lain@ncl.ac.uk

M. van der Horst

Department of Sociology, Vrije Universiteit, Amsterdam, Netherlands
e-mail: m.f.j.vanderhorst@vu.nl

S. Vickerstaff

School of Social Policy, Sociology and Social Research, University of Kent, Canterbury, UK
e-mail: S.A.Vickerstaff@kent.ac.uk

of whether extended working lives in the UK and the USA is feasible and desirable for all. It starts by setting the policy context, then examines the issue through quantitative survey analysis and a qualitative study of UK hospitality workers.

6.2 Extended Working Lives in the UK and the USA: Setting the Policy Context

Clearly you can believe that people need to work longer *on average*, but accept that it is not *always* desirable to expect people in all circumstances to work for longer. If we make this assessment, we can then argue for policy to provide adequate financial support for those with limited employment prospects (for a discussion, see Lain, 2016). However, in countries such as the UK and the USA there has been insufficient attention paid to this issue by policymakers. State pension ages are rising in both countries, to 67 in the USA and 68-plus in the UK, and these countries continue to provide benefits to those below state pension age which are extremely meager by international standards (Lain, 2016). For example, in the UK, benefits for unemployment and ill health for those below state pension age are provided at half the level of the state pension, which is itself not generous in the first place (Lain, 2016). In the USA, unemployment benefits are time-limited and Social Security benefits taken for illness are actuarially reduced when taken before pension age. In this context, it is also noteworthy that salary-related defined benefit occupational pensions have become much less common in both countries. In their place are defined contribution pensions, which are typically less well funded and do not provide the security of defined benefit pensions (Hacker, 2006; Lain, 2016; Office for National Statistics, 2012).

In terms of access to a state pension, the financial pressures to work longer are even stronger in the UK than the USA. In the USA, the Old Age Social Security pension can be taken early, from age 62. Actuarial reductions for early receipt are increasing as “normal” pension ages rise, increasing financial pressures to continue working. However, in the UK the Cridland (2016) government report into state pension ages ruled out the possibility of even allowing people to take an early pension. UK state pension rises hit low earners the worst, as the state pension is a critical element of their retirement income; for those in the lowest income quartile, the state pension accounts for over 80% of their total pension income (Cridland, 2016). Single pensioners are particularly likely to be in this category of people who are dependent on their state pension; for them their state benefit income (including the state pension) makes up more than half of all income for “all but the top fifth of single pensioners” (Department for Work and Pensions, 2017, p. 8).

Despite the obvious financial constraints introduced by raising the state pension age, policymakers have attempted to present extended working lives as being a *choice* made by individuals. In this context, the UK government followed the US path in 2011 by abolishing mandatory retirement ages, theoretically enabling individuals to choose when to retire. In the USA, the government-appointed National

Commission on Fiscal Responsibility and Reform (2010) framed the issue of extended working lives as a choice to be made by people if they were given adequate information:

Working longer and saving more has significant positive implications for both individuals and society as a whole... we propose directing SSA [Social Security Administration] to provide better information to the public on the full implications of various retirement decisions, with an eye toward encouraging delayed retirement and enhanced levels of retirement savings. (p. 52)

In the UK, there has been an additional narrative of people having “fuller working lives” than in the past. For example, Ros Altmann, who was later to become UK Pensions Minister, said in 2015: “*This is not about forcing people to work on*, but supporting those who want to maintain a fuller working life.” (Altmann, 2015, p. 9, emphasis added). John Cridland (2016) in his review of state pension ages for the UK government justified proposed increases with reference to hypothesized positive improvements in employment in older age:

The nature of work and retirement is changing, as people move from the old model of a fixed retirement age leading to a defined period of retirement to a more flexible approach where people may wish to work part-time or change career in later life (Cridland, 2016, p. 11).

The evidence that such changes are occurring in the UK at least is debatable (van der Horst, Lain, Vickerstaff, Clark, & Baumberg Geiger, 2017), and there are limited policy initiatives to promote fuller working lives (Phillipson et al., 2016). This rhetoric of individuals having “fuller working lives” is therefore used to deflect attention from the fact that some individuals are being *forced* to work longer. As the following quote from former UK Pensions Minister Steve Webb implies, there is an attempt to side-line dissenting voices who question whether extended working lives are feasible and desirable for all:

It’s time to change the conversation about extending working life from one about working “until you drop,” to one about a fuller working life, that means working as long as is necessary to create the future you want (Department for Work and Pensions, 2014, p. 4).

In this context, academic research has responded by highlighting the fact that extended working lives are not *feasible* for all, given that health problems and other constraints on employment increase as people age (see Lain, 2016). This chapter builds on this research, by arguing that even when people are “successful” at managing to remain in employment, it may not always be reasonable to expect them to be there. It starts by presenting an overview of the factors known to influence employment in older age; this is complemented with an original analysis of the US Health and Retirement Study and the English Longitudinal Study of Ageing. Research reviewed tends to highlight the better employment prospects of relatively advantaged individuals. However, the analysis here and a careful reading of the literature shows that whilst employment might be unpredictable for individuals in disadvantaged circumstances, it is not uncommon for them to be in employment in older age as well. In order to examine the implications of this, the chapter then presents findings from qualitative research on older low-paid hospitality workers in England, many of whom struggle on in physically demanding jobs whilst their

health worsens. These workers cannot rely on being able to continue working into older age, but a lack of alternative sources of income means they have little choice but try to remain in employment under difficult circumstances. Clearly older people with health conditions should be given opportunities to work if they want them. However, the case of the hospitality workers examined provides an illustration of how it is not always desirable to expect workers to extend working lives. We discuss the policy implications of this in the conclusion.

6.3 Who Works “Late”?

In order to understand whether extended working lives are feasible and desirable for all, it is useful to examine who currently ends up working in older age. Generally, research tends to conceptualize working “late” in two ways. The first stream explores people working “post-retirement.” This conceptualization is not about age per se, but about *transitions* back into work after having self-identified as fully or partially retired, and is sometimes referred to in the literature as individuals “un-retiring” (e.g., Cahill, Giandrea, & Quinn, 2011; Giandrea, Cahill, & Quinn, 2010; Kannabar, 2012; Maestas, 2010; Platts et al., 2017; Pleau, 2010). Typically, studies follow people using longitudinal surveys after age 50 and identify the frequency with which they return to work after retiring. This means, in theory, somebody could retire at 52, return to work at 54, and retire again finally at age 57. Indeed, research suggests that “un-retirement” is actually most common among younger retirees (Maestas, 2010). Studies such as these suggest that in the USA, a significant minority of older people unretire (Cahill et al., Giandrea et al., 2010; Maestas, 2010; Pleau, 2010), with this phenomenon seeming to be less common in England than the USA (Kannabar, 2012, but see Platts et al., 2017). For example, according to Giandrea et al. (2010), around 15% of those (men and women) retiring from a career in the USA returned to work, compared with 5% of men in England doing the same according to Kannabar (2012). Studies such as these are useful in showing that late careers involve more complex labor market transitions than we might expect. However, they tell us less about prospects for extended working lives because they are not related to age per se (see Chap. 18).

The second stream of research conceptualizes “late” retirement in relation to people working beyond an *age* of institutional significance—typically state pension age (examples of research focusing solely on the UK include Barnes, Parry, & Taylor, 2004; Clayton, 2008; Lain & Loretto, 2016; Parry & Taylor, 2007; Smeaton & McKay, 2003). “Late retirement” is not working “post-retirement” because an individual may never have actually retired. Whilst a significant body of research has explored unretirement as a *transition* in the USA, there has been less focus on the factors influencing employment beyond “pension age” (cf. Lain 2011, 2012, 2016). Nevertheless, from the studies that are available it might appear that post-retirement-age employment is associated with financially advantaged individuals, who presumably have the greatest ability to work as well as the most fulfilling jobs

(Lain, 2011). Haider and Loughran (2001), for example, examined the groups most likely to work in older age in the Health and Retirement Study, from which they concluded “[US] labour supply is concentrated among the most educated, wealthiest and healthiest elderly.” Likewise, analysis of the English Longitudinal Study of Ageing suggests a linear relationship between work and wealth after age 65, with increasing employment as you move up the wealth quintiles (Crawford & Tetlow, 2010; see also Lain, 2011).

Such findings might suggest that employment up to and beyond state pension age is associated with choice—those most likely to work appear to be those with the greatest means to retire. However, this picture of older worker advantage presents only a partial picture. Closer inspection of Haider and Loughran’s (2001) results suggest that whilst healthy, educated, and wealthy individuals were *most* likely to work, employment was in no way confined to this group; employment was not rare for any economic segment, and a significant proportion of those with modest wealth continued working. Likewise, Lain (2016) finds whilst the wealthiest segment was most likely to work between age 65 and 74 in the USA and England, debts and outstanding mortgages nevertheless increased the likelihood of working in both countries. Research from a range of other countries suggests that having good levels of health and education increase the likelihood of working in older age, as does the presence of a working partner in the household (e.g., Carr et al., 2018; for a discussion see Hasselhorn & Apt, 2015). However, by focusing attention on the groups *most* likely to work, we may create a blind spot for less advantaged individuals who do manage to remain in employment.

In order to illustrate this point, we present descriptive statistics on the percentages of advantaged and disadvantaged older individuals working in the USA and the largest country of the UK, England; these findings are based on analysis of the English Longitudinal Study of Ageing and the US Health and Retirement Study. The results for England should broadly reflect those of the UK as a whole because the vast majority of the UK population live in England (84% at the last census according to ONS (2012)). The analysis focuses on interviews conducted with people aged 65–69 in 2012 (and aged 54–60 in 2002). The general point to be made from this analysis is that it was not that uncommon for those in more disadvantaged circumstances to be working at 65–69, *if they were also working earlier at age 54–60*.

Figure 6.1 shows that in both countries just over two thirds of individuals were working at age 54–60. When we get to age 65–69 in 2012, around one third of Americans were still working, compared with one fifth in England. The fact that Americans were more likely to be in employment at this age is acknowledged in the literature, and is likely to be in part related to the fact that mandatory retirement ages were only abolished in England in 2011 (compared with 1986 in the USA; see Lain, 2016). One of the key findings from Fig. 6.1 is that in both countries, individuals in general had a *relatively* high likelihood of working *if they were employed at age 54–60 in 2002*. Employment continuity therefore seems to increase the likelihood that individuals will work in older age—if individuals are out of employment in their mid-50s they evidently (but not surprisingly) have a lower likelihood of

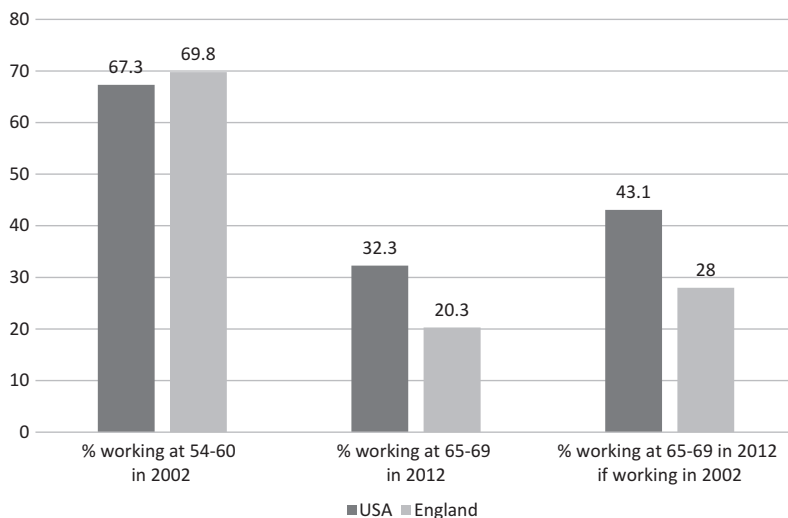


Fig. 6.1 Percentages working in the USA and England

working at 65–69. Supplementary analysis not shown here indicates that in both countries, women were less likely than men to work at age 65–69. However, for both men and women being employed at age 54–60 increased the likelihood of working at 65–69.

Table 6.1 breaks down employment levels by wealth and education, in order to see how employment is influenced by (dis)advantage. Starting with wealth, in both countries we can see that at age 54–60 in 2002 the poorest wealth quintiles were less likely to be in employment than those above this. Such patterns are known to be associated with lower levels of health and education among the poorest, which arguably make it harder for them to compete in the labor market and remain in employment (Lain, 2016). At age 65–69 in 2012, we see highest employment among the richest and lowest employment among the poorest although differences in employment between wealth groups were statistically significant only in the USA. When the focus is only on those who were working at age 54–60, however, we see relatively high percentages of those in the poorest categories working at age 65–69 (37.8% in the USA and 29.1% in England), and no longer significant differences between wealth groups in either country. In other words, when people in the least wealthy categories managed to remain in work in their 50s, they also seem to be relatively likely to stay into their jobs at age 65–69.

The lower half of Table 6.1 shows the distribution by education. At age 54–60 in both countries, those with college and above education were much more likely to be working than those with less than a high school degree. At age 65–69 in the USA, individuals with college education and above were more than twice as likely to work compared to those with less than high school (45.7% vs. 18.6%). In England, we also see the same pattern of highly educated people being more likely to work although the differences are much smaller and not statistically significant. If we

Table 6.1 Percentages working by wealth and education in the USA and England

Variable	At age 54–60 (2002)	At age 65–69 (2012)	At age 65–69 (2012) if working at 54–60
Wealth			
<i>USA</i>	($p < .001$)	($p = .003$)	($p = .178$)
Lowest wealth quartile	58.4%	25.2%	37.8%
2	73.1%	34.7%	43.9%
3	68.8%	33.1%	42.6%
Highest wealth quartile	68.7%	36.3%	47.2%
<i>England</i>	($p < .001$)	($p = .168$)	($p = .289$)
Lowest wealth quartile	56.6%	16.9%	29.1%
2	76.6%	18.0%	23.4%
3	77.6%	21.3%	27.0%
Highest wealth quartile	67.4%	24.3%	33.3%
Missing ($n = 31/25$)	80.7%	25.8%	28.0%
Education			
<i>USA</i>	($p < .001$)	($p < .001$)	($p < .001$)
Less than high school	46.0%	18.6%	33.3%
High school graduate	66.8%	28.4%	37.6%
Some college	67.5%	32.0%	43.3%
College and above	79.9%	45.7%	52.3%
<i>England</i>	($p < .001$)	($p = .217$)	($p = .888$)
Less than high school	59.8%	16.8%	28.1%
High school graduate	70.2%	19.4%	25.9%
Some college	74.6%	22.7%	28.8%
College and above	79.0%	24.4%	30.3%
Missing ($n = 102/73$)	71.2%	18.6%	25.4%

Source: Authors' analysis of the Health and Retirement Study and the English Longitudinal Study of Ageing

Note: All p -values from chi-square tests. USA $N = 1690$ (wave 6 or wave 11 employed) or 1137 (wave 11 employed conditional on employed wave 6). England $N = 1134$ (wave 1 or wave 6 employed) or 825 (wave 6 employed conditional on employed wave 1)

focus only on those who were previously working at age 54–60, we see a higher likelihood of working at 65–69 for all educational groups in both countries. It is particularly noticeable that around a third of those with less than high school qualifications were employed at age 65–69 in both countries if we focus only on those previously in employment at age 54–60.

Table 6.2 Percentages Working by Health and Physical Demands of the Job in 2002 in the USA and England

Variable	At age 54–60 (2002)	At age 65–69 (2012)	At age 65–69 (2012) if working at 54–60
Health			
<i>USA</i>			
Self-reported health	($p < .001$)	($p < .001$)	($p = .003$)
Fair/poor	39.4%	16.0%	30.6%
Excellent/good/very good	73.5%	35.9%	44.6%
<i>England</i>			
Self-reported health	($p < .001$)	($p = .001$)	($p = .393$)
Fair/poor	48.9%	12.0%	24.5%
Excellent/good/very good	74.8%	22.2%	28.5%
Physical demands of the job			
<i>USA</i>			
Physically demanding job in 2002		($p < .001$)	($p = .002$)
None of the time	–	48.9%	48.9%
Some of the time	–	42.8%	42.8%
Most or all of the time	–	36.2%	36.2%
Not working	–	10.1%	–
<i>England</i>			
Physically demanding job in 2002		($p < .001$)	($p = .142$)
Sedentary	–	23.9%	24.2%
Standing	–	30.7%	30.9%
Physically demanding	–	29.7%	30.3%
Not working	–	2.4%	–

Source: Authors' analysis of the Health and Retirement Study and the English Longitudinal Study of Ageing

Note: all p -values from chi-square tests. USA $N = 1690$ (wave 6 or wave 11 employed) or 1137 (wave 11 employed conditional on employed wave 6). England $N = 1134$ (wave 1 or wave 6 employed) or 825 (wave 6 employed conditional on employed wave 1)

The top segment of Table 6.2 shows a similar pattern for the relationship between health and employment. Research in both the UK and the USA consistently shows that having good health increases the likelihood of working in older age (Lain & Vickerstaff, 2014). Consistent with this trend, in the USA people who rated their health as being “fair/poor” were significantly less likely to work at ages 54–60 and 65–69 than those with “excellent/good/very good” health. However, it is important to recognize that just under a third of people with fair/poor health that worked at age 54–60 in the USA also worked at age 65–69 (30.6%). In England, there was no significant employment difference at age 65–69 between those with differing health levels *once we focus only on those working at age 54–60*. In other words, in both

countries, significant minorities of those with less good health work at the age of 65–69 *when they are able to remain in work in their mid to late 50s*.

To some degree this pattern is likely to be the result of positive developments. Compared with the past, it has become more common for individuals to successfully manage a health condition whilst working (Vickerstaff, Phillipson, & Wilkie, 2011); we should not, therefore, automatically assume that everybody with “fair” or “poor” health is unable or unwilling to work. The problems are arguably most acute, however, when an individual *develops a work limiting* health condition that makes it difficult for them to continue performing the types of jobs they have done previously (which are most realistically available to them in the future). This may be a slightly different situation from younger people with long-standing health problems, who perhaps developed career paths that enabled them to combine employment with managing their condition. Work limiting health conditions are common among older people—a quarter of people aged between 50 and 69 in 2008–2009 in England had a work disability which limited the kind or amount of paid work they could do (Crawford & Tetlow, 2010). It therefore matters whether or not the health condition(s) they have limit(s) the type of work they do. Under UK law companies have to make “reasonable adjustments” to enable people with disabilities to work. In the case of physically demanding work it may, however, be difficult for an employer to make reasonable adjustments to enable somebody who has developed health problems to continue doing their job. In these circumstances, an individual in financial need with diminished health faces uncertain employment prospects.

Given the importance of job demands on continued employment, the bottom segment of Table 6.2 shows employment at age 65–69 by the extent to which work at age 54–60 was physically demanding. Physical job demands are measured differently in each country, so the results are not directly comparable, but they reveal some useful insights. It is logical to expect that having a physically demanding job in your 50s would decrease the likelihood of working in your 60s. In the USA, we can see that this is indeed the case. People who were in jobs that were physically demanding “none of the time” at age 54–60 were significantly more likely to be working at 65–69 than those in jobs that were physically demanding “most or all of the time.” However, this overall result can obscure the fact that 36.2% of people in physically demanding jobs nevertheless remained in employment in the USA.

The results for England are based on whether the job is “sedentary,” “standing,” or “physically demanding.” Interestingly, once we focus only on people with a job at 54–60, we see that there is no significant difference in employment between those with different levels of physical job demands at 54–60 (any real difference appears to be related to the category “not working”). This means that a significant proportion of those with physically demanding jobs 54–60, 31.1%, was still working at age 65–69. Other research has shown that few individuals move from physically demanding to non-physically demanding work in older age (Lain, 2016; Maestas, 2010). In the past, there may have been more opportunities to move into “light work” in older age (Phillipson, 1982), but since this time employers have become much more competitive and market orientated, leading to work intensification in the UK, the USA, and a range of other countries (Burchell, Ladipo, & Wilkinson, 2001;

Capelli, 1999; Green, 2006). In this context, opportunities for moving into less demanding work within the firm have probably declined significantly. For a significant proportion of older workers, it is therefore going to be a “choice” between physically demanding work or no work at all.

To summarize these results, low levels of health and education do appear to reduce the likelihood that individuals end up in employment in their mid to late 60s; as state pension ages rise, it is therefore essential that policy reflects this in terms of supporting older individuals who find themselves without a job. At the same time, however, it is not that uncommon for people with physically demanding jobs and/or low levels of wealth, education, and health in their mid-50s to continue working beyond their mid-60s. If we focus our attention on the advantaged groups most likely to work, we may ignore the question of whether it is *always* desirable when disadvantaged individuals *do* manage to remain in work in older age. Whether this is the case is probably due to combinations of health, education, and job demands. This is not easily examined using quantitative surveys, so we turn our attentions to qualitative evidence.

6.4 Case Study of Workers in Hospitality

6.4.1 *Characteristics of the Workers*

In order to understand the situation of less advantaged individuals in the labor market, we draw on qualitative interviews with 22 older hospitality workers employed in an educational establishment. As with many of the disadvantaged workers identified above, they had typically managed to remain in work by having a reasonable degree of employment continuity—they worked in an organization with relatively secure jobs and long job tenure. As we shall see, in their qualitative interviews these workers typically reported financial pressures, which made leaving employment difficult. At the same time, however, the jobs they did were mostly physically demanding and workers faced worsening health but few financial opportunities to stop working prior to (or in some cases after) state pension age.

The interviews were part of a larger project on extended working lives in five organizations (International Longevity Centre, 2017). The hospitality case involved employees and managers in an independent business unit within the larger educational establishment. The main areas of work were: cleaning bedrooms, offices, and public areas; reception work; and catering in a range of food outlets. The organization prides itself on low staff turnover compared to sector norms. The average number of years with the firm for older employees interviewed was 13 years, which is a long tenure compared with the hospitality sector as a whole (People 1st, 2016). As a result, there are many long-serving staff members and an increasingly ageing workforce, especially in housekeeping (in which women predominate); the catering staff has a younger profile and here turnover is a bit higher. Management does not

perceive the long service of many employees as a problem—indeed, staff loyalty is considered as a positive asset. Sickness absence is around 4%, which is also significantly lower than average for the hospitality sector, and the issue is being actively managed with the support of the educational establishment's occupational health team. In other words, the conditions of employment for these workers were arguably about as good as it gets for hospitality workers.

A case study approach was used in the project, with semi-structured interviews undertaken with the HR manager and occupational health professionals (three people), line managers of older workers (five people), and the 22 older employees mentioned above. Note that some of the 22 “older workers” had supervisory responsibilities but were being interviewed as “workers” rather than managers of older people. In addition to the interviews, the organization provided information on current policies and labor force statistics. The key selection criteria for the study was that employees had to be aged 50 years or above. The hospitality workers were aged 50–67. As the quantitative analysis showed, this was a critical age range for remaining in work beyond age 65. We used a maximum variation sampling strategy (Patton, 2002) for selecting older employees. This method involved asking gatekeepers to provide potential samples of older employees stratified on the basis of occupational class, gender, and ethnicity differences that were present in the workplace. This approach was taken in order to capture the experiences of informants from different backgrounds. The key criteria for selecting line managers were that they managed older workers and were likely to have recent experience managing retirement; this was explained to gatekeepers who purposively selected participants on these criteria. This process enabled the researchers to get a 360° view of how the organization was managing older workers, health and retirement issues from the perspectives of policymakers and managers, as well as those who were managed (see Marshall, 1999 for more on case study methodology). Although we focus primarily on the older workers themselves, our discussion is also informed by the other interviews.

Table 6.3 shows that most of the 22 older workers reported were “blue collar” rather than “white collar” or “managerial” employees, reflecting the physical nature of many of these jobs. Most of these workers reported that their health was “fair” or “poor” rather than “good.” It is important to note that the range of health-related answers included “excellent,” “very good,” “good,” “fair,” or “poor.” “Good” health here therefore combines three degrees of “good health.” Few older people rated their health as being “poor” in previous studies (e.g., Lain, 2016), likely because this is the worst option and they are comparing themselves against what they think is “normal” for their age. In this context, it is arguably reasonable to categorize “fair” health as being potentially problematic from the perspective of doing physically demanding work. Furthermore, younger sample members in their 50s who reported that their health was “good” nevertheless questioned whether their health would remain at the levels required for the job, based on their perceptions of working with older colleagues. In other words, health was a big concern for these workers in the context of pressures to work longer.

Table 6.3 Characteristics of the Hospitality Older Worker Sample

		All (<i>n</i> = 22)	Women (<i>n</i> = 14)	Men (<i>n</i> = 8)
Type of job role	Blue Collar	12	6	6
	White Collar	3	3	0
	Supervisors	5	4	1
	Managerial	2	1	1
Self-reported health status	Good	8	5	4
	Fair	9	6	3
	Poor	4	3	1
	Unknown	1	1	0
Age	50–59	14	8	6
	60–69	8	6	2
	Total <i>N</i>	22	14	8

Source: Authors' analysis

6.4.2 Findings

The organization did not have any explicit policies focused around the ageing workforce. Managers and employees alike felt that extending working lives whilst reasonable if people wanted to do it was generally not what most people wanted. Tighter commercial circumstances were felt to be reducing what had in the past been an informal practice of providing lighter duties or redeploying people toward the ends of their working careers or following major health events. There were concerns among the managers that people might stay on for financial reasons when they were no longer fit or able to do the jobs well and that this might increase the need to performance manage people out. One manager said the following when asked if the rising state ages presented any problems:

Yeah, I mean inevitably it's going to give rise to [create problems] for management of organisations dealing with issues of ageing workforces. Are they still performing at the level that the role requires? That's the concern. Because obviously with ageing comes ill health, perhaps dropping performance, mental abilities start to deteriorate, people forget things, whatever, that can happen. And then I suppose it's people facing up to the fact that really can they still do the job or should they admit to themselves that actually it's time they did stop working and allowed someone else to come, with a new energy and a new take on things, to take things forward in the organisations they're working for. (Male line manager)

Following the abolition of the mandatory retirement ages by the UK government in 2011, the only time that managers appeared to get involved in retirement discussions was when performance was effected and the situation had to be managed. Managers were worried about initiating conversations about retirement in case it appeared discriminatory, and as a result there was a lack of clarity for employees about the retirement process and little information or support.

The employee respondents were asked about their retirement aspirations, when they would like to retire, when they thought that they would retire, and whether they

had considered gradual or phased retirement. The vast majority expected to retire at state pension age or later. Many wanted to retire earlier but did not see it as financially viable. Among the women there was a sense of injustice about the rapid rise in women's state pension age as many had spent their working lives assuming that they would be able to get their state pension at 60. As one female employee remarked:

'Cause, 'cause the government, you know, it's all very well going, "Oh, you can't retire till you're 57;" erm, 67, sorry, not 57. But my life is nearly over by then. Come on, I've worked since I was 15, give a little bit, you know. It's not funny, is it really? (Female, aged 57, married, poor health)

Whilst most interviewees found the idea of phased retirement attractive most of the cleaning and catering staff did not think it was affordable to reduce their hours. When one interviewee was asked whether phased retirement had any appeal to him, he replied:

No, not really, no, 'cause of finance at the end of the day. You know, you've got to live at the end of the day and to live costs money, so at the end of the day I don't think I'll be able to do anything like that. (Male, aged 54, married, poor health)

The majority of employees did not acquire an occupational or personal pension until very recently, when most were "auto-enrolled" into a workplace scheme following government legislation. This meant that they had very little in the way of pensions savings although some women would have had access to husbands' pensions. They typically did not therefore have a secure financial route to retirement. The rise in state pension age for this group was thus keenly felt and was pushing many to try to work for longer than they had expected.

The employees were also asked about their working conditions and the nature of their work. Two main themes emerged from these discussions: (1) that the work itself in cleaning and catering was hard physical work, and (2) that the pace of work had intensified in recent years. For example, when one interviewee was asked if she had "quite a physical job" she replied:

Oh yeah, yeah. I haven't got any knees anymore [laughs]. (Female, aged 60, married, health fair)

Another interviewee commented:

Many times we sit here and we joke now, especially some of us that have been here 12 years or maybe longer and we've seen changes, and the job sort of gets more and more demanding and physical.... I dread to think what we're going to be like if we've got to stay to 67, because I know I won't be able to run around like I do now. (Female, aged 50, divorced, health fair)

A majority of the employees in these jobs had worked in similar manual work for most of their working lives. Whilst there was some discontent about the nature of the work, especially at advancing age, there was a strong sense of realism about the prospects for alternative work. The following were fairly representative comments:

As you get older, it is a lot harder to find a job. So I think, whereas if I was in my twenties and I was unhappy, I would go and find something else, you know, at my age, not so easy. (Female, aged 61, divorced, health fair)

At the end of the day, you know, you need the money. It's a job. There's not much out there so, you know, at my age I'm not going to change now. The older you get, you think well, you know, you're not going to find anywhere. (Female, aged 60, co-habiting, health fair)

In the interviews with employees, two other themes emerged strongly on how people talked about their experiences of working in older age and their prospects for retirement: finances and health. These two pressures worked in opposing directions; finances meant that it was necessary to carry on working whilst health and especially worsening health meant that people would have liked to be able to give up work if they felt their health was being compromised. The following quotes captured the mood of older workers in the organization:

I think finances is the big thing for everybody. I think most of the people probably, from maybe 58 upwards, would go if they could, because I think they'd rather be out there, living their life and doing what they want to do, pottering around their allotment or whatever, rather than coming here every single day. But I do think it's finances that stop them all. (Female, aged 50, divorced, fair health)

I'd like to go pretty soon, actually, but I can't afford it. It basically comes down to money, really. I mean, you're not going to get much in the State Pension and, you know, they keep putting the age up and quite frankly, I can't see me physically and mentally being able to do this job, you know, at those ages they're talking about. I think it's 66 for me. (Female, aged 60, cohabiting, fair health)

For a number of divorced women in the group, financial pressures were especially stark:

It does worry me about what am I going to be living on, what the State Pension's going to be 'cause they keep reducing and reducing all the welfare. (Female, aged 53, divorced, good health)

The workforce had many of the ailments typical for this age group and especially for those who have been manual workers for much or all of their working lives: arthritis, especially knees and hands; diabetes; general aches and pains and diminished ability to bounce back after long shifts. As one male employee remarked:

No, no. I think health is the thing that, you know, will be the biggest problem for most people, you know, can you physically keep on doing the job? (Male, aged 59, married, health fair)

The following exchange between the interviewer and an interviewee reveals that serious health problems were being hidden from a line manager because of fears that it might lead to the loss of a job that was needed for financial reasons:

I am finding it very, very tough and some days I think oh, God, I don't know how I'm going to carry on doing this. 'Cause I've had my letter from the pension people, "You can't retire till you're 67." [Laughs] I probably won't even [be] here by the time I'm 67.

[Interviewer:] So have you talked to your line manager about your osteoporosis?

No. I've kept it to myself and I know that's a bad thing and I shouldn't do it, but I cannot afford at this present time to lose my job.... So really you just really have to hide the problems so that you can keep going. (Female, aged 57, married, poor health)

There were no noticeable differences between the responses from the younger 50–59 age group and the 60+ respondents regarding the concerns over finances and health. The relatively long job tenure was reflected in the fact that despite the issues outlined above the majority of participants spoke of having a high level of commitment to—and pride in—their work. The organization in this case was a good employer by sector standards, but still the workforce was experiencing a range of pressures around the prospect of extending their working lives. Even in conditions relatively favorable for the sector, workers raised serious doubts about the feasibility and desirability of extended working lives.

6.5 Conclusions

In the context of rising state pension ages, governments in the UK and the USA have paid insufficient attention to the situation of older people with uncertain employment prospects and those exited from work “early” (Lain, 2016; Moen, 2016). Within the policy discourse, the emphasis has been an individual choice and the assumption is made that extended working lives are feasible and desirable on an almost universal basis. The less healthy and less wealthy have therefore largely been ignored in policy and in the research literature (Moen, 2016). Some academic research has emphasized the fact that it is advantaged people who have best employment prospects in older age, calling into question whether working longer is feasible for many disadvantaged people (e.g., Carr et al., 2018; Lu et al., 2017; Phillipson, 2018). This focus, whilst welcome, has tended to obscure the circumstances under which less advantaged people *do* manage to remain in employment. In this chapter, we showed statistical evidence that in both the USA and England, a significant minority of workers in physically demanding jobs and those with less advantaged health and education do work past 65. Qualitative evidence from UK hospitality workers in the second half of the chapter explored this in more depth. These workers were aged 50–67, which the quantitative analysis showed was a critical age range for remaining in work beyond age 65. This analysis showed that these low-paid workers often struggled to continue in their physically demanding jobs as their health worsened. The case of these workers illustrated the fact that extended working lives were not realistically feasible in many cases. At the same time, they could not afford to retire, and in a number of cases it was undesirable to expect them to continue working given their circumstances and the likely effects on their health.

It is important to note that this chapter is not arguing that people in physically demanding work or with low levels of health/education should be denied support to continue working in older age if they want to. In the UK, employers are expected to make “reasonable adjustments” to enable people with disabilities to do their jobs. It

has become easier over time for people to combine working with managing a health condition (Vickerstaff, Phillipson, & Wilkie, 2011). It would be possible to make an argument for extending the reasonable adjustments requirement to older workers although this would likely be unpopular with employers. It is important to note that the situation of older people with health conditions is slightly different from that of their younger counterparts. The likelihood of having a health condition increases as people age, which means that the older hospitality workers interviewed here had long careers in physically demanding work *before* they developed health problems. In the past, older workers may have been moved onto “light” duties, which were more compatible with diminishing health levels (Phillipson, 1982). In the current context, there are more competitive pressures on employers, which make it harder for them to find lighter duties for the increasing number of older people in work. Relatively few people are therefore able to move from physically demanding to sedentary employment in older age (Lain, 2016). We would of course encourage employers to make reasonable adjustments to make it easier for people with health conditions of all ages to work. However, it is hard to envisage how sufficient reasonable adjustments could be made to a job such as cleaning to enable some of the older people interviewed here to carry on doing them. Furthermore, there is little prospect that these workers will find non-manual jobs, given their work histories.

For these hospitality workers, health and lack of wealth were in direct conflict for many people—their health was failing but they could not afford to give up work. It is noteworthy that none of the interviewees saw disability benefits as a feasible financial pathway out of work. It is therefore essential that policymakers think more creatively about how to promote continued employment, without expecting individuals to continue working into much older age under such undesirable circumstances. One option for the UK would be to allow people to take their state pension early at a reduced level, as is possible from age 62 in the USA. In the USA, it has been suggested that the early Social Security age should be raised to 64, and the “normal” age increased to 69+ (National Commission on Fiscal Responsibility Reform, 2010). Consistent with the arguments made in this chapter, however, Moen (2016) argues against such a move in the USA:

It would be a disaster... [for] those with family-care responsibilities, with chronic or acute health conditions of their own, working in stressful or physically demanding job environments, with high job insecurity, or who have been already laid off. (p. 206)

In the UK, the provision of a reduced early pension is arguably impractical because the “full” state pension is provided at such low levels (Lain, 2016). An alternative, therefore, would be to provide an earlier full pension for those starting work at a young age; this shift would benefit many of those in physically demanding manual jobs. Another option is to promote employment beyond age 65 but accept the financial consequences of providing the “full” state pension at age 65 (Lain, 2016). In any case, the issue of extended working lives raises the importance of providing decent health-related benefits *before* state pension age, thereby enabling people to live in dignity without requiring them to work when it is damaging to their health and well-being. Many of the hospitality workers interviewed were suffering from

health conditions that were arguably exacerbated by continuing to do this work. The rhetoric of work being good for you, which has been another aspect of the government pronouncements on extending working lives, has been qualified to a degree in recognition that *good* work is good for you (Business, Energy and Industrial Strategy, 2018) whereas poor work may further entrench health and income inequalities.

Obviously, the extent to which older individuals will be compelled to continue working for financial reasons will vary between countries, and a key area for future research will be to examine how the late careers of less advantaged individuals are experienced and managed in different countries. This would include examining the range of options older workers feel they have with regard to retiring or continuing in employment. In addition, future research should examine the interaction between the workplace and household circumstances of less advantaged individuals and how this relationship influences continued employment (see Lain, Airey, Loretto, & Vickerstaff, forthcoming). Divorce and changing family forms, for example, are likely to place additional pressures on less advantaged individuals to continue working and needs to be examined in more depth.

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Chapter 7

The Retirement Income Security Outlook for Older Workers: Causes for Concern and Reasons for Optimism



Kevin E. Cahill and Joseph F. Quinn

7.1 Introduction

Older Americans on the cusp of retirement today face a very different retirement income landscape than prior generations faced, with a higher degree of exposure to market forces and a higher risk of financial insecurity later in life (Quinn & Cahill 2016, *in press*).¹ This exposure and risk are due to a variety of interactions among demographic changes, the evolution of the traditional three pillars of retirement income (Social Security, private pensions, savings), and market volatility. Public sector budgets, already strained, will be strained even further with the continued retirements of the baby boomers and the individual challenges they will face in maintaining their standard of living in retirement. At the same time, older Americans have exhibited a remarkable degree of flexibility when it comes to continued work later in life, both by remaining in (and returning to) the labor force and by transitioning into new jobs, often in new lines of work. This flexibility of older American workers is a reason for some optimism as we confront the stresses and strains of an aging society.

In many ways, the changing retirement income landscape presents a perfect storm that threatens financial security later in life. First, the long-term demographic changes behind societal aging—increases in longevity and declines in fertility—mean that the ongoing shift in the age distribution will be permanent (Ortman,

¹This chapter is based in part on topics discussed in Quinn and Cahill (*in press*).

K. E. Cahill (✉)
ECONorthwest, Portland, OR, USA

Center on Aging & Work at Boston College, Chestnut Hill, MA, USA
e-mail: cahillkc@bc.edu

J. F. Quinn
Department of Economics, Boston College, Chestnut Hill, MA, USA
e-mail: joseph.quinn@bc.edu

Velkoff, & Hogan, 2014). The combination of low fertility rates during the Great Depression and high fertility rates following WWII resulted in a pause in societal aging from 1990 to 2010, followed now by a rapid increase that will continue through 2030 (Werner, 2011). Second, the retirement income landscape has evolved over the past three decades and continues to do so, altering the retirement incentives and opportunities that older Americans face (Cahill, Giandrea, & Quinn, 2015a). The well-documented transition from defined-benefit (DB) to defined-contribution (DC) pension plans in the private sector is an important example (Copeland, 2009; Munnell, 2014). Finally, the changing retirement landscape has increased the exposure of older Americans to market forces at a time when the macroeconomic environment is volatile.

This chapter summarizes the changes to the retirement income landscape, highlighting some key causes for concern that are associated with societal aging. We then describe how older Americans have responded to these changes in recent years. Their remarkable flexibility and ability to adapt are noteworthy in many respects, and may just be the antidote to our societal aging challenges.

7.2 Causes for Concern

7.2.1 *Demographic Changes*

The story of societal aging in America has long-term and short-term components. The long-term components are increases in life expectancy and decreases in fertility. Life expectancy at birth for men and women were, respectively: 46 and 48 years in 1900; 66 and 71 years in 1950; 70 and 77 years in 1980; and 76 and 81 years in 2014 (National Center for Health Statistics, 2016). The same is true for life expectancy at age 65. Between 1950 (when these data were first available) and 1980, life expectancy at age 65 increased 1.3 years for men (to 14.1 years) and 3.3 years for women (to 18.3 years), and between 1980 and 2014 it increased another 3.9 years for men (to 18.0 years) and 2.2 years for women (to 20.5 years; National Center for Health Statistics, 2016). These steady gains in life expectancy contribute to the societal aging expected over the next several decades.

The second long-term trend is a pronounced decline in fertility rates dating as far back as the early 1800s, when the average number of births per American female was approximately seven (Munnell, Cahill, Eschtruth, & Sass, 2004). By the beginning of the twentieth century, this figure had dropped nearly in half, and the decline persisted through the Great Depression. Fertility jumped temporarily to about 3.5 births per female following World War II (a reversal that has important implications today, some 65 years later), but then the long-term decline resumed and fertility rates eventually stabilized in the 1990s at approximately 2.0. The decline in fertility means that societal aging is not just a baby boomer phenomenon. If the boomers had

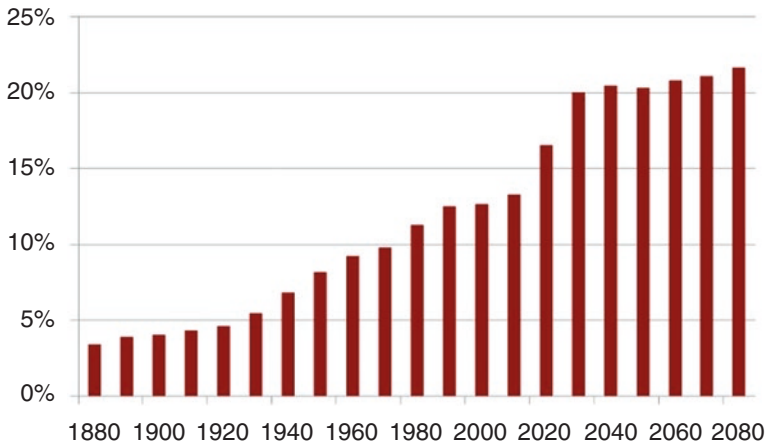


Fig. 7.1 Percent of the US population aged 65 or older, 1880–2080

had children at the same rate as prior generations did, the shift toward a more rectangular population distribution would not have occurred.

The important short-term component of societal aging has to do with two brief breaks from the long-term fertility trend, one during the Great Depression and the other following World War II. As noted above, fertility rates declined during the economic hardships of the 1930s, and these lower rates—decades later—yielded a brief respite from the tide of societal aging. Between 1990 and 2010 the percentage of the population aged 65 and over changed little, from 12.6 to 13.0% (Werner, 2011; see Fig. 7.1). In contrast, the temporary spike in fertility following World War II is now generating a rapid aging of our population. The percentage of the population aged 65 and older—13.0% in 2010 and 14.9% in 2015—will increase to nearly 20% by 2030, an increase of over 50% in just 20 years, and is expected to remain between 20 and 22% between 2030 and 2050 (Ortman et al., 2014; U.S. Census Bureau, 2016a, 2016b). So, while demographers and researchers have raised awareness about societal aging, in practice such changes are only now just starting to take place. Individuals, employers, and society as a whole are about to witness an unprecedented demographic change over the next 10 years.

7.2.2 *The Evolution of Retirement Income Sources*

Important changes to Social Security, private pensions, and savings have occurred over the past three decades, with some directly related to societal aging.

7.2.2.1 Social Security

One well-known change is the gradual increase in Social Security's Full Retirement Age (FRA) from 65 to 67 per the 1983 Social Security reforms (U.S. Social Security Administration, 2018a, 2018b). The increase in the FRA began with those individuals who turned 62 in 2000 (i.e., born in 1938; U.S. Social Security Administration, 2018a, 2018b). Their FRA was increased by 2 months, from age 65 to age 65 plus 2 months. The FRA was then increased an additional 2 months per year until it reached age 66 for those who turned 62 in 2005 (i.e., born in 1943). These increases were followed by a 12-year hiatus, after which the increases resumed with those who turned 62 in 2017 (born in 1955). The FRA is now scheduled to increase 2 months per year until it reaches age 67 for those who turn 62 in 2022 (born in 1960 or later). No further increases in the FRA are currently legislated although they would likely be considered in any further Social Security reform.

Other important changes to Social Security have taken place as well. Individuals who receive Social Security benefits prior to their FRA and earn income above a threshold (\$17,040 in 2018) have a portion of their benefits withheld according to Social Security's retirement earnings test (U.S. Social Security Administration, 2018c). Prior to 2000, the earnings test also applied to individuals older than their FRA (Burtless & Quinn, 2002; Gruber & Orszag, 2003). Importantly, although not generally known, benefits withheld due to the earnings test are returned to the beneficiary when they reach their FRA in the form of a subsequent actuarially fair increase in monthly benefits. Still, the earnings test is oftentimes viewed as a work disincentive and, in turn, its removal is commonly viewed as a work incentive. Given the need to promote continued work later in life (discussed below), the elimination of the earnings test above the FRA is a positive step.

Another important pro-work change in the Social Security program was the adjustment to the Delayed Retirement Credit (DRC), the percentage by which monthly benefits are increased for each year benefit receipt is delayed beyond the FRA. The gradual increase in the DRC (from 3 to 8% for each year of delay beyond the FRA) removed a significant work disincentive (an implicit pay cut for those who worked beyond their FRA) by making expected lifetime benefits approximately the same for the average worker regardless of when they are first claimed between the FRA and age 70. With this incentive removed, Munnell (2013) argues that the "true" Social Security retirement age is really age 70, as the FRA has little meaning in terms of one's expected lifetime Social Security benefits before then.

Social Security is by far the most important of the three traditional sources of retirement income, providing over 80% of retirement income for those age 65 and older in the bottom two income quintiles and about two thirds and 40% of retirement income for the next two quintiles, respectively (U.S. Social Security Administration, 2016a, 2016b). The program faces a long-term financial shortfall. Since 2010, outlays have exceeded revenues, absent interest on the Trust Fund (Fig. 7.2; Congressional Budget Office, 2016). The gap between outlays and tax revenues is expected to widen considerably over the next 20 years as the baby boomers continue their transition from paid employment to retirement. By 2034 the

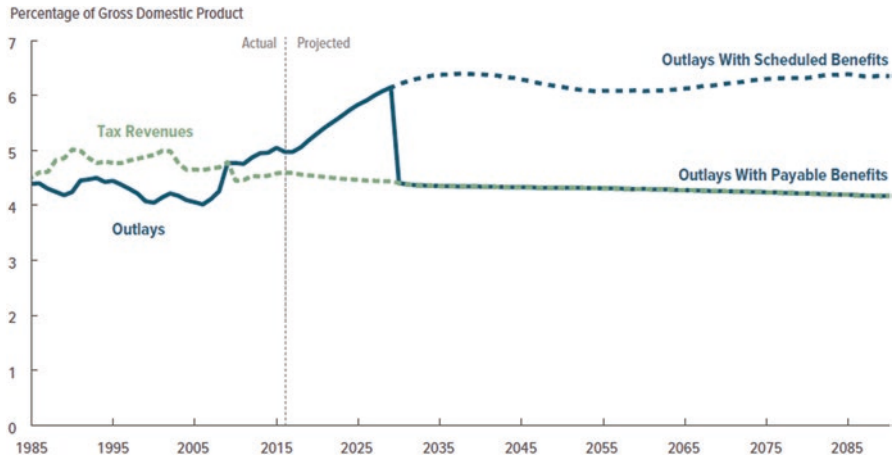


Fig. 7.2 Social Security tax revenues and outlays with scheduled and payable benefits, 1985–2085

Trust Fund is expected to be exhausted, at which point payroll taxes would be sufficient to cover only about 80% of scheduled benefits (Board of Trustees of OASDI, 2017). Numerous options to avoid such an outcome were proposed by a commission of experts though little action has taken place since the report was released (National Commission on Fiscal Responsibility and Reform, 2010).

7.2.2.2 Private Pensions

Private pensions have also been impacted. Prior to the 1980s, private sector pensions were dominated by defined-benefit (DB) type plans, in which beneficiaries are paid an annuity typically based on years of service and some measure of final average salary. With increases in longevity and in administrative costs from government regulations, however, employers began shifting away from defined-benefit plans to defined-contribution (DC) plans, which operate like a tax-deferred individual savings account (Butrica, Iams, Smith, & Toder, 2009). In addition to the tax incentives (workers do not have to pay taxes on dollars contributed to their accounts until they are withdrawn), some employers also offer matching contributions, providing an additional incentive to participate.

The transition from DB to DC plans was remarkably quick, with little change in the prevalence of overall pension coverage. About one half of private sector workers participate in an employment-based retirement plan. The actual level of participation has been the subject of some debate, as Munnell (2014) and Morrissey (2016) found that pension participation has declined slightly in recent years while Dushi, Iams, and Lichtenstein (2015) argue that participation has increased. Little disagreement exists, however, with respect to the dramatic shift in the type of pensions offered in the private sector. The percentage of private sector workers with a

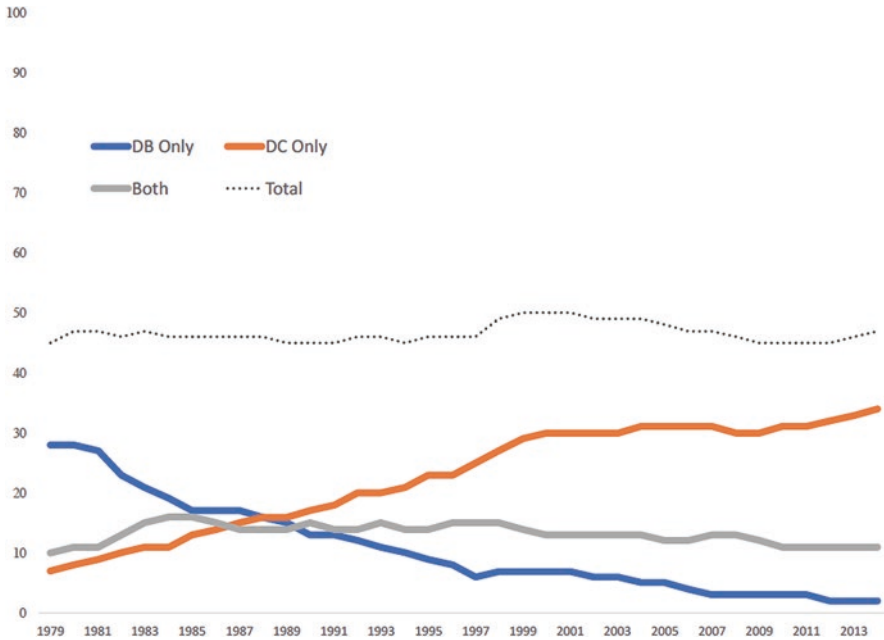


Fig. 7.3 Private-sector participants in an employment-based retirement plan, by plan type, 1979–2014 (among all workers)

defined-benefit plan only declined from more than 60% in 1980 to less than 10% by 2006, and to less than 5% today (Fig. 7.3; Employee Benefit Research Institute, 2018). In contrast, fewer than 10% of private sector workers had a defined-contribution plan in the early 1980s, compared with more than 70% today. The percentage of workers with both a DB and DC plan is currently the same as it was in 1980 (23%) and have remained between 20 and 35% over the past three decades.

DC plans do have certain advantages. They are portable from employer to employer, and the current value of the assets (which can rise or fall) is clear. On the other hand, DC plans often require workers to decide whether or not to enroll (about 1 in 5 eligible employees do not participate), how much to contribute, how to invest the funds, whether to withdraw assets before retirement, and when and how (via lump sum and/or annuity) to withdraw the assets remaining at retirement (Munnell, 2014; Munnell & Sundén, 2004). DC plans expose workers to both market and longevity risk (living longer than anticipated), two risks assumed by employers in traditional DB plans.

7.2.2.3 Savings

The traditional third pillar of retirement income, individual savings, is of modest importance for the majority of older Americans. Excluding home equity and the value of defined-benefit pensions, the typical American has less than \$25,000 in

financial assets, and more than one quarter of American workers have less than \$1000 in financial assets (Helman, Copeland, & VanDerhei, 2016). These percentages, combined with the fact that roughly one half of private sector workers do not participate in an employer pension, are consistent with the income statistics mentioned above, namely, that Social Security benefits constitute 80% or more of retirement income for the bottom 40% of older Americans (U.S. Social Security Administration, 2016a). For a sizable minority of older Americans, Social Security provides the only lifeline between a decent standard of living and poverty. For example, the 2017 Social Security retirement benefit for an individual with career average earnings equal to the national Average Wage Index (AWI) was \$20,190, or less than \$1700 per month, if benefits are claimed at the FRA. For an individual with career average earnings of 45% of the AWI, the benefit is \$12,256, or about \$1000 per month (Board of Trustees of OASDI, 2017).

A review of poverty rates from 1959 to 2016 illustrates this point (Fig. 7.4). In 1959, roughly one out of three older Americans was in poverty. This poverty rate was higher than that of children or other adults. The poverty rate for older Americans fell precipitously during the 1970s when real Social Security benefits increased, and then fell gradually thereafter to the point where today, the poverty rate of older Americans (9.3%) is below the rate of other adults (11.6%) and far below the rate of children (18.0%; Semega, Fontenot, & Kollar, 2017). In many ways, the decline in poverty among older Americans is a dramatic success story though it is important to keep in mind that poverty rates among older Americans continue to vary significantly by race, marital status, and gender (Quinn & Cahill, 2016). For example, in 2014, when the overall poverty rate for those aged 65 and older was 10%, Black men and women aged 65+ (with poverty rates of 17 and 21%), and Hispanic men and women aged 65+ (16 and 20%) were much more likely to be poor than White men and women aged 65+ (6 and 11%). Women aged 65+ were more than 60% more likely to be poor than older men (12% vs. 7%), and nonmarried men aged 65+

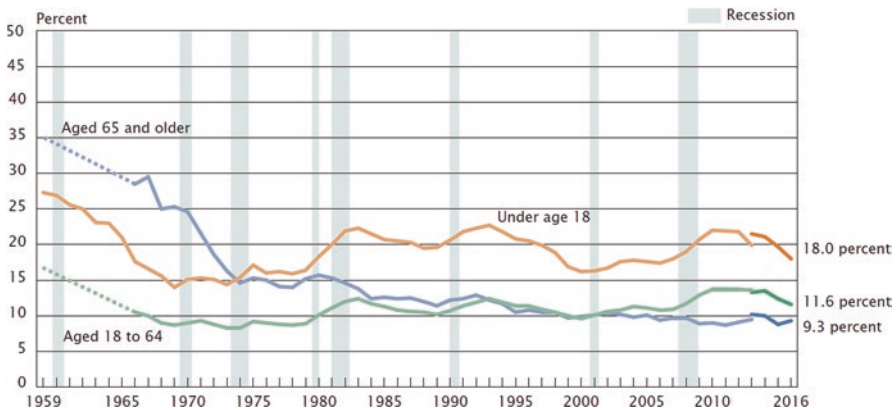


Fig. 7.4 Poverty rates by age, 1959–2016

(13%) and women aged 65+ (18%) were much more likely to be poor than married couples aged 65+ (5%; U.S. Social Security Administration, 2016a).

A key question is whether these relatively low levels of poverty will be maintained in the future. Importantly, the increase in Social Security's FRA implies a reduction in benefits for those who claim benefits at age 62, the first year of Early Eligibility Age (EEA). When the FRA was 65, the reduction in benefits for claiming at age 62 was 20%. With an FRA of 67, the reduction is 30% (Board of Trustees of OASDI, 2017). This 30% reduction might be of only modest consequence if other income sources including earnings were available in one's 60s, but the reduction would be much more consequential if Social Security became the sole source of income when retirees reached their 80s or 90s. Further, among those fortunate enough to have a private pension plan, the switch from DB to DC plans leaves these individuals more exposed to market forces. While conceptually it is possible to rebalance one's portfolio as one ages, most do not, leaving individuals vulnerable to market fluctuations (Coombes, 2015).

7.2.3 *Macroeconomic Volatility*

Macroeconomic changes present additional challenges for older Americans. For one, as more older Americans are responsible for the investment risk of their assets, the stock market has fluctuated considerably. For example, in the past two decades, the Dow Jones Industrial Average has dropped more than 25% on three different occasions (Wall Street Journal, 2016). While the markets eventually rebounded, each run-up exposed investors to the risk of another sharp decline. Indeed, as we write this chapter, the market has experienced a prolonged upward trajectory. What happens next is uncertain, but the chance of another sharp decline is ever present, and older Americans who are significantly invested in equities run the risk of losing a sizable portion of their assets, with little time to recover from their losses.

Another macroeconomic challenge is the ability of the federal government to mitigate the effects of a downturn similar in magnitude to the recent Great Recession and the ensuing historically sluggish recovery (Desilver, 2014). One response to the Great Recession, for example, was a sizable increase in deficit spending. Figure 7.5 shows the cumulative impact of these large annual deficits over the past decade. As a percentage of GDP, federal debt held by the public is currently higher than it has ever been, with the one important exception of the short-lived, high-debt period following World War II (Congressional Budget Office, 2017). Moreover, the CBO projects the federal debt to increase sharply over the next 20 years. With the federal debt projected to far exceed 100% of GDP, the ability of future governments to rely on deficit spending to address periods of economic weakness might be limited, leaving older Americans and Americans in general economically vulnerable.

Finally, it is worth noting that the *interaction* between these risk factors could play an important role in the economic vulnerability of older Americans. The volatility in equity markets, for example, comes at a time when older Americans' retire-

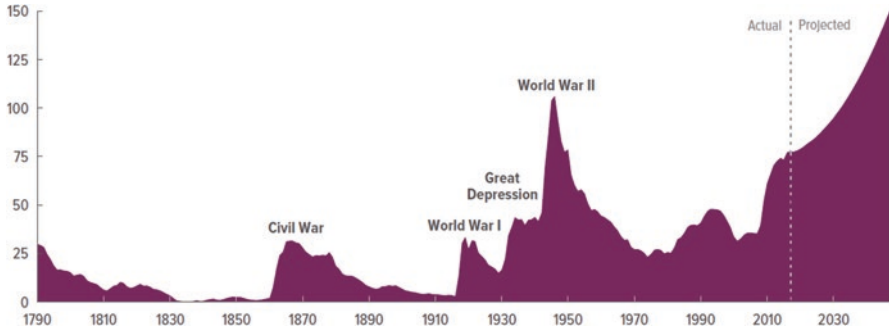


Fig. 7.5 Federal debt held by the public as a percentage of GDP, 1790–2050

ment income sources are more exposed to investment risk than they were in the past. These interactions present additional risks over and above those posed individually by the evolution of Social Security, private pensions, and savings.

7.3 Reasons for Optimism

Individuals have little or no influence over future Social Security, Medicare, or Medicaid reform, or over employers' decisions regarding pension coverage, pension type, or post-retirement health insurance. Additional savings later in life can help a little, but nowhere near as much as saving done much earlier, with decades of asset accumulation ahead. If one cannot rewrite one's savings history and cannot personally influence important Social Security parameters, trends in employer pensions, or the details of medical insurance coverage, what can one do?

7.3.1 Older Americans Are Extending Their Work Lives

One option which many have is to continue working later in life, and many older Americans are doing just that. Additional years of work can have a profound impact on economic security in retirement, as each year of work increases important retirement income flows (additional earnings and savings, and larger Social Security and pension benefits) that can be allocated for retirement and reduces the number of years in retirement that need to be financed. For example, the Congressional Budget Office (2003) examined the level of assets needed in retirement for a married couple earning \$62,000 per year before taxes. This couple would need more than \$330,000 in assets to finance their retirement years if they retired at age 62. In contrast, if the couple worked until age 67, they would need less than \$160,000 in assets—a reduction of more than 50% with only 5 years of additional work. Munnell and Sass (2008) illustrate the point more simply using the example of an individual

who works from age 20 to 60 (40 years of work) and lives to age 80 (20 years in retirement). The ratio of working years to retirement years is 2:1. With just 5 years of additional work, the ratio of work years (45) to retirement years (15) is increased by 50%, from 2:1 to 3:1.

Fortunately, the road to continued work later in life among older Americans has been well paved as a century-old trend toward earlier and earlier retirement came to a halt in the 1980s (Quinn, Cahill, & Giandrea, 2011). Since 1910, the average age of retirement for men, defined here as the age at which the labor force participation rate drops to 50%, declined steadily from age 73 to 65 in the mid-1970s and to age 63 in 1985 (Burtless & Quinn, 2002). Dora Costa (1998) documents similar dramatic declines in the employment rates of men aged 55–64 and 65+ going back to 1880. But since the mid-1980s, these trends have all reversed. The labor force participation rates of older American men are higher than their pre-1985 trends would have predicted (Quinn & Cahill, *forthcoming*). For example, as described in Chap. 1, among men aged 65, labor force participation rates increased by about 50% between 1985 and 2016; at age 68, they are up about 60%; and even at age 70, participation rates have increased by about 70%.

The labor force participation rates of older American women have changed since the mid-1980s as well. During the 20-year period between the mid-1960s and the mid-1980s, labor force participation rates for older women were more or less flat, as the early retirement trend was counteracted by the large influx of women into the labor force. Once the early retirement trend stopped, the labor force participation rates of older American women increased dramatically, and have approximately doubled since 1985 for women aged 65–70. Interestingly, the increases for women have flattened and even declined slightly in the past 5–10 years, at rates that are roughly 10% points below those of older men.

The reversal of the early retirement trend is consistent with important changes in retirement incentives noted above. The Social Security earnings test has been eliminated for those older than their FRA, and the delayed retirement credit (DRC) has increased to become actuarially fair for the average worker (Cahill, Giandrea, & Quinn, 2015b; Gruber & Orszag, 2003). The fact that Americans appear to be responding to these financial incentives, combined with the potentially large financial benefits that come with continued work later in life, is one reason to feel optimistic about our society's ability to address the challenges of an aging society.

7.3.2 Older Americans Show Remarkable Flexibility with Respect to Their Work Decisions

The zero-one construct of labor force participation—one is either in or out of the labor force—masks a very important attribute of retirement transitions in America. For most older Americans, retirement is a *process*, not a one time, permanent event. The majority of older Americans retire gradually, in stages, as they transition from career jobs to complete labor force withdrawal. The term “gradual retirement”

encompasses three types of job transitions later in life: phased retirement, a reduction in hours with one's current employer; bridge employment, a transition from career employment to a new employer prior to labor force exit; and reentry, a return to the labor force following an initial retirement (Cahill, Giandrea, & Quinn, 2006; Cahill et al., 2015b; Kantarci & Van Soest, 2008).

Data from the Health and Retirement Study (HRS), an ongoing longitudinal survey of older Americans that began in 1992, reveal that the most prevalent form of gradual retirement among those with career jobs is bridge employment. Between one half and two thirds of older Americans with career jobs transition to a bridge job prior to labor force exit. The next most common form of gradual retirement is reentry. Approximately 15% of older career workers who exit the labor force for at least two biennial HRS survey waves return to paid employment. Finally, approximately 10% of career workers experience phased retirement, reducing their hours with their career employer by 20% or more (Cahill, Giandrea, & Quinn, 2011, 2012; Cahill et al., 2015b; Quinn, 1999, 2010; Ruhm, 1990).

The relatively low prevalence of phased retirement seems counterintuitive at first, but barriers on the demand side may explain it. First, only a small minority of career workers have access to flexible hours arrangements. Approximately one quarter of career workers report being able to reduce the number of paid hours, and many fewer (10–12% of men and 14–17% of women) report being able to reduce their hours by one half or more (Cahill, Giandrea, & Quinn, 2014). The availability of job-sharing arrangements in which one or more employees split the responsibilities of a full-time position is even lower than that of reduced-hours arrangements (Hardy, 2008; Matos, Galinsky, & Bond, 2017). Employees could be reluctant to take up phased retirement if their subsequent pensions depend on their last few years of earnings. Employers, on the other hand, might restrict hours worked because of regulatory barriers that might prevent employees from claiming pension benefits and remaining with their employer (Hoffman & Andrew, 2010; Sheaks, Pitt-Catsouphes, & Smyer, 2010). Options for phased retirement policies are also limited by antidiscrimination rules with respect to age and income (Johnson, 2011; Penner, Perun, & Steuerle, 2002).

Still another complication with phased retirement pertains to scheduling. As an older worker reduces his or her hours from full-time to part-time, the employer might then need to find a worker to complete the now-unstaffed projects left by the worker who is taking phased retirement (Sloan Center on Aging & Work at Boston College, 2013a, 2013b). Further, closing the gap could involve more than just filling hours, as coordinating job tasks may involve changes for managers who need to oversee multiple workers for a series of tasks that were previously completed by one. One way to alleviate these strains is for employees to “compensate” their employers for being flexible, potentially in the form of reduced hourly wages. Aaronson and French (2004) find that reductions in the number of hours worked are associated with declines in hours wages; however, they also find that reductions in hourly wages are most pronounced among those who changed employers. The key takeaway is that, despite these barriers to phased retirement, older Americans still retire gradually by transitioning to bridge jobs and reentering the labor force.

Older Americans are also remarkably flexible with respect to the types of job changes they make. For example, a sizable minority of older Americans transition between wage-and-salary work and self-employment, and vice versa. An analysis of HRS respondents finds that between 12 and 17% of career wage-and-salary workers transition into self-employed bridge jobs and between 35 and 37% of career self-employed workers transition into wage-and-salary bridge jobs (Giandrea, Cahill, & Quinn, 2013). Although the percentage of career self-employed workers transitioning into wage-and-salary bridge jobs is higher than the reverse, the absolute number of older Americans who transition into self-employed bridge jobs is higher than the number who transition into wage-and-salary bridge jobs because there are many more wage-and-salary career workers than self-employed career workers.

Further, older self-employed workers stay in the labor force longer on average than older wage-and-salary workers, causing the prevalence of self-employment among those working to increase steadily with age. For example, the prevalence of self-employment among full-time career males in the HRS at the time of their first interview was 20%. Over the next 20 years, the prevalence of self-employment among those who remained working doubled to more than 40%. The prevalence of self-employment among older career women who remained working also doubled over the same time frame, from 10% at the time of the first interview to 20% 20 years later (Cahill & Quinn, 2014).

Among those older Americans who change jobs later in life, a sizable fraction also change occupations or “re-career.” Studies of occupational changes have found that between 30 and 40% of older career workers who change jobs also change occupations (Cahill, Giandrea, & Quinn, [forthcoming](#); Johnson, Kawachi, & Lewis, 2009). The prevalence of re-careering is similar among career men and women. Further, these changes take place between white collar and blue collar workers, and a high prevalence of switching remains when two-digit occupational codes are used instead of the more refined three-digit codes. Moreover, when combining occupational changes with changes in the number of hours worked in bridge employment, nearly 80% of older Americans who transition from career to bridge employment either change occupations, reduce hours from full-time to part-time work, or both. Clearly, older Americans exhibit a great deal of flexibility when it comes to continued work later in life.

The degree to which this flexibility is critical to the retirement income security of older Americans has been the subject of some debate in recent years. Munnell and colleagues at the Center for Retirement Research at Boston College have constructed a National Retirement Risk Index (NRRI) using data from the Federal Reserve’s Survey of Consumer Finances (SCF) (Munnell, Hou, & Sanzenbacher, 2018). The SCF is conducted every 3 years and was conducted most recently in 2016. Using the SCF data, the NRRI compares working-age households’ pre-retirement income and expected retirement income to assess the degree to which Americans will be able to maintain their pre-retirement standard of living in retirement (Munnell et al., 2018). Specifically, the measure quantifies the percentage of households whose projected retirement income falls more than 10% below the estimated amount needed in retirement. The NRRI has increased from 31 to 50% over the past 30 years, with a high of

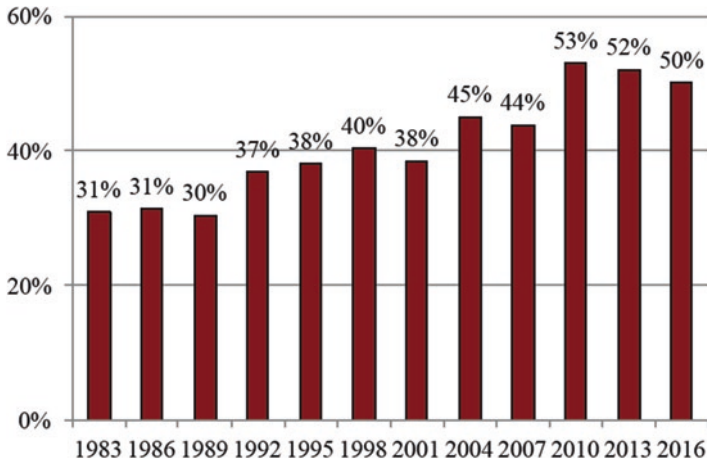


Fig. 7.6 National Retirement Risk Index, 1983–2016

53% in 2010 (Fig. 7.6). A sizable percentage of Americans—roughly half—will not have enough income in retirement to maintain their pre-retirement standard of living.

Other researchers come to a different conclusion. Biggs, for example, argues that there is no retirement “crisis” (Biggs, 2017). He points to the fact that, in the past, just as today, most private sector workers did not have a pension. The potential negative implications of the shift away from defined-benefit plans, therefore, apply to about one half of private sector workers only. He further argues that the advent of 401(k)s has actually increased the level of savings among workers generally. Biggs also points out that the American Community Survey (ACS) and the Current Population Survey (CPS)—two datasets commonly used by researchers to quantify retirement income—understate retirement income. One reason is that 401(k) balances and IRAs distributions are not paid out regularly and, therefore, are not counted as retirement income.

Schieber (2015) discusses three sets of estimates of retirement unpreparedness by birth cohort, by researchers using different datasets, different income definitions and annuitization assumptions, and different criteria for being at risk. Munnell et al. (2018) are the most pessimistic because, according to Schieber (2015), they believe “that current workers will have defined-contribution balances at retirement that are no larger than that of current retirees” (p. 15). One researcher presents two sets of estimates, with and without expected long-term care and home health care expenditures, with much higher risks when these are considered. Schieber (2015) concludes that “it is clear that many low earners face retirement with inadequate resources to provide an income that will allow them to maintain either a socially acceptable standard of living or one that matches that achieved while they were working” (p. 16).

The disagreement among researchers with respect to the adequacy of retirement income is but one outstanding issue that is unresolved in the retirement literature. Below we discuss other key outstanding questions.

7.4 Key Outstanding Questions

7.4.1 To What Extent Does Prolonged Labor Force Participation Translate into More Work Hours over the Retirement Transition Period?

A priori, the impact of extending working lives on total hours worked over the retirement transition period is ambiguous. Policies that promote continued work later in life might simply alter how older individuals allocate their work hours rather than increase the total number of hours worked. Employment decisions, retirement timing, and total hours worked are all jointly determined. This is a potentially fruitful area of research and some preliminary work on this topic suggests that voluntary job changes later in life increase the likelihood of remaining in the labor force to age 65 (Sanzenbacher, Sass, & Gillis, 2017). This analysis could further examine the impact of extending working lives on particular subgroups, especially vulnerable populations. Earlier in this chapter, for example, we commented on how poverty rates among older Americans as a whole have declined dramatically over the past 50 years, yet poverty rates remain elevated among older ethnic minorities and for unmarried men and women. Similarly, it would be worthwhile to examine how the overall impacts of extending working lives differ by population subgroups.

7.4.2 To What Extent Does Bridge Employment Per Se Increase Labor Supply over the Retirement Transition Period?

For many, bridge employment is a way to extend labor force participation later in life; for example, for those who move from a physically demanding career job they can no longer handle to a less strenuous one. But others may leave a career job that they could have continued. Since about one half of bridge jobs are part-time, it may be the case that the total number of hours worked over the retirement transition period would have been higher with continued career employment than with bridge employment. Studies of the impact of bridge employment on total hours worked would be worthwhile.

7.4.3 How Do Bridge Jobs Compare with the Career Jobs That Older Workers Leave Behind?

Bridge employment has the potential to offer older workers a variety of advantages, including flexible work arrangements and new career opportunities (rewirement!). Indeed, job transitions later in life are mostly voluntary (Cahill et al., 2015b; Maestas, 2010), suggesting that older workers expect to be better off after changing

jobs. A deeper understanding of the trade-offs that older workers face when changing jobs later in life could improve policymaking around the impacts of pro-work incentives. For example, how does bridge employment compare with career employment in terms of wages, fringe benefits, job security, and other considerations? Further, how do these compare for those leaving career employment voluntarily versus involuntarily?

7.4.4 How Can Society Address Some of the Challenges Associated with Hiring and Retaining Older Workers (e.g., Age Discrimination and the Cost of Fringe Benefits)?

To this point, we have focused on the labor supply decisions of older workers under the implicit assumption that jobs will be available to those who want them. This is a reasonable assumption when economic conditions are favorable, such as now when the unemployment rate among workers aged 55 or older is about 3% (US Bureau of Labor Statistics, 2018). The sudden onset of the Great Recession, spanning December 2007 to June 2009, however, with large increases in the extent and duration of unemployment, reminds us that the labor demand side can be critical. Rather than wait until the next downturn, we should address the persistent challenges in hiring older workers, including age discrimination and extra costs that might be associated with older employees. Doing so might help avoid or reduce a spike in long-term unemployment similar to the one recently observed (Rix, 2014).

7.4.5 To What Extent Are Low Interest Rates Masking the Financial Instability of Older Americans with Substantial Debt and Suppressing the Urgency of Continued Work Later in Life?

The baby boomers are entering their retirement years with substantial amounts of debt—more than one quarter have credit card debt and nearly one third have housing debt—and a sizable minority (11%) of the middle boomers are entering retirement with negative net assets (Munnell, 2015; The Center for Retirement Research at Boston College, 2017). The historically low-interest rates for much of the past decade might be masking the extent to which these individuals are vulnerable, as low-interest rates reduce the cost of financing debt. When interest rates return to more normal levels, the cost of borrowing will increase, and this increased cost will exacerbate the impacts of being in debt. Research now on the prevalence of this hidden vulnerability could be very helpful in order to better understand just how problematic this issue could be in the years ahead.

7.4.6 For Savers, Is the Low-Return Environment Altering Appetites for Risk in Order to Achieve Higher Returns?

In contrast to those in debt, many with savings experience low returns on their assets in the current low-interest rate environment. One outstanding question is how these savers have reacted. On the one hand, one might expect little change, if they see low levels of inflation in tandem with the low returns and therefore see little reason to change behavior. In contrast, some might seek higher rates of returns by taking on more risk. To the extent that risk-taking has occurred, savers too might be vulnerable in a market downturn, just as those with equity-heavy portfolios were in 2008.

7.5 Conclusion

Older Americans are living longer and also working longer. While societal aging is a given, its implications will depend on how we respond to the challenges and the opportunities presented by these trends. The new world of retirement income security in America suggests many causes for concern. Social Security, the bedrock of financial stability for most older Americans, is now experiencing annual shortfalls, and the Social Security Trust Fund is projected to be depleted by the mid-2030s. The financial outlooks for Medicare and Medicaid are precarious. The shift to defined-contribution pension plans in the private sector for most of the approximately one half of workers covered by an employer-provided pension along with low personal savings suggest that for many older Americans these two legs of the traditional retirement income stool are unlikely to fill any void created by negative changes to Social Security, Medicare, and Medicaid.

On the other hand, many older Americans are responding to these important changes by remaining in the labor force later in life. A century-long trend toward earlier retirement ended in the mid-1980s and has since reversed. The change is even more notable because the labor force participation rates of older Americans have increased even as those among younger workers have declined. Older Americans have also shown a remarkable ability to adjust the ways in which they work by changing employers, re-careering, switching between wage-and-salary jobs and self-employment, and altering the number of hours they work. The flexibility of older workers is one of the true (and few!) bright spots in the financial outlook for older Americans. Policymakers would be wise to consider additional ways to support continued work later in life to help mitigate the many challenges that our aging society will face in the decades ahead.

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Chapter 8

How Much Does Work Pay at Older Ages?



Damir Cosic and Richard W. Johnson

8.1 Introduction

Compensation drives work decisions. People are more likely to participate in the labor force and tend to work more hours when they are better rewarded for working, and they are less likely to participate when the rewards to work fall (Keane, 2011). How much work rewards employees depends on cash pay as well as fringe benefits, taxes, and various public programs. Many employers supplement workers' wages and salaries with health benefits and future retirement benefits, while Social Security and Medicare payroll taxes and federal and state income taxes reduce net compensation. Rules governing public programs also affect how much work pays. Social Security benefits depend on lifetime earnings, so workers tend to accumulate future benefits as they earn more.

Various features of the US tax code, employee benefits, and the retirement system can reduce the returns to work at older ages, discouraging older adults from working. Federal rules require people with Individual Retirement Accounts (IRAs) to begin withdrawing funds at age 70 and a half. These withdrawals are taxable and can push workers into a higher income tax bracket, raising taxes on their earnings. Medicare eligibility begins at age 65 for people without disabilities, but those who remain employed past that age and receive health benefits from their employer forfeit much of their Medicare benefits because Medicare covers only those health care expenses not covered by their employer-provided health benefits.

Social Security can also discourage work at older ages. Only the 35 highest-earning years enter the Social Security benefit formula, so once workers have 35 years of covered employment, additional work raises future Social Security benefits only to the extent that their earnings exceed what they earned in previous years.

D. Cosic · R. W. Johnson (✉)
Urban Institute, Washington, DC, USA
e-mail: dcosic@urban.org; rjohnson@urban.org

In addition, Social Security's progressive benefit formula often penalizes older workers. Social Security benefits replace 90% of earnings for beneficiaries with very limited lifetime earnings, but an additional dollar in monthly earnings averaged over a career increases monthly Social Security benefits by only 15 cents for workers with high lifetime earnings. Because older workers with long employment histories tend to have relatively high lifetime earnings, additional employment does not raise future Social Security benefits much for many older workers. Workers who earned much less than their spouse over their lifetime often receive Social Security benefits tied to their surviving or deceased spouse's earnings, further weakening the relationship between their own earnings and future retirement benefits.

Traditional defined benefit (DB) pension plans are another source of work disincentives at older ages. Most public sector employers and some large private sector employers offer these plans to employees, which provide a lifetime pension, beginning at retirement, generally equal to a set fraction of final average salary for each year of completed service. Because workers can only collect after they separate from their employer, a DB pension's lifetime value often declines if employees remain at work after they qualify for full benefits and thus receive fewer lifetime monthly payments, penalizing work at older ages.

Together, these features of the tax code, employee benefits, and the retirement system can create strong financial penalties for working at older ages. Although many older adults choose to work despite these penalties, these financial disincentives likely encourage many other older adults to leave the labor force.

This chapter describes the combined impact of the tax system, employee benefits, Social Security, and Medicare on the financial incentive to work at older ages. We compute the implicit tax on work, which indicates how much employees' financial reward for working falls below compensation paid by employers, and shows how it varies across the workforce as well as how it changes as workers age. The implicit tax includes direct taxes such as state and local income taxes and Social Security and Medicare payroll taxes paid directly by workers, plus indirect taxes such as payroll taxes paid by employers and the increment to future income tax liabilities from additional work. It also includes other negative and positive offsets, such as the loss of Medicare benefits by Medicare-eligible workers who receive health benefits from their employers and the gain in future Social Security benefits from working longer. To measure the tax on work, we compare how much someone would pay in taxes and other offsets over their lifetime by working at a particular age with how much they would pay if they did not engage in any additional work. Estimates come from the Dynamic Simulation of Income Model 4 (DYNASIM4), the Urban Institute's dynamic microsimulation model.

The results show that the tax, retirement, and employee benefits systems increasingly discourage work as people age. Combining direct income and payroll taxes paid by employees, indirect taxes paid by employers, and compensation offsets from retirement and employee benefit programs, the simulations indicate that the median implicit tax on work rises from 15.0% of total compensation at age 60 to 39.0% at age 65, 41.7% at age 67, and 46.4% at age 70. Implicit taxes on work rise with age because most workers with employer health benefits forfeit Medicare ben-

efits beginning at age 65, minimum withdrawal requirements for IRAs at age 70 and one half push many older workers into higher income tax brackets, and older workers tend to accumulate fewer additional Social Security credits than younger workers. Implicit taxes on work are generally higher for single workers and those with lower earnings than for married workers and those with higher earnings.

8.2 Background

Income taxes and Social Security and Medicare payroll taxes reduce take-home pay and make employment less rewarding, discouraging people from working. Certain rules regarding employee fringe benefits, Social Security, and Medicare create additional work disincentives, especially at older ages.

8.2.1 Taxes

Earnings are subject to income taxes by the federal government and most state governments; some local governments also tax earnings. The federal income tax code is progressive, exempting the first several thousand dollars of income and raising marginal tax rates as income grows. In 2017, single filers with no dependents who took the standard deduction did not owe any federal income tax unless their income exceeded \$10,400 (or \$11,950 if they were age 65 or older). Their married counterparts who filed jointly were exempt from federal income tax if their income did not exceed \$20,800 (or \$23,300 if both spouses were age 65 or older). Marginal tax rates ranged from a low of 10% on taxable income that did not exceed \$9325 for a single taxpayer and \$18,650 for a married couple, to a high of 39.6% on taxable income in excess of \$418,400 for a single taxpayer and \$470,700 for a married couple (Tax Foundation, 2016). Personal exemptions and the value of most itemized deductions also phase out at very high incomes. In addition, single people whose adjusted gross income (AGI) exceeded \$200,000 and married couples whose AGI exceeded \$250,000 faced up to a 3.8% tax surcharge on their net investment income.¹

Social Security benefits are generally not subject to federal income taxes, except for high-income beneficiaries, particularly those who continue to work, receive generous pension benefits, or collect significant investment income. If AGI plus tax-exempt interest income and one half of Social Security benefits (modified AGI) fall

¹The 2017 Tax Cuts and Jobs Act (TCJA), effective from January 1, 2018, reduced federal income tax rates and widened tax brackets while eliminating the personal exemption, raising the standard deduction, and limiting certain other deductions. A Tax Policy Center study found that the TCJA will cut 2018 individual income taxes for about two thirds of households (Sammartino, Stallworth, & Weiner, 2018). Our analysis, which began before the TCJA was signed into law, does not reflect these changes to the federal tax code.

below \$25,000 for single taxpayers or \$32,000 for couples, beneficiaries pay no federal income taxes on their Social Security. However, up to 50% of Social Security income is taxable for single tax payers with modified AGI between \$25,000 and \$34,000 (or between \$32,000 and \$44,000 for couples). Up to 85% of Social Security income is taxable for single taxpayers with modified AGI over \$34,000 (or \$44,000 for couples). These income thresholds are fixed. As wages and Social Security benefits increase over time with prices and productivity, a growing share of beneficiaries will pay taxes on their Social Security benefits.

People must generally begin withdrawing funds from traditional IRAs and employer retirement accounts at age 70 and one half. Workers (and sometimes their employers) can contribute to these accounts each year and can deduct those contributions from their taxable income (up to a certain limit). Income taxes must be paid on funds withdrawn from the accounts. At age 70 and one half, account holders must withdraw about 4% of their account balance. This required minimum distribution increases each year after age 70 as remaining life expectancy declines. People who are still working at age 70 and one half are not required to withdraw funds from an employer retirement account, but they must withdraw funds from traditional IRAs. (Roth IRAs, which are funded by post-tax contributions, do not require older account holders to take distributions.) Because many people transfer funds from 401(k) plans and other employer retirement accounts to IRAs when they change jobs, IRAs now hold more funds than employer retirement accounts (Investment Company Institute, 2017).

Most workers also pay state income tax on their earnings and some retirement benefits. Forty-one states and the District of Columbia tax earnings (Tax Policy Center, 2018).² State income taxes are much lower than federal income taxes. In 2018, the top marginal tax rate in most states was about 6 or 7%; the highest marginal tax rate, in California, was 12.3% (Tax Policy Center, 2018).

Earnings are also subject to Social Security and Medicare payroll taxes. Workers and their employers each pay a flat Social Security tax equal to 6.2% of earnings and a flat Medicare tax equal to 1.45% of earnings. Annual earnings above a certain level are exempt from Social Security taxes but not from Medicare taxes. The taxable ceiling for Social Security, which rises each year by the percentage change in the average economy-wide wage, was \$127,200 in 2017. Although employers nominally pay half of the payroll tax, most economists believe that employers offset their share of the tax bill by reducing wages below the level they would have paid in the absence of the payroll tax. Workers, then, ultimately pay the entire payroll tax themselves, and we include employer contributions in our measure of the implicit tax rate.

Since 2013, Medicare has imposed a tax surcharge on high earners. Workers must pay an additional 0.9% Medicare payroll tax on earnings in excess of \$200,000 for single taxpayers and in excess of \$250,000 for married couples. Employers are not subject to the Medicare surcharge.

²Seven states—Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming—do not have an income tax, and two states—New Hampshire and Tennessee—tax only dividends and interest income.

8.2.2 *Employee Fringe Benefits*

Employers typically offer their workers non-wage benefits, principally health insurance and retirement plans. These benefits generally influence the returns to work.

Health Benefits. About one half of employers offered health insurance benefits to their workers in 2017, at an average per worker annual cost of \$6690 for single coverage (Kaiser Family Foundation & Health Research and Educational Trust, 2017). The average cost is higher for older workers because they tend to use more health services than younger workers. Most employees who choose to participate in employer-sponsored health plans must make explicit contributions to offset part of the cost. The average annual contribution in 2017 for single coverage was \$1213. The share of health insurance costs that workers explicitly pay themselves is of less economic relevance here, however, because workers generally pay the entire cost of their health benefits, either explicitly or implicitly in the form of lower wages. Basic economic theory predicts that employers in competitive labor markets pay compensation equal to workers' productivity, and payments in the form of health benefits and other types of non-wage compensation are offset by lower wages. Although anti-discrimination laws forbid employers from charging older workers higher contributions than younger workers, employers may compensate for the high cost of providing health benefits to older workers by limiting wage growth at older ages.

Workers with employer health insurance generally forfeit their benefits when they retire. At 65, however, virtually all Americans qualify for Medicare benefits, eliminating the need to obtain primary coverage in the non-group market. For workers who wish to retire before 65, some employers offer retiree health benefits, enabling these workers to continue their employer health insurance coverage after they retire until they qualify for Medicare benefits at age 65. Some retiree health plans also supplement Medicare benefits after age 65. Retiree health benefits reduce work incentives.

Workers with employer-sponsored health insurance coverage forfeit their Medicare benefits when they remain on the job beyond age 65. Federal law establishes employer-sponsored health insurance as the primary payer of medical expenses for active workers age 65 and older. Medicare becomes secondary coverage, paying only for Medicare-covered services not included in the employer benefits package. The loss of Medicare benefits raises the cost of employing older workers, which employers can offset by limiting an employee's wage growth at older ages. The Medicare secondary payer rules, then, create an implicit tax on work at older ages.

Retirement Plans. About one half of full-time workers participated in employer-sponsored pension plans in 2017 (U.S. Bureau of Labor Statistics, 2017). There are two general types of pensions: defined contribution (DC) plans, which cover 40% of civilian workers, and traditional defined benefit (DB) plans, which cover 23% of civilian workers (U.S. Bureau of Labor Statistics, 2017). (Some workers have both types of coverage.) In 401(k) plans, the most common type of DC retirement plan, employers (and generally employees) make tax-deferred contributions to a

retirement account in a participant's name, usually specified as a particular share of salary but sometimes specified as a given dollar amount. At retirement, workers receive the funds that have accumulated in their accounts. They can use these funds to purchase annuities although relatively few do (Johnson, Burman, & Kobes, 2004). Income from DC accounts is taxable upon withdrawal. Workers face tax penalties if they withdraw funds before age 59 and one half, but penalties are waived if they receive benefits as annuities.

Traditional DB plans provide workers with lifetime annuities that begin at retirement and pay benefits typically expressed as a multiple of years of service and earnings received near the end of a career (e.g., 1% of average salary over the final 3 years on the job times years of service). Participants cannot collect benefits until they reach their plan's retirement age. Some plans allow workers to collect reduced benefits at specified early retirement ages. Income from DB plans is not taxable until it is received in retirement.

Pension wealth—the present discounted value of the stream of future expected benefits—tends to grow slowly in DB plans for young workers, increase rapidly at older ages once workers approach the plan's retirement age, and decline if the worker remains on the job past the retirement age. Pension wealth is minimal at younger ages because junior employees typically earn low wages and have completed only a few years of service. In addition, future benefits are discounted many years into the future. Wealth rises rapidly as workers age and accumulate tenure. An additional year on the job increases traditional pension benefits not only by adding an additional percentage of pay, but also by raising the value of previous benefit accruals by a combination of real wage growth and inflation. This increment is often substantial for workers with lengthy job tenures. Pension wealth also increases as workers approach retirement age and benefits are no longer discounted far into the future.

Workers in traditional DB plans often lose pension wealth if they stay on the job beyond a certain age or seniority level. Growth in promised annual retirement benefits slows at older ages as wage growth declines. Some plans also cap the number of years of service that workers can credit toward their pensions, and others cap the share of pre-retirement earnings that the plan will replace in retirement. In addition, for every year that workers remain on the job past the plan's retirement age, they forgo a year of benefits. Pension wealth declines when the increase in annual benefits from an additional year of work is insufficient to offset the loss from the reduction in the number of pension installments.

Pension wealth in DC plans, which simply equals the value of the account balance, grows each year by the value of employee and employer contributions to the plan and by the investment returns earned on the account balance. Although sharp changes in investment returns can lead to discontinuities in DC plan wealth, it does not systematically increase prior to the retirement age or fall thereafter.

8.2.3 *Social Security*

Social Security benefits depend on the employment and earnings history of both the beneficiary and spouse. Adults qualify for future benefits based on their own earnings once they accumulate 40 quarters of covered employment. Benefits are calculated in three steps, beginning with the computation of average wage-indexed monthly earnings (AIME) from the highest 35 years of indexed earnings. The second step uses AIME to compute the primary insurance amount (PIA), the monthly benefit payable at the full retirement age (FRA). The benefit formula is progressive, providing a higher PIA as a share of lifetime earnings for those with low lifetime earnings than for those with high lifetime earnings. The last step computes the actual Social Security benefit by applying actuarial adjustment factors to the PIA depending on when a beneficiary begins collecting payments. Social Security reduces payments for those who collect benefits before the FRA and increases benefits for those who do not begin collecting until after the FRA because delaying retirement reduces the number of monthly payments received.

Social Security also pays auxiliary benefits to eligible spouses, divorced spouses, and survivors of retired workers based on the current or former spouse's earnings. Unless reduced for early retirement, benefits paid to current and divorced spouses equal one half of the spouse's (or ex-spouse's) PIA, and benefits paid to survivors equal the deceased spouse's (or ex-spouse's) full PIA. Auxiliary benefits are then reduced by the amount of benefits one receives as a retired worker. Workers who earn at least as much as their spouses over their lifetime or not much less than their spouses do not qualify for spousal benefits because the Social Security benefits they receive based on their own earnings exceed half the value of their spouse's benefit.

The impact of an additional year of work on future Social Security benefits depends on one's own earnings history, a spouse's earnings history, and the age at which one chooses to begin collecting benefits. Because AIME is based on a worker's highest 35 years of earnings, working an extra year will not raise future Social Security benefits unless current earnings exceed adjusted earnings in the least remunerative of the 35 years already used in the computation (Goda, Shoven, & Slavov, 2011). In addition, those with substantially lower lifetime earnings than their spouses receive benefits based on their partners' earnings histories, and gain no additional Social Security benefits from work.

Delaying benefit take-up increases the size of the monthly Social Security check for beneficiaries, up to age 70. A worker born in 1950 (who faces an FRA of 66) would receive monthly Social Security payments equal to only 75% of her PIA if she claimed benefits at age 62, the earliest possible age. But she would receive 132% of her PIA if she delayed claiming benefits until age 70. Delaying take-up beyond age 70 does not lead to any additional increases in monthly benefits. Thus, those who postpone collecting benefits until they leave the labor force will raise the value of their monthly benefit checks by working an extra year, but they also reduce the number of lifetime payments they receive. The optimal take-up age depends in part on mortality expectations: those who survive to quite advanced ages will gain

more from claiming later than those who die earlier. Evidence shows that many people could raise the value of their lifetime Social Security benefits by claiming at older ages (Coile, Diamond, Gruber, & Jousten, 2002; Shoven & Slavov, 2014).

8.2.4 Past Research

Several earlier studies have highlighted the work disincentives built into the tax and transfer system. Gokhale, Kotlikoff, and Sluchynsky (2002) compared lifetime earnings for a representative two-earner couple to lifetime taxes and the lifetime value of transfer payments lost because of work, and concluded that workers sacrifice nearly 50 cents in tax payments and foregone transfers for every dollar they earn. The authors did not, however, consider how this implicit tax changes with age. Goda, Shoven, and Slavov (2009) estimated that the loss of Medicare benefits to workers because of the secondary payer rule creates an average implicit tax on work for men that rises from 15% at age 65 to 45% at age 80. For women, the Medicare-related tax on work rises from 20% at age 65 to 80% at age 80. Diamond and Gruber (1999) estimated that Social Security creates an implicit tax on work of 8% for a 62-year-old man who earned the median economy-wide salary throughout his career. The authors estimated that the implicit tax on work related to Social Security rises to 33% at age 65 and 44% at age 69.

Butrica, Johnson, Smith, and Steuerle (2006) computed implicit tax rates on work at older ages accounting for the combined impact of federal income taxes, payroll taxes, Social Security, Medicare, and employee benefits. They concluded that the implicit tax rate on work rises from 14% at age 55 to 25% at age 62, 39% at age 65, and 50% at age 70 for an unmarried man earning a moderate salary throughout his career with a DC retirement plan and no retiree health insurance. The authors found that implicit tax rates are higher for workers who earn more and for workers in DB pension plans. These estimates did not account for state income taxes.

Most existing studies were based on prototypical workers, making it difficult to determine how implicit tax rates are distributed across the workforce. An exception is Auerbach, Kotlikoff, Koehler, & Yu, (2017), who estimated implicit tax rates by running a nationally representative sample of older adults from the Federal Reserve's 2013 Survey of Consumer Finances through the Fiscal Analyzer, a software tool the authors developed. The study accounted for the full range of tax and transfer programs including Medicaid, the Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance to Needy Families (TANF), and the estate and gift tax. They estimated that a 1-year, \$20,000 increase in current earnings incurs a marginal net tax rate of 47% for workers in the middle of the resource distribution. The marginal tax rate is 59% for those in the top fifth of the resource distribution and 83% for those in the bottom fifth. The tax rate is especially high for those with limited resources because many would lose means-tested transfers such as Medicaid, SNAP, and TANF benefits by working. One shortcoming of these estimates, however, is that they are based on relatively few observations. Their sample included only 2658

households with heads ages 50–79. In addition, the study relied on imputed earnings histories, which could limit the reliability of estimates of future Social Security benefits and the implicit tax on work that arises from Social Security rules.

8.3 Methods

To examine how the financial rewards from working change as people age, we compute the implicit tax rate on work—the implicit tax on work divided by total compensation—for a random sample of adults ages 60–70. Our analysis defines the implicit tax on work as the difference between the compensation paid by employers and the total value of wages and non-wage benefits that workers take home. It includes direct taxes such as state and local income taxes and Social Security and Medicare payroll taxes paid directly by workers. It also includes indirect taxes such as payroll taxes paid by employers and the increment to future income tax liabilities from additional work, and other negative and positive offsets such as the loss of Medicare benefits by Medicare-eligible workers who receive health benefits from their employers and the gain in future Social Security benefits from working longer. To measure the tax on work, we compare how much someone would pay in taxes and other offsets by working full-time at a particular age with how much they would pay if they did not work at all.

8.3.1 *DYNASIM4*

We use the Dynamic Simulation of Income Model 4 (DYNASIM4) to simulate earnings, total compensation, and the implicit tax on work at various ages for a random sample of older adults. Developed by the Urban Institute, DYNASIM4 starts with a representative sample of the US population in 2006 from the Survey of Income and Program Participation and ages it year by year, simulating key demographic, economic, and health events. For example, DYNASIM4 projects that each year some people in the sample get married, have a child, or find a job. The model projects that other people become divorced or widowed, stop working, begin collecting Social Security, become disabled, or die. These transitions are based on probabilities generated by carefully calibrated equations estimated from nationally representative household survey data. The equations account for important differences by sex, education, income, and other characteristics in the likelihood of various experiences. For consistency with Social Security’s and Medicare’s projections about system finances, we generally follow the Social Security and Medicare trustees’ assumptions about future annual inflation and interest rates, earnings growth, fertility, mortality, and immigration.

The model projects employment, earnings, and fringe benefits each year. Annual earnings for an individual are determined as the product of three independently

simulated variables: employment status, annual hours worked, and a worker's hourly wage. For those who work, the model projects whether an employer provides health benefits and a retirement plan, as well as the type of retirement plan provided—DB, DC, or cash balance. DYNASIM4 simulates DB pensions from private sector employers based on DB plan formulas from the Pension Benefit Guaranty Corporation's pension insurance modeling system. DYNASIM4 uses actual benefit formulas to calculate pension benefits for federal government workers and military personnel. Pension benefits for state and local government workers are simulated based on pension replacement rates available from the U.S. Bureau of Labor Statistics. The model projects that some DB plans will freeze over time and assumes that employers move workers in frozen DB plans into cash balance plans. For workers offered a DC plan by their employer, DYNASIM4 projects DC plan participation and employer and employee contributions, as well as account balances. Employer-sponsored health benefits are simulated in a similar way, by projecting whether an employer offers health insurance coverage and whether an employee participates.

DYNASIM4 also projects benefit payments and tax liabilities. The model uses program rules—combined with projections of lifetime earnings, disability and health status, and household income and wealth—to project Social Security retirement and disability benefits, Medicaid coverage, and Medicare payments and premiums. Tax calculators simulate Social Security and Medicare payroll taxes and federal and state income taxes. They incorporate payment rules in effect for 2017 and cover every state that levies an income tax. For additional information about DYNASIM4, see Favreault, Smith, & Johnson (2015) and Urban Institute (2015).

8.3.2 *Computing Implicit Tax Rates*

The analysis uses DYNASIM4 to simulate total compensation and the implicit tax on work at older ages. Total compensation includes cash earnings plus the employer share of Social Security and Medicare payroll taxes. It also includes employer contributions toward a worker's employer-provided health insurance and DC retirement plan and the change in a worker's DB pension wealth that results from an additional year of work for workers who receive these fringe benefits from their employer. DB pension wealth usually increases with an additional year of work, but it sometimes declines for workers who remain employed after reaching their plan's normal retirement age and forfeit retirement benefits while they remain employed.

The implicit tax on work includes direct taxes, indirect taxes, and other offsets. Direct taxes consist of federal and state income taxes and Social Security and Medicare payroll taxes paid directly by workers. We do not include income taxes levied by local governments because most localities do not tax income, and DYNASIM4 does not project these payments. To isolate the direct tax associated with work, we compute how much income tax someone would pay if they did not work and subtract that from the taxes they pay when working.

Indirect taxes consist of Social Security and Medicare payroll taxes paid by employers and the increment to future federal and state income taxes from additional work. People who work another year may save more, generating future investment income, and generally accrue additional future Social Security and pension income. People who work longer also generally postpone collecting Social Security and any DB pension they may have earned, increasing their monthly payments when they do collect. The additional future income that flows to people who work longer raises their future tax liability.

Other offsets include losses of Medicare benefits and gains to future Social Security benefits from working longer. The analysis computes lost Medicare benefits as the expected value of services paid by Medicare Parts A, B, and D (covering inpatient and outpatient care and pharmaceuticals), net of the premiums that a worker would have paid for Parts B and D. (Medicare beneficiaries do not generally pay premiums for Part A.) We consider the loss of Medicare benefits and increments to future Social Security wealth as an implicit tax (either positive or negative) because they alter net compensation without changing employer payments.

Using DYNASIM4, we simulate earnings, total compensation, direct taxes, and the implicit tax on work from ages 60–70. We restrict our sample to 9512 adults born between 1956 and 1965 who were working at age 59 and who survived to age 70. We simulate outcomes under the assumption that they continue in the job they held at age 59 and receive each year their age-59 earnings, adjusted for inflation, because earnings do not generally increase faster than inflation after age 55 (Johnson & Neumark, 1996). These simulations assume that workers will stop work and begin collecting Social Security and their employer pension, if they have one, the next year, but they do not begin collecting Social Security before age 62—the early entitlement age for Social Security—or after age 67—the approximate Social Security FRA for the workers in our sample. To isolate the tax on work, we also simulate outcomes under the assumption that adults did not work and instead began collecting Social Security and their employer pension if they have one (or at age 62 if they were younger than that age). The analysis subtracts current direct and indirect taxes and other offsets (and the expected present value of future lifetime taxes and offsets) simulated under this no-work scenario from those simulated under the work scenario to estimate taxes associated with work. The present value calculations use a 2.9% annual real interest rate. The simulations do not change spouses' employment; their employment remains at the levels simulated by DYNASIM4's baseline projections under both the work and no-work scenarios. All estimates are reported in constant 2015 dollars.

8.4 Results

We begin by computing a standard tax rate, showing how much older adults pay directly from their paycheck by working for an additional year. For workers across the labor force, the mean direct tax on work at ages 60–66 varies between 20.5 and

Table 8.1 Mean direct tax on work

	Annual salary (\$)	Employee payroll taxes (\$)	Federal income taxes (\$)	State income taxes (\$)	Direct tax on work (\$)	Take-home pay (\$)	Direct tax rate (%)
Age	(1)	(2)	(3)	(4)	(5) = (2) + (3) + (4)	(6) = (1) – (5)	(7) = (5) / (1)
60	65,714	4127	8166	1850	14,144	51,571	21.5
61	65,726	4156	8283	1841	14,280	51,446	21.7
62	65,739	4119	7659	1726	13,504	52,235	20.5
63	65,731	4170	8041	1752	13,964	51,767	21.2
64	65,727	4177	8117	1778	14,071	51,656	21.4
65	65,733	4359	8985	1964	15,308	50,425	23.3
66	65,732	4367	8945	1872	15,183	50,549	23.1
67	65,722	4411	10,793	2146	17,349	48,373	26.4
68	65,711	4414	11,506	2039	17,960	47,752	27.3
69	65,719	4427	11,867	1976	18,270	47,448	27.8
70	65,829	4556	14,038	2472	21,067	44,762	32.0

Source: Authors' calculations from DYNASIM4

Note: The table shows mean annual salary and mean direct taxes on full-time annual employment at each given age. Estimates are reported in inflation-adjusted 2015 dollars

23.3% (Table 8.1). The majority of taxes are paid as federal income taxes. Over the age range, the average federal income tax rate associated with working full-time for a year varies from 11.7 to 13.7% of earnings. Mean state income tax rates on work are much lower, ranging from 2.6 to 3.0%. Average payroll taxes paid directly by workers vary from 6.3 to 6.6%. This rate is lower than the statutory rate of 7.65% (6.2% to Social Security including the Social Security disability trust fund, and 1.45% to Medicare) because some workers are not covered by Social Security or Medicare and workers do not pay taxes on annual income that exceeds the taxable maximum (set at \$127,200 in 2017).

The mean direct tax on work rises to 26.4% at age 67 and to 32.0% at age 70. The average direct tax on work is more than a third higher (or 8.9% points higher) at age 70 than at age 66. The direct tax rises at age 67 because we assume that workers will begin collecting Social Security at that age, when they reach the program's FRA, which pushes many workers into a higher income tax bracket. At age 70, people with traditional IRAs must begin withdrawing taxable funds from those accounts, which also pushes some workers into higher tax brackets, raising the average federal income tax rate on work to 21.3% and the average state income tax rate on work to 3.8%. Average payroll tax rates also rise with age because our simulation assumes that the cap on earnings subject to the Social Security payroll tax grows faster than older workers' annual salaries. Consequently, the share of older workers' earnings subject to the Social Security payroll tax grows with age.

The mean direct tax rate on work, which indicates the share of aggregate salary that goes to taxes, exceeds the median direct tax rate, which indicates the tax rate in

Table 8.2 Median direct tax rate on work, by marital status, sex, and annual earnings quintile (%)

Age	Annual earnings quintile				Marital status		Sex	
	All	Bottom	Middle	Top	Single	Married	Men	Women
60	15.3	10.3	15.6	18.2	17.7	14.5	15.1	15.7
61	15.5	9.2	15.9	18.2	17.8	14.6	15.1	16.0
62	14.9	7.9	15.6	17.8	18.0	13.7	14.6	15.4
63	15.0	7.7	15.6	17.9	18.1	13.8	14.7	15.5
64	14.9	7.7	15.5	17.8	17.9	13.6	14.6	15.3
65	14.4	7.7	15.4	18.7	16.3	13.8	14.3	14.7
66	14.5	7.7	15.7	18.5	16.4	13.9	14.3	14.7
67	17.3	7.7	18.5	20.7	20.3	16.6	17.2	17.6
68	18.4	7.7	20.0	21.0	23.2	17.2	18.1	18.8
69	18.8	7.7	20.2	21.4	24.0	17.5	18.6	19.1
70	20.6	7.7	21.8	23.9	27.8	18.8	20.3	21.2

Source: Authors' calculations from DYNASIM4

Note: The table shows the median direct tax rate on annual full-time employment, computed as the ratio of annual direct taxes to annual salary. Direct taxes consist of federal and state income taxes and employee Social Security and Medicare payroll taxes. The direct tax on work is computed by simulating direct taxes under the assumption of no paid employment and subtracting those from direct taxes simulated under the assumption of full-time employment

the middle of the distribution. One half of workers pay a tax rate that equals or exceeds the median rate, and the other half pay a rate that falls short of the median. The median direct tax rate on work ranges from 14.4 to 15.3% at ages 60–66 and rises to 20.6% at age 70 (Table 8.2). The median rate falls short of the mean rate because the mean rate weights higher earners more than lower earners and the progressive federal income tax raise tax rates on higher earners.

Because the federal income tax code and most state income tax codes are progressive, the direct tax on work rises with earnings. At age 65, the median direct tax on work for workers in the top quintile of the annual earnings distribution is 18.7%, compared with 15.4% for those in the middle quintile and 7.7% for those in the bottom quintile. At age 70, the median direct tax rate on work rises to 23.9% for those in the top fifth of the earnings distribution.

Direct tax rates on work are significantly higher for single filers than married filers and for higher earners than lower earners (Table 8.2). At age 65, for example, the median direct tax rate on work is about 3% points higher for single filers than married filers (16.3% vs. 13.8%) because married filers can claim more personal exemptions in 2017 and a higher standard deduction than single filers and additional earnings are less likely to push married filers into a higher tax bracket because the income thresholds associated with each tax bracket are higher for married filers. At age 70, the median direct tax rate on work is 9% points higher for single filers than married filers (27.8% vs. 18.8%). The direct tax rate on work is slightly higher for older women than older men because older women are more likely to be single.

8.4.1 *Implicit Tax on Work*

A broader measure of the tax rate on work than the simple direct tax rate includes taxes paid indirectly by employers plus compensation offsets created by public and private benefits. Before estimating this tax rate, we must construct a more complete measure of compensation that adds employer contributions for payroll taxes and health and retirement benefits to salary, as well as changes in future DB pension payments associated with additional work. Adding these employer contributions to salary raises mean compensation at age 60 from \$65,714 to \$86,685, a 32% increase (Table 8.3). The largest component of non-salary compensation at ages 60 and 61 is employer contributions for health insurance, followed by changes in DB pension wealth. Employer contributions to DC retirement plans and Social Security and Medicare payroll taxes are smaller. As workers age, health insurance contributions from employers rise because health care costs generally increase at older ages, while increments to DB pension wealth fall. For workers in their late 60s, mean employer contributions to DC retirement plans and Social Security exceed the mean change in DB pension wealth.

Relatively few workers are covered by DB pension plans. Among those with coverage, however, annual increments to DB pension wealth substantially raise total compensation before age 62. The mean increase in DB pension wealth from working an additional year is about \$36,600 at age 60 and \$35,700 at age 61. The impact falls sharply at age 62, when many plans allow participants to begin collecting their pension.

Table 8.4 reports the implicit tax on work and breaks down its components. Adding indirect taxes and compensation offsets raises the mean tax on work by

Table 8.3 Components of total mean compensation (\$)

Age	Salary	Employer contributions				Change in DB pension wealth	Total compensation
		Health insurance	DC retirement plan	Social security payroll tax	Medicare payroll tax		
60	65,714	9317	1052	3088	898	6616	86,685
61	65,726	9588	1075	3106	899	6000	86,393
62	65,739	9796	1114	3113	897	2669	83,328
63	65,731	9954	1117	3129	899	1514	82,343
64	65,727	10,103	1160	3138	899	1411	82,438
65	65,733	10,370	1175	3151	899	538	81,865
66	65,732	10,638	1187	3160	899	688	82,305
67	65,722	10,849	1182	3171	899	613	82,435
68	65,711	11,139	1203	3179	899	737	82,869
69	65,719	11,493	1207	3185	897	713	83,215
70	65,829	11,688	1212	3201	899	1430	84,260

Source: Authors' calculations from DYNASIM4

Note: The table reports mean values, expressed in inflation-adjusted 2015 dollars

Table 8.4 Mean components of implicit tax (\$)

Age	Social					Increment to future payments				Lost Medicare benefits	Total implicit tax (9) = (1) + (2) + (3) + (4) + (5) + (6) - (7) + (8)	Direct tax (10)
	Security payroll tax (1)	Medicare payroll tax (2)	Federal income tax (3)	State income tax (4)	Federal income tax (5)	State income tax (6)	Social Security benefits (7)	State income tax (8)				
60	6176	1937	8166	1850	1287	183	2915	0	16,685	0	16,685	14,144
61	6212	1949	8283	1841	1312	166	2445	0	17,318	0	17,318	14,280
62	6225	1903	7659	1726	1480	117	3362	0	15,748	0	15,748	13,504
63	6257	1941	8041	1752	1546	150	2933	0	16,755	0	16,755	13,964
64	6276	1938	8117	1778	1512	183	5145	0	14,658	0	14,658	14,071
65	6302	2108	8985	1964	1523	145	3331	12,610	30,305	12,610	30,305	15,308
66	6320	2105	8945	1872	1920	197	1683	12,876	32,553	12,876	32,553	15,183
67	6342	2138	10,793	2146	575	45	2789	13,142	32,393	13,142	32,393	17,349
68	6359	2133	11,506	2039	280	28	2782	13,421	32,985	13,421	32,985	17,960
69	6369	2139	11,867	1976	337	39	2607	13,654	33,774	13,654	33,774	18,270
70	6403	2254	14,038	2472	440	74	2326	13,648	37,004	13,648	37,004	21,067

Source: Authors' calculations from DYNASIM4

Note: The table shows the components of the total implicit tax on annual full-time employment. Direct taxes consist of federal and state income taxes and employee Social Security and Medicare payroll taxes. The tax on work is computed by simulating taxes under the assumption of no paid employment and subtracting those from taxes simulated under the assumption of full-time employment. Increments to future payments are the present discounted value of the expected future annual stream, discounted at an annual real rate of 2.9%. Estimates are mean values, reported in inflation-adjusted 2015 dollars

nearly one fifth at age 60 to \$16,685. Current federal income tax payments are the largest components of the implicit tax at age 60, followed by the Social Security payroll tax and the Medicare payroll tax paid jointly by employees and employers. Current state income tax payments and increments to future federal and state income tax liabilities are also significant. However, increments to future Social Security benefits offset about half of the Social Security payroll tax paid by workers from ages 60 to 65.

Medicare secondary payer rules substantially raise the implicit tax on work at age 65. Nearly all non-working adults can begin receiving Medicare benefits at age 65, but most employed 65-year-olds who receive employer-sponsored health benefits forfeit Medicare because their employer benefits are the primary payers of their health costs. Medicare pays only for those services not covered by employer health plans, but most employer plans provide coverage at least as generous as Medicare. The loss of Medicare benefits at age 65 costs workers about \$12,600 on average, nearly doubling the average implicit tax on work. At age 65, the average total implicit tax on work is about twice as high as the average direct tax (\$30,305 vs. \$15,308).

By age 60, average Social Security payroll taxes dwarf the average increment to future Social Security benefits from working another year. The average increment to future Social Security benefits is generally lower for workers in their late 60s than for workers in their early 60s. Older workers tend to have higher lifetime earnings than younger workers, so the Social Security benefit formula tends to replace a smaller share of additional earnings for older workers than younger workers. In addition, older workers are more likely than younger workers to have accumulated 35 years of covered employment, so that an additional year of employment raises future benefits only to the extent that their additional annual earnings exceed their previous lowest-paying year of employment (in wage-indexed dollars).

Required minimum distributions from IRAs raise the implicit tax on work at age 70 by pushing workers into higher tax brackets and increasing their federal and state income tax payments in the same way as it raises the direct tax on work. Between ages 69 and 70, mean federal income tax liabilities for workers increase by about \$2200, or 18%, and mean state income tax liabilities increase by about \$500, or 25%.

8.4.2 Distribution of the Implicit Tax on Work

The mean implicit tax rate on work at ages 60–64 ranges from 17.8 to 20.3% (Table 8.5). The implicit tax rate in this age range is somewhat lower than the direct tax rate because total annual compensation is higher than annual salary. The median implicit rate is lower than the mean rate, ranging from 12.2 to 15.0%.

At age 65, the implicit tax rate on work increases sharply as workers with employer health benefits forgo Medicare benefits. The mean implicit rate jumps to 37.0%, and the median rate jumps to 39.0%. The median rate exceeds the mean

Table 8.5 Total annual compensation and the implicit tax on work

Age	Mean total annual Compensation (\$)	Mean implicit Tax (\$)	Mean implicit Tax rate (%)	Percentiles of the implicit tax rate (%)				
				10th	25th	50th	75th	90th
60	86,685	16,685	19.2	3.5	9.4	15.0	20.9	27.3
61	86,393	17,318	20.0	3.7	9.5	15.0	20.8	27.6
62	83,328	15,748	18.9	-4.5	5.2	14.2	24.5	37.8
63	82,343	16,755	20.3	-5.1	5.6	14.7	25.7	40.6
64	82,438	14,658	17.8	-12.6	0.8	12.2	24.1	40.4
65	81,865	30,305	37.0	15.6	24.5	39.0	63.5	111.4
66	82,305	32,553	39.6	17.1	26.3	41.6	68.5	125.0
67	82,435	32,393	39.3	22.7	29.5	41.7	61.8	104.7
68	82,869	32,985	39.8	22.8	30.0	43.3	64.0	107.1
69	83,215	33,774	40.6	23.3	30.7	44.0	64.9	109.2
70	84,260	37,004	43.9	25.3	32.7	46.4	67.3	112.9

Source: Authors' calculations from DYNASIM4

Note: Total annual compensation consists of salary; employer contributions to employer-sponsored health insurance, DC retirement plans, and Social Security and Medicare payroll taxes; and annual increments to DB pension wealth (for covered workers). The implicit tax on work consists of federal and state income taxes, employee- and employer-paid Social Security and Medicare payroll taxes, the present discounted value of the future incremental stream of federal and state income taxes from working an additional year, and the value of Medicare benefits forfeited when Medicare-eligible workers receive employer-sponsored health benefits, minus the present discounted value of the increment to future Social Security benefits from working an extra year. Present discounted values are estimated using a 2.9% real annual interest rate. The tax on work is computed by simulating taxes under the assumption of no paid employment and subtracting those from taxes simulated under the assumption of full-time employment. All dollar values are reported in inflation-adjusted 2015 dollars

rate after age 65 because the loss of Medicare benefits represents a larger share of compensation for lower earners than higher earners, and the median rate gives less weight to higher earners than does the mean rate. Implicit tax rates generally increase slowly through age 69 and then spike at age 70 when workers with traditional IRAs must start withdrawing funds from their accounts. At age 70, the mean implicit tax rate on work is 43.9%, and the median implicit tax rate on work is 46.4%.

The implicit tax rate on work varies substantially across the workforce. At age 60, one quarter of workers face an implicit rate of no more than 9.4%—the 25th percentile of the distribution—and one tenth of workers face an implicit rate of no more than 3.5%—the tenth percentile. Implicit tax rates are much higher near the top of the distribution. One quarter of 60-year-old workers face an implicit tax rate of at least 20.9%—the 75th percentile of the distribution—and one tenth of workers face an implicit rate of at least 27.3%—the 90th percentile.

The tax rate spread is higher at older ages. At age 64, 10% of workers face an implicit tax rate of less than 12.6%; they face a negative tax rate because they gain more in future Social Security benefits by working another year than they pay

directly or indirectly in combined income and payroll taxes. Another 10% of 64-year-old workers face implicit tax rates of at least 40.4%. At ages 65 and older, when implicit tax rates are higher across the board, tax rates exceed 60% for one quarter of workers and 100% for one tenth of workers. At age 70, one quarter of workers face an implicit tax rate of at least 67.3%, and 10% face an implicit tax rate of at least 112.9%. When implicit tax rates exceed 100%, the loss of Medicare and the additional future lifetime income tax liability that people incur by working another year exceed the sum of their after-tax compensation and the increment to future Social Security benefits.

Before age 65, workers with high annual earnings face steeper implicit tax rates on work than workers with low annual earnings, but implicit tax rates for low-salaried workers soar when they reach age 65 (Table 8.6). The distribution of total annual compensation is skewed. At age 60, total annual compensation for workers with annual earnings in the top quintile of the distribution averages about four times as much as for those in the middle quintile and about 13 times as much as for those in the bottom quintile. The median implicit tax rate on work at age 60 is 9.8% for those in the bottom quintile of the annual earnings distribution, 14.6% for those in the middle earnings quintile, and 19.0% for those in the top earnings quintile. The mean implicit tax rate varies somewhat more with earnings than the median rate.

At age 65, however, the implicit tax rate for workers in the bottom earnings quintile soars, as the median rate reaches 98.4%. The median implicit tax rate also rises for workers with higher earnings, reaching 36.1% for workers in the middle earn-

Table 8.6 Median implicit tax on work, by marital status, sex, and annual earnings quintile (%)

Age	All	Annual earnings quintile			Marital status		Sex	
		Bottom	Middle	Top	Single	Married	Men	Women
60	15.0	9.8	14.6	19.0	16.7	14.2	15.2	14.7
61	15.0	9.7	14.6	19.2	16.7	14.2	15.2	14.8
62	14.2	10.1	13.0	18.2	17.1	13.0	13.7	15.0
63	14.7	10.5	13.3	18.6	18.1	13.1	14.2	15.4
64	12.2	8.0	9.8	16.8	15.6	10.4	11.3	13.3
65	39.0	98.4	36.1	26.1	47.7	33.2	34.9	44.6
66	41.6	109.9	38.7	27.3	51.2	34.6	36.6	47.9
67	41.7	98.5	39.5	28.3	50.0	34.9	38.1	46.2
68	43.3	101.1	41.2	28.5	53.2	34.8	39.5	47.6
69	44.0	104.1	42.1	29.0	53.5	35.2	39.9	48.6
70	46.4	106.9	44.2	31.3	56.6	36.0	42.0	51.1

Source: Authors' calculations from DYNASIM4

Note: The implicit tax on work consists of federal and state income taxes, employee- and employer-paid Social Security and Medicare payroll taxes, the present discounted value of the future incremental stream of federal and state income taxes from working an additional year, and the value of Medicare benefits forfeited when Medicare-eligible workers receive employer-sponsored health benefits, minus the present discounted value of the increment to future Social Security benefits from working an extra year. Present discounted values are estimated using a 2.9% real annual interest rate. The tax on work is computed by simulating taxes under the assumption of no paid employment and subtracting those from taxes simulated under the assumption of full-time employment

ings quintile and 26.1% for those in the top earnings quintile, but the increase is much smaller. The implicit tax rate increases so much for workers with limited earnings because the loss in Medicare benefits, which affects all workers by about the same dollar amount, represents a much larger share of earnings for low-earning workers than for high-earning workers. At age 70, workers in the bottom earnings quintile face a median implicit tax rate on work of 106.9%.

Single adults generally face higher implicit tax rates on work than married adults. At age 62, the median implicit tax rate on work for single adults is 17.1%, compared with 13.0% for married adults. Single filers face higher implicit tax rates on work than married filers because they face higher average personal income tax rates from the federal and state governments. The absolute gap between single and married filers increases at age 65 because the loss in Medicare benefits from working at age 65 is larger, relative to earnings, for single workers, who tend to earn less than married workers. At age 65, the median implicit tax rate on work is 47.7% for single adults and 33.2% for married adults. At age 70, the median implicit tax rate is 56.6% for single adults and 36.0% for married adults.

The implicit tax rate on work does not vary much by gender between ages 60 and 64, but women generally face a higher implicit tax rate than men at ages 65 and older (Table 8.6). At age 65, the median implicit tax rate for women is 44.6%, compared with 34.9% for men. Women and men experience comparable Medicare losses by working beyond age 65, but women generally earn less than men. Consequently, those losses as a share of compensation are generally larger for women than for men. In addition, women tend to gain less in Social Security benefits from working longer than men because they are more likely than men to receive benefits on their spouse's earnings record.

8.5 Conclusions

Elements of the tax, retirement, and employee benefits systems increasingly discourage work as people age, and the impact is substantially larger than the work-related taxes paid directly by employees. Combining direct income and payroll taxes paid by employees, indirect taxes paid by employers, and compensation offsets from retirement and employee benefit programs, our results show that the median implicit tax on work rises from 15.0% of total compensation at age 60 to 39.0% at age 65, 41.7% at age 67, and 46.4% at age 70. By contrast, median direct tax rates on work are only 14.4% at age 65 and 20.6% at age 70. Implicit taxes on work rise with age because most workers with employer health benefits forfeit Medicare benefits beginning at age 65, minimum withdrawal requirements for IRAs at age 70 and one-half push some older workers into higher income tax brackets, and older workers tend to accumulate fewer additional Social Security credits than younger workers.

Some older workers face even higher implicit tax rates. At age 70, one quarter of workers face an implicit tax rate of at least 67.3%, and 10% face an implicit tax rate

of at least 112.9%. Implicit taxes on work after age 65 are generally higher for single workers and those with lower earnings than for married workers and those with higher earnings.

These estimates understate employment disincentives for low-income workers because they do not account for the potential loss of means-tested benefits such as SNAP and TANF benefits, Supplemental Security Income payments, and Medicaid, that low-income workers could suffer. As Auerbach et al. (2017) point out, additional earnings could make some low-income people ineligible for benefits, significantly reducing the financial rewards from working. In addition, our results do not reflect the tax cuts signed into law by President Trump in 2017. Because those tax reforms reduced marginal tax rates, our simulations may overstate the tax code's work disincentives in 2018 and later years.

Understanding the implicit tax on work at older ages is important because it can discourage work at older ages. Working longer can improve future retirement security by allowing people to save more for retirement and reducing the time spent in retirement collecting benefits and spending down savings. (See Chap. 7 for a discussion of the retirement security outlook for today's older workers.) Working longer also increases the net output and productivity of the economy and generates additional payroll and income tax revenue that funds retirement and other crucial public programs. Some recent policy and societal changes have likely increased work incentives at older ages. With the decline in DB pension plans and growth in DC retirement plans, fewer workers lose retirement benefits by remaining employed past their plan's specified retirement age. The erosion in employer-sponsored retiree health benefits raises the cost of retiring before the Medicare eligibility age. Increases in Social Security's FRA and delayed retirement credits make work at older ages more rewarding, and growth in married women's earnings has reduced the prevalence of Social Security spouse and survivor benefits, more closely tying future Social Security benefits to one's employment history.

Additional policy changes may be warranted to further reduce work disincentives at older ages. Policymakers might consider a payroll tax credit for older workers, many of whom pay more in payroll taxes than they receive in additional future Social Security benefits, especially when factoring in the indirect taxes paid by their employers. This reform might not reduce total tax revenue much because it could draw more older people into the workforce and boost income tax revenue. Extending Social Security's delayed retirement credits past age 70 and raising the age at which people must start withdrawing funds from their IRAs would also make work more rewarding at older ages. Perhaps most important, eliminating the requirement that Medicare serve as the secondary payer of medical expenses for Medicare-eligible workers with employer-sponsored health benefits would substantially boost work incentives at older ages. The high cost of medical insurance for older workers discourages some employers from retaining or hiring workers older than 65. Allowing Medicare to be the primary payer would lower employment costs and reduce the implicit tax rate faced by older workers, potentially attracting more older people into the labor force. This change would, however, raise the cost of the Medicare program, which is already facing budgetary problems.

Older adults face multiple employment challenges, including health problems (see Chap. 20), lack of training and up-to-date skills (see Chaps. 12 and 13), lack of motivation (see Chap. 11), and competing family responsibilities (see Chap. 19). Nonetheless, policy changes that would make work more financially rewarding could convince more older adults to remain in the workforce, contribute to the nation's economic growth, and reduce the strain on retirement programs.

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Chapter 9

Population Aging, Age Discrimination, and Age Discrimination Protections at the 50th Anniversary of the Age Discrimination in Employment Act



Patrick Button

9.1 Introduction: Population Aging

At the 50th anniversary of the Age Discrimination in Employment Act (ADEA),¹ the United States is experiencing a rapidly aging population. The proportion of the population of age 65 and older was 9.0% in 1960 (20.3% for age 45–64), and this increased to 13.0% (26.4%) in 2010 (Howden & Meyer, 2011). This trend will continue, as the proportion of seniors (here defined as age 65 and older) in the US working-age population is projected to rise sharply—from about 19% currently to 29% in the year 2060—approaching equality with the proportions of those aged 25–44 and 45–64 (Neumark, Burn, & Button, 2017). This aging population makes issues such as employment and financial well-being of seniors increasingly important.

9.2 The Increased Labor Force Participation of Seniors

In addition to there being more seniors due to the aging population, seniors are increasingly choosing to work into older ages. Figure 9.1 presents the labor force participation rate of men in panel (a) and women in panel (b) for the same three age groups. Men younger than 65 have experienced slightly decreasing participation

¹For a discussion of the history of the ADEA at its 30th anniversary, see Eglit (1997).

P. Button (✉)

Department of Economics, Tulane University, New Orleans, LA, USA

The RAND Center for the Study of Aging, RAND Corporation, Santa Monica, CA, USA

The IZA Institute for Labor Economics, Bonn, Germany

National Bureau of Economic Research, Cambridge, MA, USA

e-mail: pbutton@tulane.edu

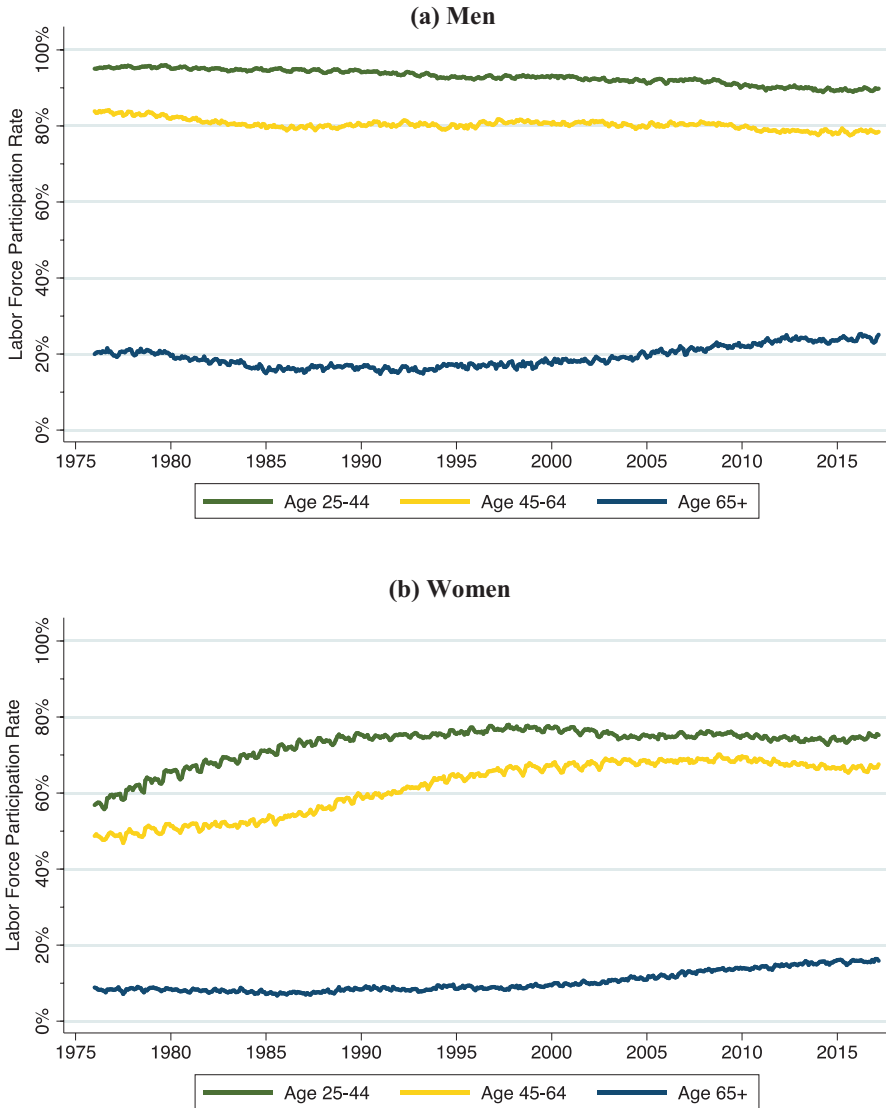


Fig. 9.1 Labor force participation rates by age group and sex. (a) Men. (b) Women. Source: Author's calculations using data from the Current Population Survey (monthly) from 1975 to March 2017, via IPUMS-CPS (Flood, King, Ruggles, & Warren, 2015)

since 1975. For men aged 65 and older, participation has increased from 16.5% in March 1985 to 20.2% in March 2017. The changes are more drastic for older women. While the participation rate of women younger than 65 increased until 1995 (age 25–44) or 2005 (age 45–64), it has since flat-lined. Meanwhile since about

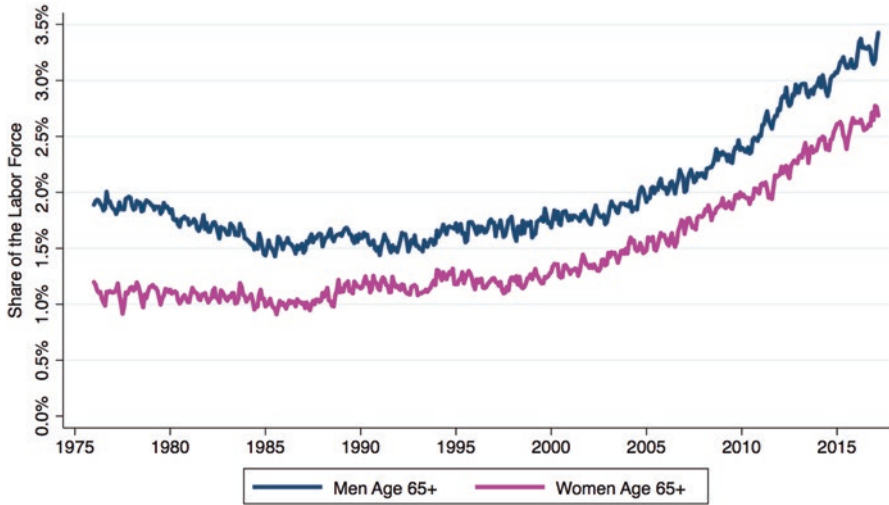


Fig. 9.2 Proportion of the labor force by age group and sex. Source: Author’s calculations using data from the Current Population Survey (monthly) from 1975 to March 2017, via IPUMS-CPS (Flood et al., 2015)

2000 the participation rate for women aged 65 and older has been rapidly increasing, from 10.0% in March 2000 to 15.9% in March 2017.

The combined trends of an aging population and a rising labor force participation rate of seniors, especially senior women, causes seniors to be an increasingly larger share of the labor force, as shown in Fig. 9.2. The proportion of the entire labor force that is senior men increased from 1.57% in March 1985 to more than twice this, 3.42%, in March 2017. The increase in the entire labor force that is senior women increased more substantially, from 1.01% in March 1985 to 2.69% March 2017. Adding women and men together, this means that in March 2017 about one in 16 people in the labor force were seniors (compared to about one in 39 in March 1985).²

9.3 Working Longer Through “Bridge” Jobs

A common approach that seniors take to work longer is taking “bridge” jobs or “partial retirement” jobs (e.g., Johnson, Kawachi, & Lewis, 2009), which ease them into a complete retirement. “Unretirement” is also very common, where seniors leave retirement to take jobs before retiring again. Nearly 50% of retirees follow a non-traditional retirement path that involves transitioning to bridge jobs before retirement or involves “unretirement.” This behavior is usually anticipated and often

²These trends may differ by race and race-by-gender. See, e.g., Lahey (2018).

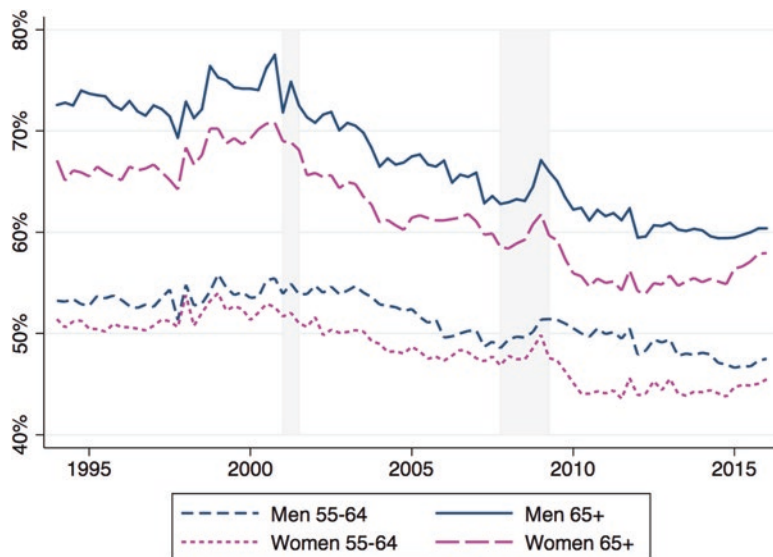


Fig. 9.3 Hiring rates by age and gender, relative to men aged 25–34. Source: Author’s calculations using data from the Quarterly Workforce Indicators (QWI) from 1994Q1 to 2006Q1 (release R2017Q1). Each series is seasonally adjusted by the author using X-13-ARIMA-SEATS before being converted to relative rates. Shaded areas are recessions according to the NBER Business Cycle Dating Committee

is not due to some adverse economic event during retirement (Maestas, 2010). For these reasons, hiring in these “bridge” jobs remains important as seniors seek to work longer.

Figure 9.3 presents the hiring rate of men and women aged 55–64 and aged 65 and older, relative to the hiring rate of men aged 25–34.³ Both of the older age groups have a lower hiring rate than that of young men, reflecting that young men change jobs more often and face fewer obstacles (e.g., age discrimination). Older women also, unsurprisingly, have lower hiring rates. However, it is notable that the hiring rates of those aged 65 and older are higher than for those aged 55–64, reflecting the importance of these “bridge” jobs. For both of the older age groups and for both genders, the hiring rate has been declining since about 2000, especially for seniors aged 65 and older, perhaps reflecting increased difficulties faced by older workers in the labor market and the increased difficulties as seniors seek to extend their work lives.⁴

³The hiring rate is calculated from Quarterly Workforce Indicators (QWI) data as the number of hires divided by employment for that age group and gender. This is calculated as relative to the hiring rate for men aged 25–34. A value of 50% means that this group has half the hiring rate of men aged 25–34.

⁴As supporting evidence, Figure 9.6 shows that mean unemployment durations were also generally increasing for older workers after 2000.

9.4 Why Are Seniors Working Longer?

Seniors are working longer due to both “push” and “pull” factors. “Pull” factors include internal, personal reasons for why seniors prefer to work longer. With each generation being healthier and living longer, there is more capacity for seniors to work longer (Coile, Milligan, & Wise, 2017). While the physical challenges of work are a barrier to many, these barriers are shrinking as the health of seniors improves and as they identify ways to mitigate these barriers (McLaughlin & Neumark, 2017). This is especially the case for women, who live longer than men and often outlive their spouses (Maestas, 2018). While some cognitive and physical skills decline near retirement age (McLaughlin & Neumark, 2017), most do not. This stability in many skills and abilities contributes to productivity in many common “bridge” jobs (e.g., retail sales, administrative assistants; see Neumark, Burn, & Button, 2019) being largely unaffected by aging (Belbase, Sanzenbacher, & Gillis, 2015). Many seniors elect to work longer based on preferences, as this allows them to maintain their sense of identity (Riach & Loretto, 2009) and is associated with improved physical and mental well-being (Calvo, 2006).

“Push” factors in working longer include the economic situation and government policies that push seniors into the labor force rather involuntarily. Even with seniors choosing to work longer voluntarily, they are increasingly pushed into the labor force because their financial situation demands it. This is because most seniors cannot fully rely on the combination of Social Security benefits (Retirement Benefits, Survivor Benefits, and Supplemental Security Income), private pensions, and personal savings to get by after retiring. For this reason, poverty is highly concentrated among seniors, especially senior women who are single, separated, divorced, or widowed (Sandell & Iams, 1997). With recent reforms to the Social Security system, discussed below, the push to get seniors to work is only increasing. The economic benefits of working longer are larger for married women relative to married men since older women typically have a shorter work history and less Social Security wealth, making the opportunity cost of earlier retirement higher for older women (Maestas, 2018).

Age discrimination becomes even more relevant with these increased “push” and “pull” factors. The ability for seniors to get hired in bridge jobs, and thus to delay retirement, depends on the extent to which they face age discrimination. Severe age discrimination leads seniors to become discouraged after being unable to find work, or taking jobs that are a worse match, earning less or staying at these jobs for less time. An inability for seniors to get bridge jobs makes poverty even more likely.

9.4.1 “Carrots” and “Sticks” from Recent Social Security Retirement Benefit Reforms

Recent reforms to the US Social Security system have further pushed seniors into the labor market to make ends meet, which makes age discrimination even more relevant. Social Security is crucial for seniors, as it is their primary source of income (see Chap. 7). However, most do not receive many benefits relative to their previous earnings. As of 2007, the hypothetical “medium earner” retiring at 65 receives Social Security Retirement Benefits equal to about 41% of previous earnings (Munnell & Sass, 2007).

These already low Social Security benefits are even lower now, after the Social Security Amendments of 1983, which raised the age at which seniors who were born after 1938 can retire with full Social Security retirement benefits. The full benefits retirement age increased from 65 to between 65 and 70 for cohorts born from 1938 to 1960 based on a graduated scale, with the full benefits retirement age staying at age 70 for cohorts born in 1960 onwards. This amendment made it such that retiring at the previous full benefits age of 65 meant a cut in benefits. Table 9.1

Table 9.1 Social Security retirement benefit calculations by year of birth

Year of birth	Full benefits retirement age	Proportion of benefits received if retiring at...					
		Full retirement age (FRA)		Age 65		Age 62	
...and you are the...							
		Wage earner (%)	Spouse (%)	Wage earner (%)	Spouse (%)	Wage earner (%)	Spouse (%)
1937 and earlier	65	100	50	100.0	50.0	80.0	37.5
1938	65 + 2 months	100	50	98.9	49.3	79.2	37.1
1939	65 + 4 months	100	50	97.8	48.6	78.3	36.7
1940	65 + 6 months	100	50	96.7	47.9	77.5	36.3
1941	65 + 8 months	100	50	95.6	47.2	76.7	35.8
1942	65 + 10 months	100	50	94.4	46.5	75.8	35.4
1943–1954	66	100	50	93.3	45.8	75.0	35.0
1955	66 + 2 months	100	50	92.2	45.1	74.2	34.6
1956	66 + 4 months	100	50	91.1	44.4	73.3	34.2
1957	66 + 6 months	100	50	90.0	43.8	72.5	33.8
1958	66 + 8 months	100	50	88.9	43.1	71.7	33.3
1959	66 + 10 months	100	50	87.8	42.4	70.8	32.9
1960 and later	67	100	50	86.7	41.7	70.0	32.5

Source: Social Security’s Retirement Planner, at <https://www.ssa.gov/planners/retire/ageincrease.html>

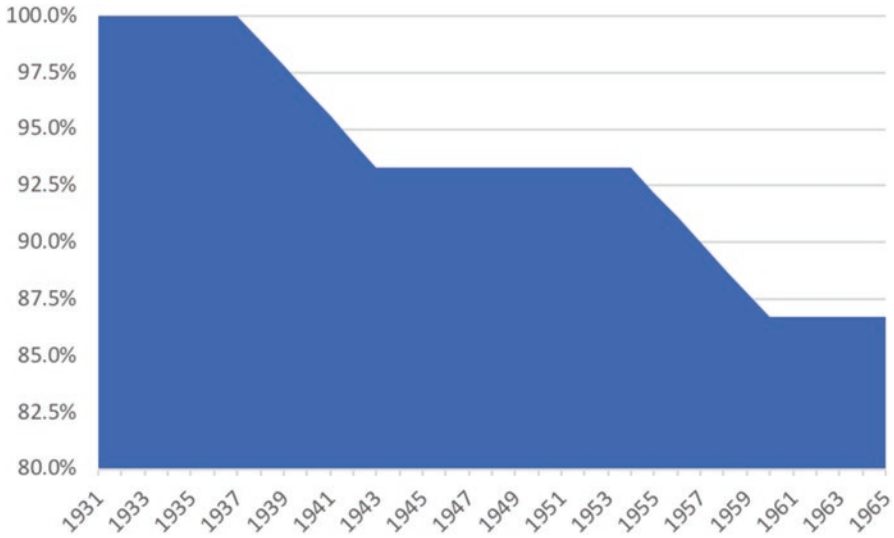


Fig. 9.4 Proportion of full benefits per year for retirement at age 65, by year of birth. Source: Social Security’s Retirement Planner, at <https://www.ssa.gov/planners/retire/ageincrease.html>

presents the changes in the full retirement year over time and how benefits decreased for three possible retirement ages: age 62 (the earliest age for claiming benefits), the former full retirement age of 65, and the full retirement age that was in effect for each birth year. Figure 9.4 presents the proportion of full benefits that were available per year for different birth cohorts retiring at age 65. The cut in benefits from this reform were fairly steep. For example, those born in 1960 and later and retiring at age 65 receive only 86.7% of what those born in 1937 or earlier and retiring at age 65 receive annually. This cut in benefits makes it even harder for Social Security benefits to make ends meet for seniors, leading seniors to recoup this income in the labor market if they can get bridge jobs without facing age discrimination.

This Social Security cut (a “stick”) was combined with another reform (a “carrot”) to increase the labor supply of seniors. The Senior Citizen’s Freedom to Work Act of 2000 changed Social Security’s retirement earnings test (RET) with the goal of reducing Social Security benefit reductions for those who claimed benefits, but also had earnings from work, from the ages of the full retirement age to age 69. The RET applied a cutoff where any earnings above this level were essentially taxed, leading to temporary reductions in Social Security benefits. These reduced benefits were withheld until later, so benefits were not lost but rather transferred to later in life. Prior to 2000, the RET applied to those who claimed Social Security benefits but also worked from the ages 62 to 69. The RET earnings cutoff in 1999 was \$15,500 for seniors of age 65–69 (Figinski & Neumark, 2018). The RET imposed a larger benefits reduction for those who worked and claimed Social Security benefits before the full retirement age. Prior to 2000, this benefits reduction was \$1 for every \$2 earned above the cutoff during the period from age 62 to the full retirement age

(then age 65) and was \$1 for each \$3 earned from the full retirement age to age 69 (Baum, Hannah, & Ford, 2002; Figinski & Neumark, 2016).

The Senior Citizen's Freedom to Work Act of 2000 removed the RET above the full retirement age, so \$1 for every \$3 in earnings benefits reduction was no longer in place for those collecting benefits and working from the full retirement age to age 69. Also, the act made the RET less stringent in the full retirement age year (Figinski & Neumark, 2016). Thus, this act led to an increase in earnings for those claiming but also working from the full retirement age to age 69. Since the RET was perceived as a tax (Liebman & Luttmer, 2015) despite not really being one, this perceived "income tax cut" from the Act led to increased earnings, and perhaps increased labor supply, for seniors. For example, Song and Manchester (2007) found that this Act led to increased earnings, with some evidence of increased labor supply. Loughran and Haider (2007) found even larger responses in earnings and labor supply to the RET.

9.4.2 Employer-Sponsored Pensions

Many seniors cannot rely on private sector employer-sponsored pensions, as less than half of the private sector work force aged 25–64 have an employer-sponsored plan of any type (Munnell & Sass, 2007), and only 27.6% of those who stopped working to retire claimed a pension (Maestas, 2010). Since pension participation rises with earnings, the lack of coverage of private pensions hits lower income seniors even harder. Even for those with a pension, the typical pension does not provide much. The Federal Reserve's 2004 Survey of Consumer Finances shows that a typical individual approaching retirement has 401(k)/IRA balances of only \$60,000 (Munnell & Sass, 2007; Munnell & Sundén, 2006). Thus, pensions only have a small role in making ends meet for seniors, leading seniors to stay in or re-enter the labor market.

9.4.3 Personal Savings

Personal savings are even less likely to help seniors make ends meet during retirement. It is well established that individuals do not adequately save for retirement. Approximately 30% of US households where the head of the household is close to retirement have done little or no retirement planning (Lusardi, 2003). Similarly, only a minority of US households feel "confident" about the adequacy of their retirement savings (Lusardi & Mitchell, 2005). More concretely, a study of the US National Income and Product Accounts (NIPA) personal saving rate found that almost all of the savings undertaken by the working-age population occurred in pension plans (Munnell, Golub-Sass, & Varani, 2005). In many years, the savings outside of pensions have actually been negative (Munnell & Sass, 2007). Clearly there

is little role for personal savings to help seniors make ends meet unless current personal savings behavior changes significantly.

9.4.4 Senior Women and Death of a Spouse

Another “push” factor that primarily affects women is the death of a spouse. Because women tend to live longer than men, more than half (53.0%) of women aged 65 or older are separated, divorced, widowed, or never married/single.⁵ These women cannot rely on supplementary income from a partner, who is or was often the primary earner. This is a major factor for why poverty among seniors is particularly concentrated among senior women and leads to increased pressure to work (Sandell & Iams, 1997) and partially explains the differential increase in labor force supply for senior women (Fig. 9.1b).

9.5 Is Age Discrimination a Barrier to Working Longer?

Since much of the increased labor force participation of seniors comes from “bridge” or “partial retirement” jobs, increasing hiring is fundamental to increasing the employment and financial security of seniors. However, research demonstrates that age discrimination remains a large barrier for seniors seeking to get hired in these jobs, more so for senior women than for senior men.

9.5.1 Non-experimental Evidence of Age Discrimination

There is ample evidence of age discrimination in hiring. One prominent piece of evidence is longer unemployment durations for older workers compared to younger workers (see Neumark & Button, 2014), which partly reflects the increased difficulty that older workers face in the labor market. There is also industrial psychology research that notes that older workers face negative stereotypes such as disinterest in building their skills (e.g., Fritzsche & Marcus, 2013), a lack of ambition (e.g., Bowen & Staudinger, 2013), physical and cognitive health challenges (e.g., Hummert, Garstka, Shaner, & Strahm, 1994; Ng & Feldman, 2012), inflexible or abnormal personalities (e.g., Fritzsche & Marcus, 2013), and less experience with technology (e.g., AARP, 1999).⁶

⁵ Calculated by the author using 2015 data from the Current Population Survey, via IPUMS CPS (Flood, King, Ruggles, & Warren, 2015).

⁶ There are also some positive stereotypes, such as older workers being more dependable (e.g., Chiu, Chan, Snape, & Redman, 2001), kind (e.g., Fritzsche & Marcus, 2013), and of course, more experienced (Bal et al., 2015).

Some studies also examine worker self-reports of discrimination, which are correlated with adverse labor market outcomes (Adams, 2002; Johnson & Neumark, 1997).

9.5.2 Experimental Evidence of Age Discrimination

The most credible studies that quantify age discrimination in hiring are audit field experiments, more specifically, resume-correspondence studies (Bertrand & Duflo, 2017; Fix & Struyk, 1993; Neumark, 2018). These studies create fictitious-but-realistic job applicants (resumes and cover letters) that are on-average equal except for age, which is signaled through school graduation year(s). These fictitious job applicants then apply for real job openings. Employers then request interviews with the candidates by sending an email or leaving a voicemail. Researchers measure hiring discrimination by comparing interview request rates (“callbacks”) by age.

While it would be ideal to track job offers in resume-correspondence studies, as that is an exact measure of hiring discrimination, this requires hiring actors and actresses. Not only is this costly but it opens up the study to “experimenter effects” (Heckman & Siegelman, 1993). While comparing interview request rates is only a proxy for hiring, most discrimination occurs at the interview offer stage (90%), according to studies of ethnic discrimination by the International Labor Organization (ILO), discussed in Riach and Rich (2006) and Neumark et al. (2019).

This experimental approach controls for all factors but age, which better isolates age discrimination. An alternative to quantify hiring discrimination is to use survey data to study hiring rate differences between older and younger workers. The difficulty with this approach is that it is not possible to make older and younger workers identical, even if regression control is used to set factors such as education, occupation, and geography constants. This problem is avoided by using an experimental method.

Previous resume-correspondence studies almost always point to substantial age discrimination in hiring (Baert, Norga, Thuy, & Van Hecke, 2016; Bendick, Brown, & Wall, 1999; Bendick, Jackson, & Romero, 1997; Carlsson & Eriksson, *forthcoming*; Lahey, 2008b; Riach & Rich, 2006, 2010). However, a difficulty in these studies comes from making older job applicants on average identical to the younger job applicants. Older workers generally have much more experience, so if the resumes of older and younger workers are made to be the same, then this could overestimate age discrimination. Also, previous studies did not focus on those near traditional retirement ages, which is the group for which age discrimination matters most in terms of population aging and strain on the Social Security system.

9.5.3 *The Neumark et al. (2019) Resume-Correspondence Study*

Partly to better confront these issues and to provide more detailed and accurate evidence of age discrimination, Neumark et al. (2019) conducted the largest and most comprehensive resume-correspondence study of age discrimination in hiring. They created realistic but fictitious resumes for young (aged 29–31), middle-aged (aged 49–51), and senior (aged 64–66) job applicants. Workers aged 64–65 age group are new to the literature and are motivated by the common occurrence of “bridge” jobs for this age group.

In this experiment, they sent over 40,000 applications (resumes) to over 13,000 job positions in 12 cities spread across 11 states, by far the largest resume-correspondence study of hiring discrimination to date. They sent applications for positions that seniors often take as “bridge” jobs, according to Current Population Survey data: administrative assistant and retail sales for women, and retail sales, security, and janitor for men. These positions are also common for younger workers. While their resumes were generally on average identical to isolate the effect of age, they sent different types of resumes for older workers: some with the same experience on average as the younger applicants and many where the older worker had a longer work experience commensurate with their age. As in other studies, they tracked callbacks—interview requests or other similar positive responses from employers—and compared the callback rates by age.

Figure 9.5 presents the main results from Neumark et al. (2019). Across all occupations and genders, senior applicants (aged 64–66) got fewer callbacks than

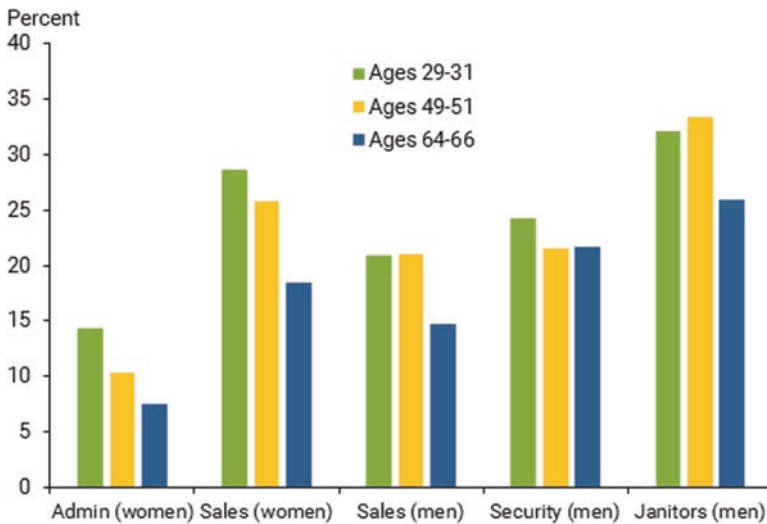


Fig. 9.5 Comparisons of job applicant callback rates by age. Source: Neumark, Burn, & Button, (2017), using data from Neumark et al. (2019)

younger applicants. These differences are statistically significant in all cases except for security jobs (men). The evidence is more mixed for middle-aged applicants (age 49–51), as female middle-aged applicants have a statistically significant lower callback rate, but there is no evidence of discrimination against middle-aged men.

Even in the cases where both senior women and men face age discrimination, the magnitude of the discrimination against senior women is much larger. For administrative assistant positions, the callback rate is nearly half for senior women (7.58%) compared to younger women (14.41%). For retail sales, senior women get callbacks 18.43% of the time while younger women get callbacks 28.68% of the time. These differences are less pronounced for senior men. In retail sales, where they apply with both male and female applicants, the age penalty is larger for senior women (35.7% fewer callbacks) than it is for senior men (29.6%). Thus, while they find age discrimination against older men, it is concentrated in those near traditional retirement ages and does not occur in every occupation. This evidence is also not robust to other checks of the data (Neumark et al., 2016). For older women, the discrimination is more severe and starts much earlier than it does for older men.

9.6 Can Stronger Age Discrimination Laws Help Reduce Age Discrimination?

Age discrimination laws are a key approach used to reduce age discrimination in employment. There is, of course, the federal *Age Discrimination in Employment Act* (ADEA), but there are also state laws in all states (plus the District of Columbia) except Arkansas, Mississippi, and South Dakota. Some states even have features of their laws that make them broader or stronger than the federal law (Neumark, Burn, Button, & Chehras, [forthcoming](#); Neumark & Song, 2013; Neumark, Song, & Button, 2017), which provide additional protections against age discrimination.

9.6.1 Evidence from Theory

At first blush, one would expect that laws forbidding discrimination would reduce discrimination and thus improve labor market outcomes for protected individuals. However, economic theory suggests that this may not necessarily be the case. Discrimination laws should reduce terminations because terminating an employee, whether there is discriminatory intent or not, opens firms up to possible legal action. Because it is harder under discrimination laws to terminate older workers, it creates a disincentive to hire them in the first place (Bloch, 1994). This could lead to the unintended consequence of decreased hiring.

Of course, discrimination laws forbid discrimination in hiring, so they could still decrease hiring discrimination if employers follow this aspect of the law. Enforcement to curtail hiring discrimination is more difficult than other types of

anti-discrimination enforcement, however, because it is harder to prove or identify a class of affected workers. For example, with most of the discriminations occurring at the interview offer phase (Riach & Rich, 2002), it is almost impossible to prove that age discrimination is the reason for a lack of interview. Economic damages are generally much smaller in hiring discrimination cases relative to terminations, which leads to hiring cases being less attractive to plaintiffs and attorneys. This means that laws forbidding discrimination in hiring have little bite, which could mean that the negative hiring incentive dominates. But in net, it is difficult to know the effect of discrimination laws on hiring, and thus on employment.

9.6.2 Evidence from the Empirical Literature

Economists have long studied the effects of discrimination laws on the employment outcomes of protected workers. The most common approach that these studies employ is a statistical analysis strategy called a “difference-in-differences,” which tries to isolate the effect of the law on labor market outcomes. Most of these difference-in-differences studies compare older workers before and after a change in discrimination law (e.g., introduction of the ADEA or changes in state laws) compared to the same before and after change for some unaffected control group, such as younger workers or older workers in states without legal changes, or both. Most studies of age discrimination laws have found positive effects of the laws, while some have found no effects or negative effects.

Most of these “difference-in-differences” studies use the passage of state age discrimination laws before the passage of the ADEA to explore if the introduction of these laws affected employment for older workers. Neumark and Stock (1999) found that state-level age discrimination laws passed before the ADEA in addition to the passage of the ADEA in 1968 led to increased employment for protected older workers. Adams (2004) found a similar result using the state laws passed before the ADEA.

Other studies focus not just on the introduction of laws but rather on how features of the laws differ. Lahey (2008a) finds that some features of age discrimination laws are associated with decreased hiring of older workers. Lahey (2008a) explores how the employment effects stemming from the introduction of the ADEA were mediated by the existing state-level age discrimination laws. Lahey (2008a) argues that the ADEA is stronger in states with an existing law, noting that the statute of limitations under the ADEA is 300 days if the state has a fair employment protection agency, whereas it is 180 days otherwise. Lahey (2008a) also argues that fair employment protection agencies in these states may be able to process claims more quickly than the EEOC. Lahey (2008a) finds that these increased legal protections lead to a decrease in employment and hiring and an increase in retirement. However, Neumark (2009) disputes these results for several reasons and argues rather that the results show that the introduction of the

federal ADEA boosted employment of older workers in states without existing age discrimination laws.

Neumark and Song (2013) explore the effect of state age discrimination laws that had features that made them stronger or broader than the ADEA. They study older men “caught” by the increase in Social Security’s full retirement age, which meant that the men had to work longer before they could retire with full Social Security benefits. They compared “caught” older men to older men who were not caught, in states with and without these stronger or broader law features. They classified states as having stronger or broader laws if (1) the state law allows for compensatory or punitive damages (“larger damages”), which provides for larger damages than the ADEA,⁷ (2) the federal ADEA applies to employers with at least 20 employees, but some state laws apply to employers with fewer employees (“lower firm size”), and (3) if the state law has a longer statute of limitations than the ADEA.⁸ They found that larger damages and lower firm size both increased hiring of older workers, with the statute of limitations having little effect.

Neumark et al. (forthcoming) use a unique approach to examine how these state law features (“larger damages” and “lower firm size”) affect hiring of older workers. They follow the resume-correspondence approach of Neumark et al. (2019), creating on-average identical resumes for older (age 65) and younger (age 30) workers of both genders in retail sales. They then send these resumes (older men, older women, younger men, and younger women) to job openings in all 50 states and compare callback rates between older and younger workers in states with stronger or broader laws compared to in states with weaker or narrower laws. This approach provides direct evidence of discrimination in hiring and helps control for other factors, such as older and younger workers being different. They find evidence that some features of stronger age discrimination laws (namely “larger damages,” meaning plaintiffs can sue for more damages) reduce age discrimination. Otherwise they find no effects of the laws and no evidence that stronger or broader laws reduce hiring. It is important to note that while their study only sometimes finds that stronger state laws reduce age discrimination in hiring, their study may not capture other possible positive effects of these laws such as increased labor market participation of older workers.

⁷To be more specific, compensatory and punitive damages are not allowed under the ADEA, but “liquidated damages” are those which are available up to the amount of back pay for a willful violation of the ADEA. A violation is willful when an employer either knew it engaged in illegal conduct under the ADEA or the employer showed “reckless disregard” for whether it was prohibited. See https://www.americanbar.org/content/dam/aba/administrative/labor_law/meetings/2011/annualmeeting/004.authcheckdam.pdf. Neumark and Song (2013) classify states as having larger damages than the ADEA if they allow compensatory or punitive damages, regardless of if they require proof of intent or willful violation.

⁸The filing period for the ADEA for states without a law is 180 days, but is 300 days for states with a state law and enforcement agency.

9.7 Challenges to Age Discrimination Laws

While the research suggests—but is not definitive—that age discrimination protections may help improve labor market outcomes for seniors, the ability for age discrimination protections to be effective at this is challenged by recessions, where the laws may become less effective, by recent court decisions, and by legal quirks that lead the ADEA to inadequately cover older women and older people of color.

9.7.1 *Age Discrimination Laws and the Great Recession*

One consideration for discrimination laws is how they operate over the business cycle. Research indicates that discrimination tends to increase during a recession (Baert, Cockx, Gheyle, & Vandamme, 2013; Johnston & Lordan, 2015; Kroft, Notowidigdo, & Lange, 2013). Therefore, it is important to know if age discrimination laws are still effective during recessions, when they are likely needed the most, compared to during economic expansions. This is a timely question, given the recent Great Recession from December 2007 to June 2009,⁹ which was especially devastating for older workers, who faced decreased income (Davis & von Wachter, 2011), wealth, and significantly more job loss (Munnell & Rutledge, 2013), and thus increased Social Security benefit claiming (Mueller, Rothstein, & von Wachter, 2016; Munnell & Rutledge, 2013; Rutledge, 2012; Rutledge & Coe, 2012). There was significant anecdotal evidence, especially in the media, of age discrimination both during the Great Recession and during the long recovery,¹⁰ and ADEA claims filed with the EEOC increased significantly during this period, rising from about 16,000 in 2006 to about 23,000 in each year from 2008 to 2012 (Neumark & Button, 2014).

This impact is mirrored in the dramatic increase in unemployment durations for older workers during and after the Great Recession. Figure 9.6 shows the mean unemployment duration (in weeks) since 1994 by age and gender. Older workers consistently have higher unemployment durations, which reflects both age discrimination and the fact that older workers are pickier about jobs. The gap in average unemployment durations by age increased significantly after the Great Recession. The gap was the smallest in the year before the Great Recession (2007), about 6.2 weeks longer for older men and 1.4 weeks longer for older women, peaking in 2012 at 11.7 weeks and 10.7 weeks longer for older men and older women, respectively.¹¹

⁹These are the dates of the Great Recession as determined by the National Bureau of Economic Research (NBER) Business Cycle Dating Committee. See <http://www.nber.org/cycles.html>.

¹⁰See, e.g., <http://www.pbs.org/newshour/bb/women-over-50-help-not-wanted/>, <http://www.npr.org/2017/03/24/521266749/too-much-experience-to-be-hired-some-older-americans-face-age-bias>, and <http://www.cbsnews.com/news/age-discrimination-is-alive-and-well/>.

¹¹The author's calculations for this, using Current Population Survey data, are available upon request. Note that the effect of recessions on unemployment durations typically takes a few years to materialize, hence the 2012 peak.

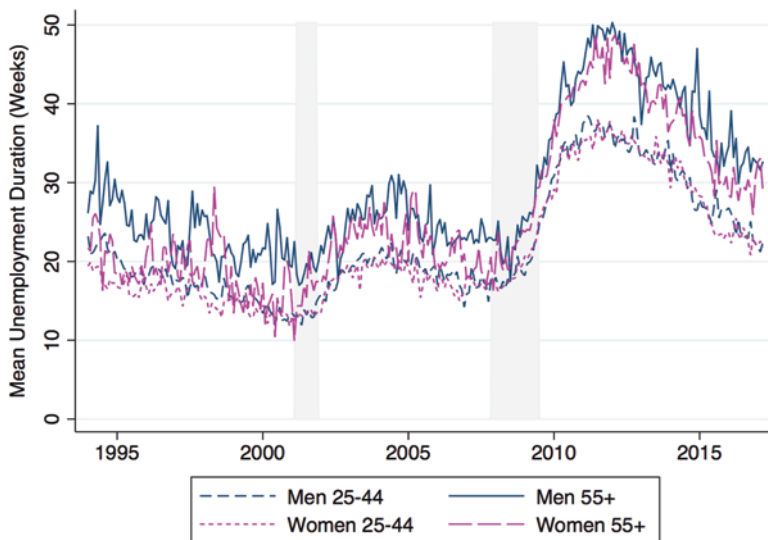


Fig. 9.6 Effects of the Great Recession on mean unemployment duration, in weeks. Source: Author's calculations using data from the Current Population Survey (monthly) from 1994 to March 2017, via IPUMS-CPS (Flood et al., 2015). Each series is seasonally adjusted by the author using X-13ARIMA-SEATS. Shaded areas are recessions according to the NBER Business Cycle Dating Committee

Motivated by the severity of the Great Recession, Neumark and Button (2014) explored whether age discrimination laws helped protect older workers during this difficult time. They focused on whether state age discrimination laws that were stronger or broader than the federal ADEA helped older workers. The focus was on “larger damages” and “lower firm size” as defined in Neumark and Song (2013). The findings provide mixed evidence suggesting that the effect of age discrimination laws may vary over the business cycle, with them possibly being more helpful in non-recessionary periods but of mixed and often negative impact during and after the recent Great Recession.

9.7.2 Recent Court Cases Weakening the ADEA

Recent legal changes have significantly weakened the coverage and strength of the ADEA. In 2009, the Supreme Court Case *Gross v. FBL Financial Services Inc.*¹² significantly weakened the ADEA (Lazarus, 2012). The case removed one way that

¹²557 U.S. 167 (2009), decided June 18, 2009.

plaintiffs could previously prove their age discrimination case. Since *Gross*, plaintiffs in age discrimination cases must prove, by preponderance of evidence, that age was the “but for” cause for the adverse employment action.¹³ That is, discrimination must have been the determining reason for the adverse employment action, not just one reason among others (the “mixed-motive” framework,¹⁴ now no longer allowed; Van Ostrand, 2009). This change increased the burden on the plaintiff to make a *prima facie* case of discrimination, meaning that they could not establish that age discrimination might have occurred, which meant that cases could not proceed. Many argue that *Gross* radically weakened the ADEA (e.g., Harper, 2010; Lazarus, 2012; Noonan, 2010; Van Ostrand, 2009; Foreman, 2009), and under *Gross*, the ADEA is significantly weaker than other similar discrimination laws, such as Title VII of the Civil Rights Act (McCann, 2018).

Another concerning case was from the US Court of Appeals for the 7th circuit (*Kleber v. CareFusion Corp.*, No. 17–1206 (7th Cir. 2019)), decided January 23, 2019. In *Kleber*, the plaintiff sued for age discrimination in hiring after being passed up in favor of a less experienced younger worker for a senior in-house position at CareFusion Corporation’s law department. It appears that the employer was intentionally trying to screen out older or more experienced applicants by including the request “3 to 7 years (no more than 7 years) of relevant legal experience” in the job advertisement. The court ruled that Section 4(a)(2) of the ADEA did not authorize job applicants to bring a disparate impact claim against a prospective employer. This was based on the belief that the “plain language” of the ADEA showed that Congress intended that law to cover current employees, not job applicants.

This decision could have big implications. If disparate impact claims are not allowed for job candidates, then employers are legally able to discriminate in hiring by filtering older workers out of the applicant pool. Employers could do this (and have done this) by posting job advertisements with ageist language to discourage older applicants (Burn et al., 2019),¹⁵ putting experience or time-since-graduation restrictions on job applicants,¹⁶ posting job ads only in ways where the job ad is

¹³“But for” the discrimination, the adverse employment action would not have happened. See <http://www.constangy.com/communications-247.html> (accessed June 5, 2017) for useful discussion.

¹⁴Under “mixed-motive,” the jury is instructed to rule for the plaintiff if they determine that the protected class was a motivating factor, even if other (legal) factors were also present. See *Price Waterhouse v. Hopkins*, 490 U.S. 228 (1989).

¹⁵Employers could use language that is suggestive that they want younger workers. This could be leveraging age-related stereotypes, requesting a candidate who is more flexible, able to learn, energetic, or better with technology, which are stereotypes associated with younger workers (relative to older workers) in the industrial psychology literature (e.g., Burn, Button, Munguia Corella, & Neumark, 2019; Posthuma & Campion, 2007). While these requests could be well-intentioned, as they are related to productivity on the job, employers could also use this strategy to intentionally filter out older workers. More aggressive examples are phrases such as “digital native,” which suggests that the ideal candidate “grew up” with technology. See, e.g., <http://fortune.com/2015/05/04/digital-native-employers-bias/> (accessed March 29, 2019).

¹⁶In addition to this happening in *Kleber*, it seems common, especially in the tech industry. Other way this is phrased in job advertisements includes “Class of 2007 or 2008 preferred” (from a

more likely to be seen by younger people,¹⁷ or using job candidate evaluation methods that favor younger applicants. Since this was a decision of a circuit court, it may be more contained to Illinois, Indiana, and Wisconsin. However, this decision could be appealed to the Supreme Court, although the current make-up of the court may not be favorable to keeping discrimination laws intact.

9.7.3 Intersectional “Sex-Plus-Age” Discrimination

Given that age discrimination is stronger against women than men (Neumark et al., 2019), intersectional discrimination—that is discrimination at the intersection of age and gender—may be relevant. If age discrimination against older women is primarily intersectional, that is, they are not discriminated against for just being female or just being old but by being old *and* female, then the ADEA provides limited protection for this “sex-plus-age” discrimination (Day, 2014).

For older women to be protected from this intersectional discrimination, they must use both the ADEA and Title VII of the Civil Rights Act, recognizing older women as a subgroup of two protected classes. However, in practice, courts generally do not allow this joint use of legal precedence (Crocette, 1998; Day, 2014; McLaughlin, 2018; Porter, 2003)¹⁸ although some have allowed it.¹⁹

Facebook job advertisement) or numerous tech companies specifically requesting a “new grad.” See, e.g., <http://fortune.com/2015/05/04/digital-native-employers-bias/> (accessed March 29, 2019).

¹⁷This could include searching for candidates only through job fairs hosted by educational institutions or posting the job ad only in venues that younger people use, such as social media websites, or using the tools of social media websites to only advertise job postings to younger candidates, either directly or indirectly. Many social media websites and tech companies allowed targeting based on age. See <https://www.reuters.com/article/us-facebook-lawsuit-discrimination/facebook-ads-that-let-employers-target-younger-workers-focus-of-u-s-lawsuit-idUSKBN1EF09B> (accessed March 29, 2019). This appears to be changing, as Facebook no longer allows age, gender, or ZIP Code targeting for housing, employment, and credit-related advertisements. See <https://www.wsj.com/articles/facebook-axes-age-gender-and-other-targeting-for-some-sensitive-ads-11553018450> (accessed March 20, 2019).

¹⁸Case law showing that this is not allowed includes *Thompson v. Mississippi State Personnel Board*, 674 F. Supp. 198 (N.D. Miss 1987), *Murdock v. B.F. Goodrich*, 1992 Ohio App. LEXIS 6611, and *Sherman v. American Cyanamid Company*, 1999 U.S. App. LEXIS 21086. See McLaughlin (2018) for a discussion of these cases. Ventrell-Monsees (2014) also lists *Johnson v. Napolitano*, 2013 WL 1285164 *8 (S.D.N.Y., 2013) which cited *Cartee v. Wilbur Smith Associates, Inc.*, No. 3:08–4132-JFAPJG, 2010 WL 1052082, at *4 (D.S.C. Mar 22, 2010); *Block-Victor v. CITG Promotions, L.L.C.*, 665 F. Supp. 2d 797, 808 (E.D. Mich. Oct 13, 2009); *Smith v. Board of County Com’rs of Johnson County, Kan.*, 96 F. Supp. 2d 1177, 1187 (D. Kan.,2000) (collecting cases); *Luce v. Dalton*, 166 F.R.D. 457, 461 (S.D. Cal. 1996); see also *Kelly v. Drexel University*, 907 F. Supp. 864, 875 n. 8 (E.D. Pa. 1995).”

¹⁹Some courts have recognized intersectional discrimination, such as *Arnett v. Aspin*, 846 F. Supp. 1234, 1241 (E.D. Pa. 1994), *Grozynski v. JetBlue Airways Corp.*, 596 F.3d 93, 109 (2d Cir. 2010), *Barnett v. PA Consulting Group*, 715 F.3d 354 (D.C. Cir. 2013), *DeAngelo v. Dental EZ, Inc.*,

Meanwhile, intersectional claims that fall under the same statute (e.g., race and gender, both under Title VII) are generally accepted by courts (Day, 2014).²⁰ This odd quirk seems to stem from the mere fact that the ADEA is a separate statute.

Moreover, sex-plus-age claims are more difficult to make since the *Gross v. FBL Financial Services, Inc.* Supreme Court decision. Day (2014) argues that the *Gross* decision will likely create a “chilling effect” as to the initiation of sex-plus-age claims, and older women would be dissuaded from bringing the claim under the ADEA because they cannot use the mixed-motive framework.

Given all this, an open question is the extent to which age discrimination laws protect older women from discrimination. All the studies of age discrimination laws discussed above estimated the effect on men only, except Neumark and Button (2014) and Neumark et al. (forthcoming) who analyzed men and women separately. Based on these two studies, there are mixed effects of the laws. Larger damages under state law are associated with shorter unemployment durations for older workers before the Great Recession, but decreased hiring during and after (Neumark & Button, 2014). A lower firm-size minimum under state law is associated somewhat with lower employment of older women after the Great Recession (Neumark & Button, 2014) but with no difference in hiring in their recent resume-correspondence experiment (Neumark et al., forthcoming).

Luckily, a study by McLaughlin (2018) fills this gap by estimating the effect of state age discrimination laws passed before the ADEA and the passage of the ADEA on employment outcomes for older women (similar to Adams, 2004, and Neumark & Stock, 1999). McLaughlin (2018) finds that while both state-level age discrimination laws and the ADEA helped older men, they either had a smaller positive effect for older women or no effect at all. This suggests that the ADEA and similar laws are less effective at protecting older women, likely because of the intersectionality issue.

Moreover, sex-plus-age claims are more difficult to make since the *Gross v. FBL Financial Services, Inc.* Supreme Court decision. Day (2014) argues that the *Gross* decision will likely create a “chilling effect” as to the initiation of sex-plus-age claims, and older women would be dissuaded from bringing the claim under the ADEA because they cannot use the mixed-motive framework.

738 F. Supp. 2d 572–578–79 (E.D. Pa. 2010), *Good v. U.S. West Communications*, 1995 WL 67672 (D. Or. 1995), *Sogg v. American Airlines*, 603 N.Y.S.2d 21 (NY App. 1993), and *Foley v. Eckhart Richard-Allan Med. Inbus.*, 1995 U.S. Dist. LEXIS 20663 (C.D. Cal., Nov. 14, 1995), all discussed by Ventrell-Monsees (2014).

²⁰For the first notable case (Black women), see *Jefferies v. Harris Cnty. Cmty. Action Ass’n*, 615 F.2d 1025, 1034 (5th Cir. 1980). For Asian women, see *Lam v. Univ. of Haw.*, 40 F.3d 1551, 1562 (9th Cir. 1994).

9.7.4 *Other Intersectional Age Discrimination*

It is also likely that current discrimination laws do not adequately cover other types of intersectional age discrimination. Little is known about age discrimination that intersects with other factors, namely race and ethnicity.²¹ This is largely either because previous work does not study intersectionality, studying older individuals as a whole without doing an analysis by sub-groups, or because researchers look specifically at Whites in order to isolate (non-intersectional) age discrimination (e.g., Lahey, 2008a). To my knowledge, all the resume-correspondence studies of age discrimination also used names that were likely to be assumed to be White (or at least did not signal race or ethnicity) meaning these studies cannot speak to if age discrimination differs by race or ethnicity.

Lahey and Oxley (2018) is one of the first studies to study this intersectionality. Lahey and Oxley (2018) conducted a lab experiment to quantify discrimination at the intersection of age, gender, and race. They had students in business and related fields rate resumes and select candidates for interviews, all while being monitored with a non-intrusive eye-tracker. The eye-tracker allowed the researchers to see the mechanisms behind discrimination and learn more how individuals treat resumes. Lahey and Oxley (2018) find weak evidence of discrimination in favor of middle-aged Black workers, relative to middle-aged White workers. However, they find intersectional discrimination *against* Black seniors, relative to White seniors, mirroring the evidence of intersectional discrimination against older women. This additional age discrimination against Black workers is a further barrier to extending work lives, further exacerbating racial economic disparities in old age (Emmons & Noeth, 2014).

This intersectional discrimination could similarly fall between the cracks of the ADEA and Title VII of the Civil Rights Act, an issue discussed in-depth in Delaney and Lahey (forthcoming). Delaney and Lahey (forthcoming) also note that the implications of *Gross* apply here, making intersectional age-by-race claims even more difficult to make. This issue is even more dire for Black older women who may experience intersectional discrimination on the basis of the combination of age, race, and gender.

9.8 Conclusion

The United States is experiencing an aging population that is increasingly trying to work longer into what would be normally considered typical retirement ages, leading to more than doubling of the proportion of the labor force that are seniors in the

²¹ There is, however, a growing literature on how disability discrimination laws protect older workers (Button & Khan, 2019; Neumark, Song, & Button, 2017; Neumark et al., forthcoming; Stock & Beegle, 2004).

last 20 years (2.9 to 6.1%). Working longer is important to many seniors and is fundamental as they seek to support themselves financially, especially given recent Social Security reforms. Given this, a key policy question is to what extent seniors face age discrimination and whether age discrimination laws help remedy this.

The research summarized in this chapter suggests that age discrimination against seniors, especially, is still common, even under the federal Age Discrimination in Employment Act and similar state laws. Age discrimination was much higher during and after the Great Recession, as evidenced by increased EEOC claims, huge increases in unemployment durations for older workers, and a flurry of media discussions of age discrimination (Neumark & Button, 2014). Research on the impacts of age discrimination laws on employment of older workers generally suggests that these laws are helpful (Adams, 2004; Neumark & Song, 2013; Neumark & Stock, 1999), although they could be harmful (Lahey, 2008a) and are likely less effective during economic downturns such as the Great Recession (Neumark & Button, 2014). Regardless, the ADEA's coverage was restricted in 2009 in the *Gross v. FBL Financial Services* Supreme Court decision and may be further restricted after the *Kleber v. CareFusion Corp.* case in 2019.

There is a major gender element to age discrimination and age discrimination protections. Age discrimination hits older women at younger ages (at least age 50), and for seniors, age discrimination against women is much more severe (Neumark et al., 2019). Thus, “sex-plus-age” intersectional discrimination is a verified problem. Meanwhile, “sex-plus-age” discrimination cases are generally not being allowed under the ADEA and Title VII of the Civil Rights Act (Crocette, 1998; Day, 2014; McLaughlin, 2018; Porter, 2003), while other intersectional cases are allowed (e.g., race and gender) simply because they both fall under the same statute. The lack of discriminatory protections for older women may be behind the more severe age discrimination that they face and may also explain the fact that the laws seem less likely to help them (McLaughlin, 2018).

At the 50th anniversary of the ADEA, it is clear that age discrimination persists in spite of the law and that the challenges of population remain. Thus, policy responses are necessary to address this issue, which are becoming increasingly relevant. Policy responses should consider how policies and laws affect senior women specifically, as the gendered nature of age discrimination and age discrimination law cannot be ignored.

Future research can help us determine which policies or laws can better allow seniors to keep working by reducing discriminatory barriers to seniors taking bridge jobs. For example, which features of age discrimination laws best reduce hiring discrimination? Are age discrimination laws becoming more or less effective in an age of online and social media-based job posting and recruitment, computerized evaluation of job candidates, and technological growth? Another impactful avenue for future research is if age discrimination occurs even before the hiring stage. This could be in where the job ad is posted (e.g., on social media rather than common job search websites), how the job is described (e.g., using language that may suggest an age preference) (Burn et al., 2019), or in the application process itself (e.g., the online job application system requires that applicants enter high school and college

graduation years.) Despite it being the 50th anniversary of the ADEA, there is still much more to know about age discrimination and the effectiveness of age discrimination laws. Future research on age discrimination is crucial in our endeavor to support seniors and the Social Security system as our population ages.

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Part III
Work Performance Issues

Chapter 10

A Human Factors Engineering Perspective to Aging and Work



Joseph Sharit

10.1 Introduction to Human Factors and Ergonomics

Human factors and ergonomics represent two closely linked disciplines but with relatively distinctive roots (Helander, 1997; Karwowski, 2012). Ergonomics began in Europe in the 1950s using knowledge from work physiology, biomechanics, and anthropometry as a basis for the design of workstations and industrial processes involving people while emphasizing the well-being of workers and industrial productivity. *Work physiology* concerns how various physiological systems work together to meet the energy-expenditure requirements of work, and how these requirements can be measured quantitatively and considered in the analysis of physical work. *Anthropometry* involves the collection of measurements related to human body dimensions for achieving good fits of people as they interact with devices, systems, workstations, and environments. *Biomechanics* concerns the mechanical behavior of the musculoskeletal system and component tissues when physical work is performed, and applies laws of physics and engineering principles to assess muscle forces and stresses placed on joints, tendons, ligaments, and other tissues.

Human factors, which was developed in the United States, arose primarily from human-system issues in military applications; its origins were in systems engineering and experimental psychology with the goal of enhancing overall human-system performance. Over the years, the area of human factors has increased its recognition of more traditional areas of ergonomics as part of its human-system perspective of analysis and design. Its primary emphasis, however, still lies outside of that domain and includes areas of study as diverse as aging, automation, aviation, cognition, communication, health care, human-computer interaction, sensory and perceptual processes, simulation and virtual reality, systems design and analysis, teams, and training and instructional systems.

J. Sharit (✉)

Department of Industrial Engineering, University of Miami, Miami, FL, USA

e-mail: jsharit@miami.edu

With the development of more complex and technical work-related processes, ergonomics for its part has also evolved to comprise a broader set of issues situated within various sub-disciplines. Human anthropometric, physiological, and biomechanical characteristics as they relate to physical activity (e.g., materials handling, workplace design, and work-related musculoskeletal disorders) now are considered to comprise physical ergonomics. Other sub-disciplines, however, such as cognitive ergonomics (which addresses mental processes such as perception, memory, information processing, and reasoning) and organizational ergonomics (also known as *macroergonomics*, which is concerned with the optimization of sociotechnical systems) have also become well established.

In this chapter, four topics related to aging and work with implications for the employability or retention of older workers are examined from the perspectives of human factors and ergonomics. These topics include: macroergonomics and socio-technical systems; physical work demands; changes in work configuration and job selection; and technology, the future of work, and cognitive task demands. Considerations related to human factors and ergonomics that are focused on designing jobs for older workers can be found in Sharit and Czaja (2012).

10.2 Macroergonomics and Older Workers

Macroergonomics is an area of specialization within human factors and ergonomics that focuses on the design of the overall work system (Hendrick, 2017; Hendrick & Kleiner, 2002). Conceptually, it represents a top-down sociotechnical systems (STS) approach to the design of work systems that recognizes the interaction between people and technology in workplaces. Implicit to this STS design approach is the belief that the social system ingrained within organizations is potentially as influential in the success or failure of the organization as are its technical and economic systems. The creation of human-centered and high-performance alternatives to the classical Tayloristic bureaucratic styles of work structures and administration (which are still found to various degrees in many organizations) through innovative STS design approaches has been prolific and continues to evolve as organizations face parallel demands of ensuring productivity, quality, flexibility, innovation, sustainability, and worker health and well-being. STS design was originally expressed in routine manufacturing work, for example, in traditional production line methods in automobile manufacturing. In its next wave, STS design theory began to become applied to the more non-routine knowledge work that entailed processing or transforming information in service work environments. Eventually, it recognized many new types of organizational work systems that involved designing networks within and across organizations, including virtual teams.

Macroergonomic design approaches that have embodied STS design perspectives have also been instrumental in establishing productive, high quality, and safe workplaces (Robertson et al., 2015), including those in complex healthcare systems (Ackerman, Goggins, Herrmann, Prilla, & Stary, 2017; Carayon, 2017). These

approaches also extend to the roles of communications and decision-making within the larger STS context as they apply to entities such as regulatory, political, and cultural forces (Flach, Carroll, Dainoff, & Hamilton, 2015).

10.2.1 Sociotechnical System Design Principles

An important outcome of research and practice in STS design has been the formulation and continued development of STS design principles (e.g., Cherns, 1976; Clegg, 2000; Edwards & Wilson, 2004). While they are intended to serve as guides for evaluating work design alternatives, they are not meant to be prescriptions for the application of rules for design solutions. Ten of these STS design principles, each with implications for the employability of older workers, are summarized below.

1. *Responsible Autonomy.* STS theory shifts the emphasis toward considering teams or groups as the primary unit of analysis (and not the individual) who should be able to exercise the degree of power and authority that they need to accept responsibility for their own performance. Internal supervision and leadership at the level of the group as well as the immediacy and proximity (actual or virtual) of trusted team members are critical for establishing and maintaining the kinds of verbal exchanges needed to produce continuous, redundant, and recursive interactions that enable the construction and maintenance of individual and mutual situation awareness, especially in hazardous systems. Effective group work also promotes the pooling of knowledge and skills for achieving more creative solutions and better outcomes.
2. *Minimum Critical (Flexible) Specification.* The work-related outcome should be specified, but the means to achieve it should be minimally specified, which ensures some flexibility in design and implementation. At the onset, only the essential content of a change should be specified. The key factor in minimally critically specifying tasks is the responsible autonomy of the group to decide, based on local conditions, how best to undertake the task in a flexible, adaptive manner. This principle is consistent with ideas like effects-based operations (EBO), which asks what goal it is that we want to achieve and what objective it is that we need to reach rather than what tasks need to be undertaken, when, and how.
3. *Multifunctionalism.* EBO, combined with adaptability and responsible autonomy, forms the basis for the kind of dynamic closure that requires the deployment of a multiplicity of skills—that is, the need for competence in a wide range of tasks, as well as the capability to plan and solve problems in a wide variety of circumstances. Responsible autonomy enables one to select when and how to utilize these skills. This approach to work also loosens the myriad of control mechanisms found in more traditionally designed organizations.
4. *Multiple Task Allocations.* The human's roles should involve a coherent and meaningful cycle of activities. This implies a “wholeness” associated with the

various task activities, where the knowledge and skills associated with performing specific tasks facilitate the performance of other task-related activities allocated to the worker.

5. *Information Flow.* The information needed to take actions and meet goals should be provided to those who require it, when they require it, and in the most appropriate form. This implies the elimination of “gaps” in critical information, which is a harbinger of uncertainty—a system feature that often compromises decision-making—and the ability to provide this information, regardless of its form, effectively (e.g., easily detectable, discriminable, and unambiguous) and efficiently.
6. *Variance Control.* System variances need to be controlled at their points of origin. This principle, whose roots in part stem from control systems theory, comprises a critical element of a worker’s self-management strategy and management’s approach to total quality, and implies that operators carry out their own process quality assurance and their own maintenance checks, diagnostics, and repair.
7. *Support Congruence.* Systems of social support should reinforce the behaviors that are needed and be consistent with the work design philosophy. For example, training for teams should take place in groups and should cover social as well as technical skills and considerations. Similarly, supervision should be facilitating rather than directive.
8. *Joint Optimization.* Consideration must be given to how humans and technology within systems may need to interact to maximize system performance. This would include ensuring that human workers have correct models of how any automation that may be in effect is performing, that is, an understanding of the capabilities and limitations of automated aspects of the system in different contexts, as well as the ability to efficiently assess the status of any machine intelligence that is being used. It also implies that such automation is aware of what the human’s roles are at any given time.
9. *Boundary Location.* While work groups should be self-regulating, the location of the boundary between a team and the rest of the organization is critical. Otherwise, essential information can be lost, both vertically and horizontally, within the organization. The organization and function boundaries thus should be drawn with care to allow the optimal sharing of information, knowledge, and learning.
10. *Learning and Transition.* Systems design is an iterative and continuous process, which implies that as systems evolve, work processes will require continuous re-evaluation. Thus, a design is never really completed but rather should be subject to continuous improvement. This principle can also embody the organizational characteristic of adaptability, which relies on responsible autonomy, multifunctionalism, boundary location, and other principles to diminish the extent of hierarchical task interdependence and promote a more “agile” response to varying problem contexts so that local problems do not propagate through the larger social system of the organization, impacting the workload and quality of work of many others.

10.2.2 STS Design Principles: Implications for the Employability of Older Workers

Examination of these STS design principles reveals a fundamental challenge associated with assessing the employability of older workers: how do we reconcile those STS considerations that can potentially benefit the older worker from those that could possibly become compromised by older worker capabilities? For example, STS design relies heavily on effective self-regulated work groups or teams characterized by *responsible autonomy*. Given the greater maturity and communication skills often attributed to older workers along with the possibility for them to exercise greater judgement attributed to their longer work experiences, one can argue that the emphasis on teams driven by their internal supervision and leadership would support maintaining and even employing older workers. However, the increasing dependence on information and communication technologies (ICTs) in group work, especially in virtual teams, can bias employers against selecting older workers for these work arrangements as managers may lack confidence in these workers' technological skills (Sharit, Czaja, Hernandez, & Nair, 2009). This bias could be exacerbated if employers view older workers as less adaptable (i.e., less able to adjust to work-related contexts) as compared to their younger counterparts. Hedge, Borman, and Lammlein (2006) noted that the adaptability requirements necessitated by teamwork may induce stress in older workers as the demands exacted by these requirements may be incompatible with the needs and preferences of older workers.

In speculating on the general fit of older workers for teamwork, Smyer and Pitt-Catsouphes (2009) considered three major categories for classifying team processes: cognitive, affective/motivational, and behavioral. From a cognitive perspective, two critical elements are an individual's *team mental model* (i.e., the representations of knowledge that are common or shared among the team members) and *transactive memory*, which refers to knowledge of how information is distributed among the team members (i.e., knowledge of who knows what). Forming complete and accurate team mental models, which is fundamental to establishing effective self-regulating groups, can potentially place older workers at a disadvantage as these mental operations can tax fluid cognitive abilities—those abilities involved in new learning or problem-solving such as working memory and processing speed (see Sect. 10.5.1)—especially if the worker is relatively unfamiliar with the work team. However, for those older workers who have accumulated important technical and strategic knowledge and have been exposed to varying work contexts, their knowledge and experience may in fact be crucial for establishing valuable shared group mental models, and the loss of such workers could adversely impact an organization's ability to adapt, demonstrate an agile response to varying contexts, and more generally, to learn and continuously improve as implied by DeLong (2004). In considering the affective/motivational category, although older individuals may act more maturely and professionally and thus be in better positions to mitigate team conflicts and exert a stabilizing effect on team performance, their presence can give rise to intergenerational conflicts that could undermine leadership roles.

The behavioral category of team processes encompasses many considerations, including ensuring that team members have the appropriate skills related to coordination, cooperation, and communication to enable the team to achieve effective responsible autonomy. Some of these skills can be dictated through formal training, not unlike what occurs in training crews in the aviation industry using crew resource management.

The impact of age diversity on teams, including how older workers and age diversity affect important team outcomes, as well as strategies for maximizing these outcomes, including leadership practices, are examined in detail in Chap. 16. Another important and emerging factor that could potentially impact team dynamics is the increasing ethnic diversity of older workers and the workforce (see Chap. 1).

In addition to the principle of responsible autonomy, there are other STS design principles which embody similar antagonistic viewpoints with respect to their advocacy for the employment of older workers. For example, *multifunctionalism* and *minimal critical specification* imply the need to learn and develop expertise in multiple job functions and the need for less concrete, more abstract thinking about work operations, which can impose high mental workloads on older workers. The principles of *multiple task allocations* and *information flow*, however, imply system design features which could help offset potentially high workload demands. Specifically, task allocations that involve a coherent, *holistic* array of activities provide the basis for stronger, more resilient associations in long-term memory, which ultimately places less load on working memory (see Sect. 10.5.1). Likewise, appropriate design of technological and social structures governing information flow can reduce the mental workload burdens on older workers considerably. The *variance control* principle suggests the need for anticipatory and judgement skills in identifying potentially damaging variability in system processes; in principle, the greater experience with work processes typically afforded to older workers could place them in more advantageous positions to manage such perturbations.

The principle of *joint optimization* generally refers to the fluidity with which the human and technological elements work together. It has been receiving increased interest of late with the influx of more intelligent automation into workplaces and service systems (see Chap. 2). However, it also carries many unknown elements with respect to its impact on older workers. As these technologies become more intelligent, cognition will need to be shared—that is, the human and technological entities will need to be cognizant of and *comprehend* the other's actions. This implies developing some degree of understanding of each other's capabilities and limitations, which may be a formidable task for any worker. Assuming older workers have been given appropriate training, greater experience interacting with these technologies is likely to lead to a greater understanding of what the technology knows, why it is doing what it does, what it knows about what you are doing, and when to question its reliability.

10.3 Physical Work and Older Workers

The general impression that older people are not suitable for manual labor jobs that involve some degree of physical exertion is understandable. As we age, we become less capable of performing such work due to many factors, including: diminished capacities of muscles, tendons, ligaments, joints, and bones; lesser capacity for energy expenditure; and decreased flexibility, sensory perception, and reaction time (a more thorough account of human factors and ergonomic considerations related to job design can be found in Sharit & Czaja, 2012). A recent news article noted that even though older workers have proportionately the same number of job accidents as younger workers, they experience much higher fatality rates (Leefeldt, 2018), which was attributable to having a poorer health status or constitution and thus a lesser likelihood of survivability following an accident. In fact, in the USA among all age groups people 55 and older have the highest rate of fatal work injuries (Fig. 10.1), and the fatality rate in 2016 for workers 65 and older was almost three times the national average—9.6 fatalities per 100,000 full-time equivalent workers compared to a rate of 3.6 for all workers (Bureau of Labor Statistics, 2018). It should also be noted that the number of deaths for all workers was higher in 2016 than in any of the previous 8 years, and up to 7% from 2015; however, workers 55 and older accounted for 36% of these fatalities despite comprising only 23% of the workforce.

Nonetheless, for various reasons (e.g., see Chap. 15) older workers are likely to choose to remain working on jobs that can put them at risk of injuries or fatalities.

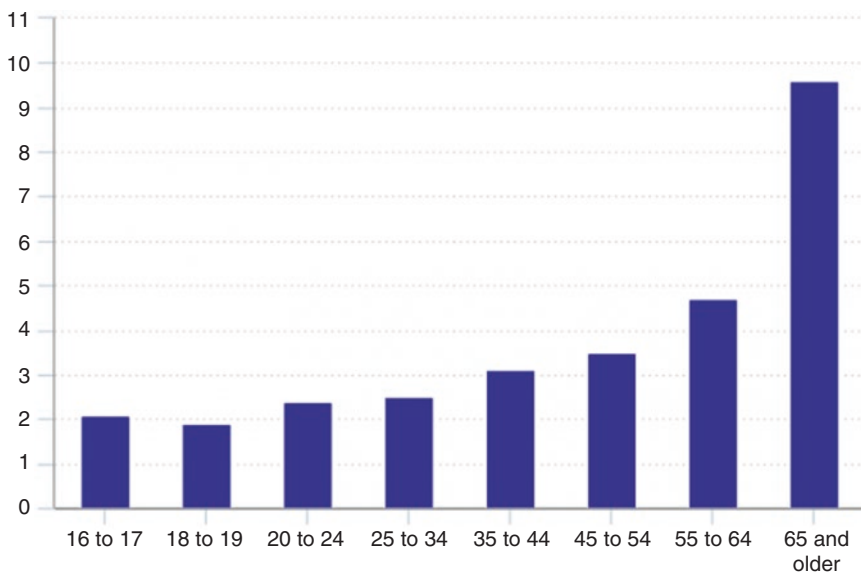


Fig. 10.1 Rate of fatal work injuries per 100,000 full-time equivalent workers by age in 2016 (U.S. Bureau of Labor Statistics 2018)

These reasons include the low median savings of \$5000 for working-age families, which has been cited by the Economic Policy Institute and the ability to receive employer-based health insurance benefits. However, it should be noted that there is no consensus that older workers are poor fits for manual labor, and even in physically demanding jobs older workers are often viewed as repositories of vital knowledge related to work operations, including safe practices. In addition, it is well known in human factors and ergonomics that most accidents occur during the first few months on the job, when the mental models that workers possess of the tasks are possibly ill-formed and their ability to skillfully coordinate sensory and procedural information for meeting job-related objectives is still underdeveloped. Statistics, which show that 28% of all injuries happen during the first year on the job (Leefeldt, 2018), which almost doubles to 52% in the construction industry, appear to contradict arguments against the value of older workers in occupations that involve physical work. These workers can transfer and demonstrate the kinds of critical, contextual knowledge to younger inexperienced workers that may not be as obtainable through videos or computer-based demonstrations.

Physical work demands are generally classified into five categories, based on the kilocalories of energy expenditure required per minute: *light work* (about 2.5 kcal/min); *moderate work* (2.5–5.0 kcal/min); *heavy work* (5.0–7.5 kcal/min); *very heavy work* (7.5–10.0 kcal/min); and *extremely heavy work* (>10.0 kcal/min) (Astrand & Rodahl, 1986; Garg, Herrin, & Chaffin, 1978; Kroemer, Kroemer, & Kroemer-Elbert, 1994). Various methods are available for measuring the physical demands of work, including the use of oxygen (O₂) consumption, heart rate, and subjective methods.

Measuring O₂ consumption during work only helps determine the amount of aerobic metabolism utilized, which involves metabolic processes that produce energy when there is sufficient availability of oxygen. This approach makes use of the relationship between O₂ consumption and energy expenditure: for every liter of O₂ consumed, an average of about 4.8 kcal of energy is released. Aerobic energy expenditure can thus be determined by measuring the amount of O₂ a person consumes during work, where kcal/min of energy expenditure = O₂ consumption rate (L/min) × 4.8 kcal. Men who are 20 years of age have an average maximal capacity of 3–3.5 L/min; women of the same age have an average capacity of 2.3–2.8 L/min. At age of 60, the capacity is diminished to about 2.2–2.5 L/min for men and 1.8–2.0 L/min for women, which makes older workers less suitable for heavy work.

Heart Rate (HR) reflects the increased demand for the cardiovascular system to transport more O₂ to the working muscles and remove more waste products from them. For moderate work, HR is linearly related to O₂ consumption and is often used in industrial applications as an indirect measure of energy expenditure. However, although HR is easier to measure than O₂ consumption, it is not as reliable a measure as O₂ as it can be influenced by many factors (e.g., emotional states) that violate the HR–O₂ consumption relationship. In addition, this relationship must be calibrated for each worker before HR is used alone as a valid estimate of workload because the relationship between HR and O₂ consumption varies for different individuals. During

physical work, HR typically rises from its resting state and levels off at its steady state, with the increase in HR as well as the HR recovery time used as measures of physical workload. Maximum heart rate directly determines the maximum work capacity of an individual, where maximum heart rate = $206 - (0.62 \times \text{age of the person})$.

An example of a subjective measure of physical workload is the Borg Rating of Perceived Exertion Scale, which requires workers to rate their perceived level of effort on a scale of 6–20 (Borg, 1982). Subjective scales often provide valid and reliable measures of physical effort involved in a job and are easy to implement but may be influenced by other factors such as worker satisfaction and motivation. Subjective measures are probably more useful when used in conjunction with physiological measures as they help provide a more comprehensive understanding of the work demands.

Normal aging is associated with tremendous individual variability in physical work capacity, but also for most a general trend toward decline in capacity. The short-term maximum physical work capacity or *aerobic capacity* is known as $VO_{2\max}$ and represents the maximum energy expenditure that can be achieved by an individual for a few minutes. At $VO_{2\max}$, the heart cannot beat faster and the cardiovascular system cannot supply O_2 to the working muscles at a faster rate to meet the increasing energy demands of the work. Some individuals may be able to maintain the maximum $VO_{2\max}$ values that they can achieve throughout a large period of their potential work life (e.g., between the ages of 35 and 70), whereas other individuals may experience a gradual and approximately linear decline in their $VO_{2\max}$ to about 50% of what they were once capable of achieving. In addition to age, factors such as gender, health and fitness level, training, and genetic considerations can also influence a person's aerobic work capacity.

From an industrial perspective, physical work can be classified into at least five discrete categories as shown in Fig. 10.2 (Rodgers, 1978). Category I jobs are not of concern for their physical effort demands and category V jobs are rare. Most industrial jobs fall in effort categories II, III, and IV.

10.3.1 Light Industrial Jobs

With the increasing emphasis on the infusion of information technologies and automation into the work sector, it is easy to lose sight of the fact that there are many industrial jobs that fall into category I and perhaps into category II (Fig. 10.2) for which many older workers may be suited for. These jobs, which are often referred to as “light industrial jobs,” all involve some degree of manual labor and sometimes carry the stigma of lacking in specific skills or requirements for intelligence. These are misconceptions as there are a variety of cognitive functions many manual labor jobs can require and which are compatible with the capabilities of older adults, including having knowledge of procedures and the ability to implement these

DURATION	INTENSITY		
	Light (L)	Moderate (M)	Heavy (H)
Occasional (O): Less than 2 hours	OL I	OM II	OH
Frequently (F): 2 to 4 hours	FL	FM III	FH IV
Constant (C): More than 4 hours	CL	CM	CH V

Fig. 10.2 Five discrete categories of physical work based on combinations of duration and intensity (adapted from Rodgers, S.H., (1976, July). Metabolic indices in materials handling tasks, in C.G. Drury (Ed.), *Safety in manual materials handling* (pp. 52–56). DHEW/NIOSH Publications No. 78-165, Proceedings of a symposium, Buffalo, NY. Cincinnati, OH: Department of Health, Education, and Welfare/National Institute of Occupational Safety and Health

procedures while demonstrating sufficient flexibility to perform the work activities within specific parameters. Examples of light industrial jobs that are potentially suitable for many older workers, and which are expected to continue, if not even grow in demand are listed below.

Automotive Assembly. This type of job includes makers of automobile parts and the individual components of those parts and requires an acute attention to detail and pride in precise work.

Consumer Electronic Manufacturing. This type of job involves the production and assembly of small-scale technology (e.g., printers, cell phones, computers, fire alarms, and other entertainment and communication devices). Demand for small electronic products in both the business and household sectors generally grows every year.

Food Production. This industry represents one of the largest employers of light industrial workers (e.g., bakers, producers of processed meats and cheeses). It can involve a number of machinery supervision and technician jobs. Demand for food manufacturing is always high, making it one of the most secure areas to work in.

Garment Manufacturing. This type of job involves cutting, sewing, and assembly of different types of garments (clothes and shoes are always in demand) and requires a high level of accuracy and quality control; creativity is welcomed in this area.

10.3.2 *Exoskeletons*

For more physically demanding work, *exoskeletons*, which are essentially “outer skeletons,” offer the prospect for extending the physical capabilities of workers, including older workers (Chow, 2017; Farrell, 2016). Exoskeletons with lightweight frames allow operators to handle heavy tools as if they were weightless, and can minimize the pressure on the lower back, hips, knees, and ankles of wearers while improving their posture and reducing the risk of injury.

Ford Motor Company is investing in the (non-powered) EksoVest (Hard, 2017), a type of exoskeleton (designed by Ekso Bionics in partnership with Ford) that supports factory employees’ upper bodies to ease strain when lifting and performing overhead tasks, which certain Ford employees perform up to 4600 times per day. It fits employees from 5 to 6 ft. 4 in. tall and is designed for anyone in load-bearing work, from factories to construction sites to distribution centers. A Ford assembly line worker at Ford’s Michigan Assembly Plant was quoted as saying “My job entails working over my head, so when I get home my back, neck and shoulders usually hurt... Since I started using the vest, I’m not as sore, and I have more energy to play with my grandsons when I get home” (Chow, 2017).

Lowe’s, the second-largest chain of home improvement stores in the USA, is also exploring the use of a robotic exoskeleton (Murphy, 2017) in a pilot program at one of its stores in Virginia. This exoskeleton, which was designed by its own research facility (the Innovation Labs) in partnership with the Assistive Robotics Laboratory at Virginia Institute of Technology, is intended to help workers offset some of the strain on their muscles and joints as they pick up and move heavy and awkward items (e.g., bags of cement or paint buckets).

In Japan, which is facing a shortage in their labor force, a large older population, and a desire to keep people working as efficiently as they can for as long as possible, there is great interest in robotic technologies that can benefit older workers in performing demanding physical work (Financial Tribune, 2016). A Japanese hauling company (Tatsumi Shokai Logistics), which employs many older workers, has invested in an exoskeleton to take the strain off its staff. The exoskeleton helps them in their frequent loading, unloading, carrying, and bending tasks, as reflected in the comments of a 57-year-old worker at this company who noted that the burden on his back and legs has been lessened by half, that he could do the same work over a long period of time, and that he hoped to continue working for another decade.

There are many other innovative ways in which work processes can be transformed to better accommodate the capabilities of older workers. In the Volkswagen Phaeton “glass factory” assembly plant in Dresden, Germany (Harrington-Cressman, 2014), sociotechnical system as well as ergonomic principles are incorporated to assemble each Phaeton in what would be more appropriately referred to as a “moving line” (via seams in the floor) rather than an assembly line. People work in small teams (or even individually) with stations near each vehicle containing the parts, components, and specialized tools for handling the corresponding stage in the assembly process. An overhead crane lifts the car up and is configured to enable the worker

to easily move the vehicle around as needed and position oneself as ideally as possible with respect to forces that may need to be applied to all work that is required to be performed on the underside.

The use of various technologies can go a long way toward reducing the stresses involved in physical work and thereby potentially extend both the life and health of many older workers. However, there are also many basic principles and guidelines (Kroemer et al., 1994; Wickens, Lee, Liu, & Becker, 2004) that can be adopted by managers to benefit older workers. Some examples of considerations in designing physical work for older workers are listed below.

- Provide warm-up exercises and adequate work-rest cycles to condition and relax the body.
- Be aware of time and pace pressure in job schedules.
- Adopt job procedures that provide adequate muscle rests between exertions and that allow workers to change postures periodically.
- Avoid placement of displays so that rigid location of the head or eyes is required.
- Design standing workplaces to avoid stretching or stooping and optimize sitting-standing workplaces.
- Be aware of reduced tolerance to biomechanical stresses on joints and muscles, and intense and repetitive exertions in awkward postures which can result in cumulative trauma disorders.
- Be aware of asthma and related breathing conditions, wearing respiratory protective equipment, working in confined spaces, and heat and humidity stress.
- Avoid work requiring excessive static muscle contractions, which can result in muscle fatigue, reduced motor control, occupational injuries and accidents, and ligament and tendon disorders.
- Make use of the NIOSH lifting equation (Ergonomics Plus, 2018) as a way for suggesting design parameters in manual material handling tasks that should be optimized.

10.3.3 Physical Work: Implications for the Employability of Older Workers

Many design considerations related to physical work, and especially work which may be performed by older people, are fundamentally based on knowledge associated with anthropometrics, biomechanics, and work physiology. Deriving principles and guidelines from these areas can accommodate many older workers and to a degree, be made prescriptive. However, the true challenge, especially given the large individual variability among older adults in physical work capabilities and health status, is the need to tailor these prescriptions to the characteristics of the individual older workers as well as to the nature of the tasks that they are required to perform. This may entail that organizations invest in training managers to become knowledgeable about these (and other) job design factors.

Unfortunately, this may sway organizations to adopt the more expedient approach of employing younger workers (if they are available) for these jobs to avoid the risks that may accompany allocating older individuals to these work activities. Even if managers are reasonably confident in designing physical work tasks for older workers and in assigning workers to these tasks, there is still the possibility that they may have to shoulder an increased burden due to the need for them to monitor these workers more carefully to assure that the design parameters set for them are suitable.

The use of auxiliary devices, such as exoskeletons, as a means for increasing the physical capabilities of older workers raises a different set of issues. Most importantly, there have not been any formal usability studies on these devices to determine if older users might encounter any problems working with them, regardless of whether these issues pertain to safety, comfort, or performance. Studies are also needed to determine if there are hidden health-related hazards associated with their use over longer periods of time.

10.4 Changes in Work Configuration and Employment of Older Workers

An Intuit (2010) reports that forecasted trends in work over the next decade indicated several ways in which the shape of work would be changing (see Chap. 2). First, work would be shifting from traditional full-time employment to contingent workers such as freelancers and part-time workers. Second, due to emergent internet cloud and mobile technologies, working in the cloud will increasingly shift work lives away from corporate offices toward an in-my-own-place, on-my-own-time work regimen. Third, part-time remote jobs will continue to be a very appealing work arrangement for many workers, including semi-retirees, with the number of part-time workers projected to increase to 40%.

Most remote work is knowledge work as opposed to manual work. Essentially, it is information-based whereby information is converted from one form to another and, unlike most forms of manual work, the links between behavior and results are not always so apparent and rarely immediate. With *remote knowledge work* the visibility of work can become even further diminished, which can add to the burden of managerial control.

An important question is whether older workers are employable as remote knowledge workers. Traditionally, issues regarding employability are often handled through job selection tests. The premise of any job selection system is that it be based on a *job analysis* to ensure that the selection criteria are job-related (Thomas & Scroggins, 2006)—that is, based on relevant knowledge, skills, abilities, and other characteristics. For knowledge work, standardized tests of cognitive and information-processing abilities are a commonly used class of selection tests. Cognitive ability tests normally provide the benefit of being generalizable (they can

be used across organizations and jobs) and have been shown to produce large economic gains for companies that use them (Gatewood & Feild, 1998). Measuring cognitive ability is also among the easiest and least expensive of all job selection tests (Schmidt & Hunter, 1998). However, many of them are not “culturally fair,” which is a concern in today’s diverse workforce.

Common categories of cognitive ability measured for selection include general ability and intelligence (Borman, Hanson, & Hedge, 1997), verbal ability, numerical ability, perceptual ability, reasoning ability, perceptual speed, memory, and spatial abilities (Ackerman & Cianciolo, 2002). Some jobs may require very specific skills; for example, communication skills may be critical for pilot and air-traffic controller performance. The use of personality test measures for job selection has also been popular as a number of *personality factors* (e.g., agreeableness, conscientiousness) have been shown to predict job performance (Hogan, Johnson, & Briggs, 1997).

As part of a study which examined older worker employability as teleworkers who would be working exclusively from their homes, an online questionnaire was developed and directed at managers representing either small (<500 employees; $n = 133$), medium size (between 500 and 5000 employees; $n = 62$) or large (>5000 employees; $n = 118$) companies from a large variety of industries (Sharit et al., 2009). Based on a review of the literature and guidelines for telework, 13 worker attributes were identified as important for telework. These attributes were then ascribed ratings of importance for telework on a scale of 1 (not important) to 10 (very important) by 314 respondents (Table 10.1). Not surprisingly, several of these variables were significantly correlated; the three highest correlations were between trust and reliability (0.608), trust and maturity (0.494), and writing ability and verbal communication ability (0.479).

Following these ratings, the respondents were asked to compare older and younger workers on these work-related attributes. The results of these comparisons,

Table 10.1 Ratings of 13 worker attributes on importance for telework (from Sharit et al., 2009)

Worker attributes	<i>M</i> (SD)
Trustworthiness	9.31 (1.11)
Reliability	9.31 (1.06)
Ability to work independently	9.31 (1.08)
Time-management ability	9.04 (1.36)
Maturity	8.67 (1.62)
Experience in the work activity	8.29 (1.71)
Technology skills	8.25 (1.70)
Ability to make adjustments to work activities	8.11 (1.62)
Verbal communication ability	7.25 (2.26)
Writing ability	6.67 (2.40)
Ability to work on teams	6.62 (2.57)
Tenure (time on the job)	5.66 (2.86)
Health status	4.66 (2.99)

which are presented in Table 10.2, indicate that despite relatively large numbers of neutral responses for many of the attributes, statistically significant differences in the percentages of responses that favored either younger or older workers were found for each worker attribute. With regard to trustworthiness, reliability, ability to work independently, time-management ability, maturity, experience in the work activity, verbal communication ability, writing ability, and tenure, older workers were rated as either being better or having more of that characteristic. However, when the attributes of technology skills, ability to make adjustments in work, ability to work in teams, and health status were considered, older workers were rated as worse than younger workers.

Further analysis was performed to determine if level of managerial experience influenced either the ratings of importance attributed to each of the 13 worker attri-

Table 10.2 Comparisons between younger and older workers on each of the 13 worker attributes (from Sharit et al., 2009)

Based on your experiences with workers of all ages, compare older workers (55+) to younger workers on the following work-related factors:	Compared to younger workers, older workers are generally:			
	N	Less/ worse	About the same	More/ better
		n (%)	n (%)	n (%)
Worker attributes				
Trustworthiness	305	1 (0.3)	199 (65.2)	105 (34.4) ^a
Reliability	303	11 (3.6)	155 (51.2)	137 (45.2) ^a
Ability to work independently	306	22 (7.2)	171 (55.9)	113 (36.9) ^a
Time-management ability	305	25 (8.2)	172 (56.4)	108 (35.4) ^a
Maturity	306	4 (1.3)	60 (19.6)	242 (79.1) ^a
Experience in the work activity	305	2 (0.7)	65 (21.3)	238 (78.0) ^a
Technology skills	306	218 (71.2) ^a	79 (25.8)	9 (2.9)
Ability to make adjustments in work	305	141 (46.2) ^a	130 (42.6)	34 (11.1)
Verbal communication ability	305	24 (7.9)	193 (63.3)	88 (28.9) ^a
Writing ability	305	22 (7.2)	168 (55.1)	115 (37.7) ^a
Ability to work in teams	305	64 (21.0) ^a	206 (67.5)	35 (11.5)
Tenure (time on job)	305	1 (0.3)	43 (14.1)	261 (85.6) ^a
Health status	305	187 (61.5) ^a	112 (36.8)	5 (1.6)

^aSignificant differences based on 95% confidence intervals on proportions

butes or the comparisons between younger and older workers on those attributes. Four levels of managerial experience were considered: ≤ 5 years ($n = 72$), between 5 and 10 years ($n = 80$), ≥ 10 but less than 20 years ($n = 83$), and ≥ 20 years ($n = 78$). No significant differences in ratings of importance were found among the four managerial experience groups on any of the 13 worker attributes.

In the rankings of older workers as compared to younger workers, mean ranks were computed for the four managerial experience groups for each of the 13 worker attributes (“worse/less” was assigned the value of 1, “about the same” was assigned the value of 2, and “better/more” was assigned the value of 3). Significant differences were found among the managerial groups for seven of the worker attributes: maturity ($p < 0.001$), trustworthiness ($p = 0.01$), reliability ($p < 0.001$), ability to work independently ($p = 0.001$), writing ability ($p = 0.039$), ability to make adjustments in work ($p = 0.005$), and technology skills ($p = 0.001$). Further analysis on each of these seven attributes was performed to determine which managerial groups, if any, significantly differed from one another. In each of the seven cases, the difference was in the direction of a higher experience group favoring older workers over younger workers to a greater degree than a lower experience group. This tendency was especially striking when differences between managers with >20 years of experience and managers with ≤ 5 years of experience were considered (all p 's ≤ 0.001).

10.4.1 Remote Work: Implications for the Employability of Older Workers

The results discussed above appear to provide strong support for employing older workers in jobs involving remote, knowledge-based work. In the absence of close supervisory attention, which is impractical in the case of remote work, possessing attributes such as trust, reliability, maturity, and the ability to work independently, in addition to verbal and written communication skills, should be influential in the decision by managers to employ older workers. Complicating this job selection decision, however, is the need to reconcile these perceived positive attributes with negative impressions of older workers. Specifically, as compared to their younger counterparts older workers were perceived more negatively with respect to technology skills, the ability to make adjustments in work, and health status, and perhaps even in the ability to work on teams (although most responses were neutral on this attribute).

Remote knowledge work is likely to become not only more dependent on interaction with ICTs, but also on the ability to make continuous adjustments in the use of these technologies as they evolve. Perceptions that older workers may be more likely to be impeded in carrying out their work assignments due to having poorer health may further contribute to job selection decisions which argue for not hiring them. Such perceptions by managers may also have implications for the emphasis on responsible autonomy in sociotechnical systems design (see Sect. 10.2.1), especially

when the teams are virtual. Although older workers may exemplify many of the characteristics needed for achieving such autonomy, beliefs by managers related to older workers' technology skills and abilities for making adjustments in work (which relates to the bias that older adults are more rigid) may be sufficient reason for them to not risk creating virtual team arrangements comprised of older workers.

The findings that more experienced managers tended to evaluate older workers more favorably (or less unfavorably) than younger workers with respect to the various worker attributes raise additional issues. Assuming that the more experienced managers were older than those who were less (or at least much less) experienced, one perspective on these findings is that they may have been reflective of self-protective tendencies on the part of these more experienced (older) managers—that is, they harbored a greater need to perceive themselves as still relevant. Another view, however, is that having greater experience in fact enables managers to better understand the value of older workers for remote work arrangements. In any case, assuming that experienced or older managers are more likely to adopt more positive attitudes about older workers with regard to these worker attributes, the challenge is how to translate this possibility into increased remote work employment opportunities for these workers.

10.5 Technology, the Future of Work, and Cognitive Task Demands

Many work activities presently have the potential to be automated through technologies that include robotics and artificial intelligence. Technical feasibility alone, however, is not a sufficient condition for realizing the automation of jobs. Other factors that may need to be considered are the cost of developing and deploying the required hardware and software, the degree of availability of workers with sufficient skills for the job and their expense in relation to the automation (which could slow the rate of adoption of automation), and whether automation can provide benefits relative to their human counterparts (e.g., higher levels of output, better quality, and fewer errors). Similarly, the likely pace of workplace transformation brought about by automation may depend not only on the speed with which automation technologies are developed, adopted, and adapted, but also on the speed with which organizations are able to redefine work processes and roles accordingly. Those sectors of the economy that are already relatively highly digitized (e.g., the financial services sector, media, and the technology sector itself) can expect automation to be mostly software-based. Consequently, they are capable of capturing value much faster and at a far lower cost than industries that are more capital or hardware intensive (e.g., health-care, education, and retail) or are constrained by heavy safety regulation. In some of these sectors, only a very small percentage of activities could be automated with currently available technology. Similarly, there are many lower-wage occupations

such as home health aides, landscapers, and maintenance workers where only a very small percentage of activities could be automated with current technology.

Still, as noted in a recent report disseminated by the McKinsey Global Institute on the impact of technology on the future of work (Manyika, 2017), although the proportion of occupations which currently are capable of being fully automated is relatively small, about 60% of all occupations have at least 30% of activities that are technically automatable and in about two decades 50% of all of today's work activities may be able to be automated. One potentially negative consequence of an increase in the number of job activities that will become automated is that it can promote *job fragmentation*, which occurs when parts of the job become dissociated from other job-related activities only because they are automatable. By leaving behind a not necessarily coherent set of work activities, the fragmentation of jobs not only violates various precepts of sociotechnical systems design (see Sect. 10.2.1) but can also generate increased mental workload, and thus can potentially compromise the already capacity limited information-processing capabilities of older people (see Sect. 10.5.1).

The overall impact of the trend toward increased automation of activities comprising jobs is that skilled workers capable of working effectively with technology will be of greater value to organizations, with the success of organizations likely hinging on their ability to staff and manage these partially and fully automated work operations. For current and future generations of older workers, it is thus imperative that they possess adequate technological skills and the confidence to transition these skills to new technologies that might appear over the course of work activities. At the same time, organizations need to be willing to offer the training support that these older workers may require to work effectively with technology (see Chaps. 3, 12, and 13).

10.5.1 The Role of Cognitive Abilities in Future Work

While the prospects of increased automation may conjure up images of an overly mechanical, oppressive work society, the potential also exists for increased automation in many jobs to generate more meaningful work by replacing routine or repetitive tasks. This, in turn, could allow workers to focus on those tasks which utilize creative and affective processes. For example, in industrial process control or manufacturing operations workers may be able to place more emphasis on situational awareness in order to anticipate future problems, and on ways to adjust or improve system processes, often by working jointly with automation. Generally, as more procedural or predictable tasks become handled by smart machines, humans will become more responsible for tasks that require: perceptual/attention skills in monitoring work processes; diagnostic/inferential skills for interpreting computer-based information; judgement and decision-making skills for handling exceptions and anomalies; and communication skills for coordination in distributed decision environments.

A number of these skills, however, draw upon information-processing capabilities and thus may undermine the employability of older workers due to age-related declines in *fluid abilities* (Park, Lautenschlager, Hedden, & Davidson, 2002), especially if the work depends on speed in processing data or information. Such abilities, for instance working memory and processing speed, are typically involved in new learning or problem-solving. Working memory represents the human’s short-term or temporary memory storage system that keeps information active while it is being used or is needed; it is a kind of workbench of consciousness in which people visualize, plan, compare, and evaluate, and is critical for decision-making and problem-solving (Wickens et al., 2004). If sufficient *attention* (mental effort) is given to this information, it can become encoded in long-term memory, which is the human’s larger and relatively stable information storage system. Processing speed reflects the speed with which many information-processing operations can be executed, for instance, the speed with which one can attach meaning to perceived information.

Fluid abilities generally peak somewhere in the 20s or 30s and then gradually decline with increasing age (Fig. 10.3). There is, however, great variability in both the number of abilities that show decline and the degree of such declines (Czaja et al., 2006). However, the fact that fluid abilities generally decline with age does not necessarily imply that job performance that depends on these abilities will be compromised. There are many strategies related to providing job performance support (Morrow & Rogers, 2008; Sharit & Czaja, 2012; Wickens et al., 2004) that can diminish the reliance on these abilities during task performance. Also, because *crystallized* intelligence abilities, such as vocabulary or other markers of acquired knowledge, remain relatively stable or increase throughout the life span, the experi-

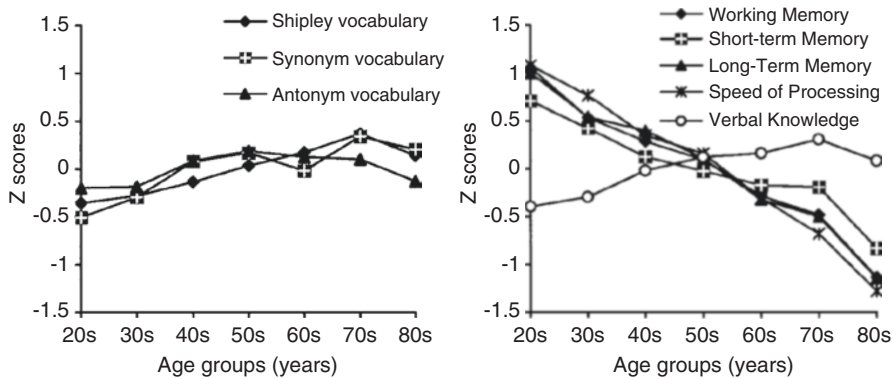


Fig. 10.3 Illustrations across the adult lifespan of performance declining on measures of fluid cognitive abilities (e.g., working memory, speed of processing) but being preserved on measures of crystallized cognitive abilities (e.g., verbal knowledge Shipley vocabulary). From Park, D.C., Lautenschlager, G., Hedden, T., Davidson, N.S., Smith, A.D., & Smith, P.K. (2002). Models of visuospatial and verbal memory across the adult life span, *Psychology and Aging*, 17(2), 299–320. Published by the American Psychological Association, reprinted with permission

ence that older workers accumulate can often also serve to compensate for declines in fluid abilities in many work tasks.

10.5.2 *Task Analysis and Cognitive Task Analysis*

In practice, task-related demands that might be imposed on older workers can be assessed using *task analysis* (TA), a methodology which provides a breakdown of the physical and cognitive activities by an individual or team which are necessary for meeting task goals (Fisk, Rogers, Charness, Czaja, & Sharit, 2009; Hollnagel, 2006). TA may rely on various data collection methods, including measurements of movements, field observations, critical incident techniques, questionnaires, interviews, verbal protocols (think aloud techniques), introspection, and audio and video recordings. By serving as a conduit for identifying a wide variety of concerns related to human-system interaction, TA can potentially identify which types of tasks might be inappropriate for older workers, while also providing a basis for needed job redesign or training modifications that may enable many older workers to be better suited to the job demands (Sharit & Czaja, 2012).

Cognitive task analysis (CTA) was developed as a means for obtaining more insight into the knowledge and thought processes that underlie observable task performance, although it can be argued that a “good TA” should, in principle, encompass CTA. Essentially, CTA seeks to obtain an understanding of the cognitive demands (e.g., attention, memory, decision-making, problem-solving, and judgement) associated with task activities. An example of a CTA method is ACTA (Applied Cognitive Task Analysis) developed by Militello and Hutton (1998). ACTA relies on subject-matter experts (SMEs) and consists of three complimentary techniques: the task diagram, the knowledge audit, and the simulation interview. In the task diagram, the SME is asked by an interviewer to decompose the task into three to six steps, avoiding minute details, and identify steps requiring cognitive skill (e.g., judgements, assessments), highlighting the difficult cognitive aspects of the task. The knowledge audit employs a set of probes designed to identify types of domain knowledge or skill and describe how such expertise is used based on actual experiences. The simulation interview presents a challenging (existing) scenario (which can be done in various formats) to the SME; events within the scenario are then probed for situation assessments, actions, critical cues, and potential errors.

In a type of TA method referred to as hierarchical task analysis (HTA), *goals* are examined in terms of their subordinate goals and their accompanying *plans*, which are the sequence of steps needed to accomplish each of those goals (Shepherd, 2000). When used in conjunction with a modified hazard analysis and quality improvement technique known as failure modes and effects analysis, HTA was capable of exposing difficulties stemming from cognitive demands that older users experienced when using the [Medicare.gov](http://www.Medicare.gov) website to solve a health-related problem-solving task (Sharit, Hernandez, Nair, Kuhn, & Czaja, 2011).

In principle, an organization could employ a TA/CTA methodology to determine the physical and cognitive demands associated with current and future work, how to redesign the work to lessen these demands, and the training requirements for jobs. However, to be informative TA generally requires, in addition to expertise, considerable time and resources. How realistic is it to expect organizations to make effective use of these methods for establishing work-related parameters that are more accommodating to older workers is thus an open question.

10.5.3 Do Older Workers Require the Same Levels of Cognitive Abilities as Younger Workers?

The belief that older workers must match the fluid cognitive abilities of their younger counterparts to be as effective in performing cognitive work may be a misconception. Some support for this view derives from a study that investigated human performance on a task that involved seeking online information and making decisions related to a relatively complex multiple sclerosis (MS) health scenario (Sharit, Taha, Berkowsky, Profita, & Czaja, 2015). The task was composed of a base scenario, which provided the primary problem context, followed by two secondary scenarios; each of the scenarios had corresponding questions and decisions for the participant to negotiate. Three task performance measures were assessed: *search time*, which was the total time a participant needed to complete the MS task; *amount of search work*, which consisted of two measures—the number of distinct websites visited and the number of transitions between websites (a single website could be visited multiple times); and *search accuracy* (or quality of work), which was the sum of the individual scores assigned to the responses on each of the queries. Using a median split, 60 male and female study participants 18–82 years of age were classified into a younger group ($n = 31$, 18–51 years of age, $M = 33$) and an older group ($n = 29$, 53–82 years of age, $M = 67.2$). All the participants had prior computer and internet experience.

Relevant to this discussion were two findings. First, whereas internet experience was not found to have an impact on any of the task performance measures, higher cognitive ability was generally related to greater search accuracy. Second, the older participants matched the search accuracy performance of the younger people despite demonstrating a significantly lesser amount of search and taking significantly more time—64.5 min as compared to 50.9 min—to perform the task. These findings suggested the possibility that the younger and older participants may not have relied on their cognitive abilities in similar ways.

To examine this possibility, median splits were subsequently used to form a lower and a higher cognitive ability group for each of six cognitive ability measures: working memory, reasoning, processing speed, verbal ability, executive function, and visuospatial ability (Sharit, Taha, Berkowsky, & Czaja, 2016). Thus, each participant was classified as being in either a lower ability or a higher ability group for

each of the six cognitive ability measures. As expected, for each of the cognitive abilities the younger and older participants comprising the higher ability group had much better scores than their counterparts who were in the respective lower cognitive ability group. What was also not surprising was that for several fluid cognitive abilities, such as processing speed and visuospatial ability, the number of older participants who were classified into the higher cognitive ability group was relatively small—for instance, only 7 of the 30 people in the higher processing speed group and 9 of the 30 people in the higher visuospatial ability group were comprised of older age-group participants, whereas 14 of the 29 people in the higher reasoning ability group were older participants.

More importantly, on each of the task performance measures there were markedly different patterns in the comparisons between the lower and higher ability people for the older as compared to the younger participants. For example, for the older participants being in the higher as opposed to the lower reasoning ability group resulted in a significantly reduced time to complete the task (57.6 as compared to 70.3 min). In contrast, the younger participants in the higher reasoning group performed the task in 50.2 min as compared to 51.5 min for their counterparts in the lower reasoning ability group. When considering the amount of work performed, for the younger participants being in the higher cognitive ability group resulted in significantly more search work being performed as compared to being in the lower cognitive ability group for five of the six cognitive abilities. However, for the older participants, there were no significant effects in amount of search work performed by virtue of belonging to the higher as compared to the lower cognitive ability group. Finally, for search accuracy being in the higher as opposed to the lower cognitive ability group was found to be beneficial for the older participants in the case of reasoning ability ($p = 0.06$), working memory ($p = 0.097$), and especially processing speed ($p = 0.002$). For the younger participants, the benefits to search accuracy performance were associated with being in the higher visuospatial ability ($p = 0.005$), executive function ($p = 0.007$), and processing speed ($p = 0.009$) groups. Figures 10.4 and 10.5 illustrate these effects for the measures of amount of search work and search accuracy, respectively.

One implication of these findings is that older individuals may compensate for normal age declines in fluid abilities by placing more emphasis on crystallized abilities which depend on cumulative life experiences. The success of such compensatory behaviors, however, may depend on fluid abilities not being too diminished. In cases where older adults have relatively high fluid abilities, such as processing speed, this may prove especially advantageous. As seen in Fig. 10.5, with respect to search accuracy (quality of work) the older participants in the high processing speed group on average outperformed the younger participants who were classified into the high cognitive ability groups.

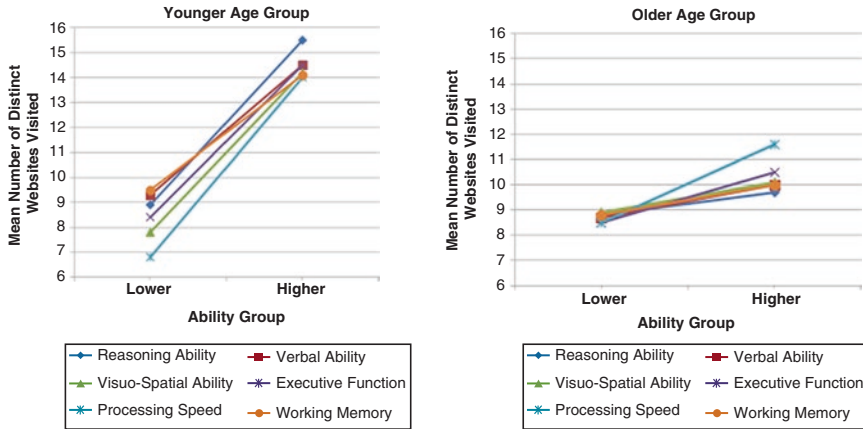


Fig. 10.4 Mean differences in the number of distinct websites visited between participants classified into the lower and higher cognitive ability groups for the younger (left-side) and older (right-side) participants. From Sharit, J., Taha, J., Berkowsky, R.W., & Czaja, S.J. (2016). Seeking and resolving complex online health information: Age differences in the role of cognitive abilities, *Proceedings of the Human Factors and Ergonomics Society 2016 Annual Meeting*, September 19–23, Washington, DC. Thousand Oaks, CA: Sage Publications

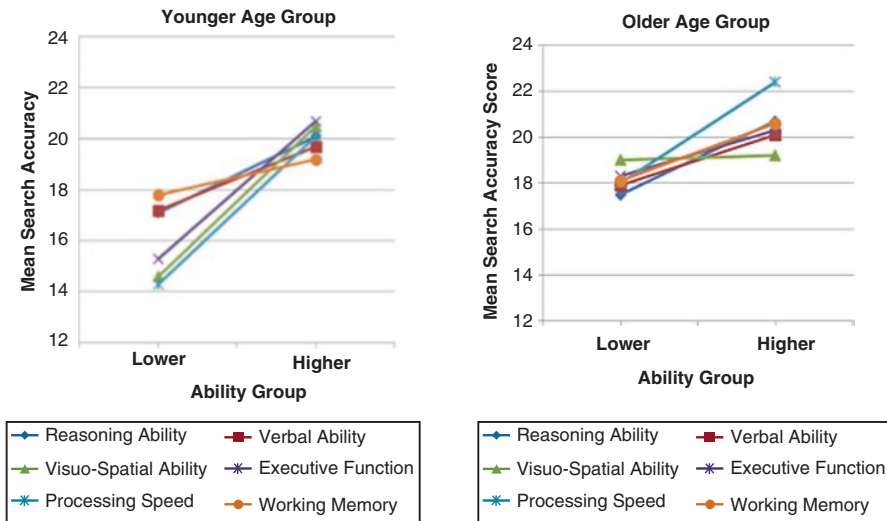


Fig. 10.5 Mean differences in search accuracy scores between participants classified into the lower and higher cognitive ability groups for the younger (left-side) and older (right-side) age-group participants. From Sharit, J., Taha, J., Berkowsky, R.W., & Czaja, S.J. (2016). Seeking and resolving complex online health information: Age differences in the role of cognitive abilities, *Proceedings of the Human Factors and Ergonomics Society 2016 Annual Meeting*, September 19–23, Washington, DC. Thousand Oaks, CA: Sage Publications

10.5.4 Cognitive Task Demands: Implications for the Employability of Older Workers

Clearly, jobs exist and will emerge with cognitive task demands that may be challenging for some older workers, implying the need to assess the specific cognitive demands associated with work tasks. However, this is likely to be difficult for managers to determine as they would not be expected to have the expertise to apply or make use of the outcomes of methods such as TA or CTA. In any case, the impact of normal age-related declines in cognitive abilities on cognitive task performance may be more mythical than fact: if older adults are not too deficient in key fluid cognitive abilities (e.g., processing speed) and the cognitive work is not excessively speed-based, older adults should be suitable for many forms of knowledge work. In addition, while it may indeed take more time for many older adults to learn new or unfamiliar technologies as, early on in learning, they are allocating significant mental resources to become more facile with the technology, once this is achieved previously unavailable cognitive resources can then be directed toward using the technology for task performance (Czaja & Sharit, 2012).

It is not unreasonable to presume that once older people are given the opportunity to master the technology that they need to use as part of their work activities, they may be more apt to use their knowledge more effectively as a compensatory mechanism for overcoming limitations in fluid abilities. The greater knowledge and experience that many older adults possess, which can translate into superior judgement and reasoning skills, can also allow for better understanding of incoming information so that it could be acted on more effectively; this could also potentially lessen the need for processing greater amounts of information. In addition, adhering to good human factors and ergonomics principles by providing older workers with highly usable interfaces, displays, and other artifacts could diminish reliance on fluid cognitive abilities such as working memory and processing speed. Finally, training that is appropriately designed for older people (Czaja & Sharit, 2012; see also Chaps. 3, 12, and 13) can further serve to accommodate many older workers into jobs that involve reasonable cognitive demands.

10.6 Summary

This chapter highlighted several topics within the domains of human factors and ergonomics as a basis for examining their implications for accommodating older workers in today's workforce and for the employability or retention of these workers. From a macroergonomics perspective, it was reasoned that judicious application of sociotechnical systems design principles has the potential to benefit many older workers. The application of these principles, however, let alone tailoring them

to benefit older workers, is not straightforward and thus remains an important challenge for organizations if they desire to derive the benefits that older workers can provide. With regard to employing older workers on jobs that require physical work, demand for light industrial work that should be compatible with the physical capabilities of many older workers is expected to continue. In addition, organizations have at their disposal numerous design guidelines for physical work that can benefit older workers, and new technological assistive devices are being developed that can extend the physical capabilities of older workers and thus potentially lengthen their work lives. However, challenges exist in this area as well as these design guidelines are not always straightforward to implement, and assistive devices will likely require more systematic and longer-term evaluation prior to being deemed appropriate for this population of workers.

Although part-time, remote work may be very appealing for many older individuals, managerial decisions to employ older workers may require the need to reconcile perceived positive attributes with perceived negative attributes associated with older workers. Finally, in considering the increased cognitive demands that are likely to accompany knowledge work in the future, many older people may be well-suited to work that depends on cognitive abilities, particularly if the job demands do not rely on excessive speed in information processing and if the worker is sufficiently trained on the technologies needed for performing the work. The challenges faced here include biases related to older workers being slower in processing information, having less attentional capacity, less technological familiarity, and a lesser ability to continuously adapt to the ongoing infusion of new technologies into work activities, which may drive organizations to prefer employing younger workers and thus lose out on the host of unique and positive work-related qualities that older workers can provide.

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Chapter 11

Work Motivation and Employment Goals in Later Adulthood



Ruth Kanfer and Keaton A. Fletcher

Over the past decade, a record number of older adults have delayed retirement or returned to work after retirement. According to the US Bureau of Labor Statistics, individuals aged 65–74 represent the fastest growing segment of the workforce (Toossi, 2013; see Chap. 1). Such trends bode well for societies who face demographically based declines in the number of available younger workers. However, the graying of the workforce has also raised a host of organizational challenges related to the management of this segment of the workforce in ways that effectively prolong working lives.

Over the past 20 years, work and organizational researchers have focused increasing attention on older workers. One of the early questions raised pertained to whether older workers perform as well as younger workers. Although meta-analytic findings suggest no appreciable differences in job performance associated with age for most occupations (Ng & Feldman, 2008), there is evidence to suggest age-related differences in worker motivation with respect to new skill learning and continued work participation. In general, compared to younger workers, age is generally positively associated with motivation to learn (Gegenfurtner & Vauras, 2012), but the design and delivery of training practices that place heavy demands on age-sensitive cognitive abilities may dampen training enthusiasm. Perhaps more importantly, however, younger and older workers experience work in different life contexts and experience different sociocultural influences with respect to work motivation. In contrast to younger workers, for whom paid employment is viewed as central for achieving personal life goals, the approach of age-graded retirement possibilities among older workers often disentangles the *need* to work for financial reasons from a *desire* to engage in work that is meaningful and empowering. In practical terms,

R. Kanfer (✉) · K. A. Fletcher
School of Psychology, Georgia Institute of Technology, Atlanta, GA, USA
e-mail: rkanfer@gatech.edu; ruth.kanfer@psych.gatech.edu; kfletcher40@gatech.edu

whereas younger workers often focus on *where to work*, older workers typically focus on *whether to work* (retire) and the role of employment in crafting a satisfying life post-retirement.

Although work motivation is ultimately an intra-individual process that affects an individual's allocation of personal resources (e.g., time and effort), motivation must also be understood in terms of the economic and technological context in which it occurs. This context includes the broad changes in the modern workplace that have substantially altered the role of the individual in the achievement of organizational objectives (see also Chaps. 2 and 10). During the industrial period of the early twentieth century, organizations emphasized production quantity and quality. Work motivation theories popular during this time focused largely on the use of extrinsic incentives such as bonus pay to spur higher levels of effort and productivity on the shop floor. As methods of production broadened during the mid-to-late twentieth century, new work motivation theories emerged that took into account worker goals and intrinsic motivation associated with one's work role. Most recently, globalization, demographic trends, and the emphasis on organizational production in terms of services has spurred research on work motivation in the context of an individual's broader life goals, including health and well-being.

The growing trend toward understanding work motivation from a situated, person-centric perspective underscores the unique lifespan-related factors and age-linked constraints and opportunities that influence older worker motivation. For example, among younger workers, work motivation is typically driven by work-linked opportunities for personal growth and learning, and the acquisition of financial resources. Among older workers, motivation to engage in post-retirement work may be more strongly influenced by physical and/or social constraints (e.g., the need to care for a sick spouse) and competing non-work opportunities (e.g., to travel).

This chapter examines work motivation and employment goals among older workers from a person-centric perspective. Our chapter is organized into five sections. In the first section, we describe conceptual and measurement issues salient in the study of work motivation during later adulthood. In the second section, we discuss the organization of human motives and implications for motivation at work and to work. In the third section, we briefly review three motivational theories from the developmental lifespan literature that address dynamic patterns of adjustment and behavior that occur across the lifespan in response to age-related changes in competencies, work circumstances, and psychological orientation. In the fourth section, we consider the antecedents and mechanisms associated with motivation to work and motivation at work. Specifically, we propose that decisions *to work* involve longer cycles, and deliberative cognitive processes that take into account the worker's perspective on how extending one's job tenure or returning to work is anticipated to satisfy salient life motives and goals. In contrast, motivation *at work*, often referred to as job engagement, is proposed to reflect shorter cycles, and psychological processes that occur in the context of an action stream that may be more affect-

driven than judgment-driven. In the fifth, final section, we identify abiding issues and promising research directions.

11.1 Work Motivation: Challenges in the Motivational Analysis of Older Adults

Theories of work motivation address two, interrelated aspects of action: what a person chooses to do (goal choice) and the factors and strategies associated with goal accomplishment (goal striving). Such theories have proved useful in predicting an individual's job performance and other work outcomes (see Kanfer, Frese, & Johnson, 2017). Theories of work motivation that highlight the prediction of an individual's goal choice typically emphasize inter-individual differences in personal attitudes/traits (e.g., work centrality) and motive salience (e.g., achievement). In contrast, theories of work motivation that address the process of goal pursuit or striving focus on the self-regulatory processes and strategies by which individuals modulate their thoughts, feelings, and behaviors to accomplish goals. Most contemporary theories of work motivation are interactionist theories; that is, theories that take into account the independent and joint effects of person attributes and contextual factors as they affect goal choice and goal striving. Further, most theories recognize the dynamic nature of work motivation and the reciprocal effects between goal choice and goal striving systems.

The first challenge confronting the application of work motivation theories to older workers pertains to the conceptualization of goal choice. Most studies of work motivation have focused on motivation at work and on the inter-individual differences in traits and situational factors that independently and jointly influence choice among organizationally relevant work goals that vary in difficulty or type (e.g., finish a complex report tonight or tomorrow, finish a report, or help a team member). Because most studies to date have focused on prime-age (ages 24–54) employees, fewer studies have directly examined the impact of age-related changes in motives, competencies, or orientation. Among older workers, however, these factors importantly affect decisions to work longer in their job, work goals that involve new learning, or higher levels of work stress.

A related challenge refers to the meaning of motivation at work. In the workplace, motivation has long been understood as a set of rational decision-making processes driven by hedonic motives to maximize pleasure and minimize pain. However, contemporary approaches to work motivation have steadily shifted toward the use of the broader job engagement construct. Theories of job engagement propose that engaged employees show not just higher levels of job effort and persistence (motivation) but also higher levels of vigor and dedication to their job (Leiter & Bakker, 2010). In contrast to traditional work motivation models, engagement conceptualizations posit a meaning of motivation at work that incorporates satisfac-

tion of eudemonic as well as hedonic motives; that is, engagement is supported by features of the job that promote vigor and dedication by reducing personal job costs and stimulating employee development (Bakker & Demerouti, 2007). As such, engagement indexes an affective-motivational state importantly driven by job resources. Although engagement conceptualizations fit well with theories of successful aging at work, it is important to note that job engagement is a more holistic approach that involves more than goal choice and goal striving.

A third challenge to understanding work motivation among older adults pertains to the dissociation of motivation at work and motivation to work. As Kanfer, Beier, and Ackerman (2013) suggest, motivation to work is typically not salient to prime-age individuals, but it may become more prominent and increasingly dissociated from motivation at work as individuals approach normative retirement age, and the accomplishment of motives and goals through non-work activities becomes more apparent. For example, an older (but not younger) individual may demonstrate motivation at work but decide to take a bridge retirement position in order to spend more time with family members. Kanfer et al. (2013) further suggest that although motivation at work plays a role in the motivation to continue working post-retirement, personal attributes (e.g., health, finances, work centrality, and non-work opportunities for motive accomplishment) are likely to play a larger role in employment decisions in late adulthood (Fig. 11.1).

Until recently, retirement was viewed as an event associated with complete withdrawal from the labor force (Wang & Shultz, 2010). Although contemporary formulations view retirement as a process characterized by gradual exit from the workforce, most studies to date do not distinguish between retirement and employment goals (see Chaps. 14 and 18). Individuals may choose to retire from their current job yet hold post-retirement employment goals that involve working in a different occupational sector or in a different work role. Studies that have begun to make such a distinction have shown that an individual’s age of intended retirement is often years earlier than the age at which one intends to leave the workforce completely (Beier, LoPilato, & Kanfer, 2018). The failure to independently and concomitantly assess

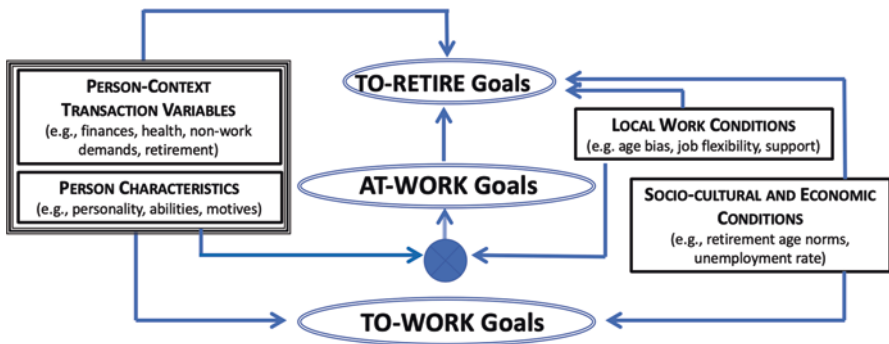


Fig. 11.1 An organizing framework of work-related goals and determinants in later adulthood (from Kanfer et al., 2013)

retirement and employment age intentions and work goals is problematic for two reasons. First, retirement age intentions may be driven by financial factors unrelated to motivation to continue working or motivation to work post-retirement. Older adults with insufficient financial resources may continue to work long past traditional retirement age despite low job engagement and/or low work centrality. Conversely, retired individuals with sufficient financial resources may return to work in order to satisfy agency or affiliation motives. Additional and more precise measures of an individual's motive structure, perceived opportunities and constraints, and employment goal intentions across the perceived future time horizon are sorely needed.

Taken together these perspectives provide insight into the challenges and opportunities researchers face when considering older adults in the workforce. Within the framework of Kanfer et al.'s (2013) model, we can explore goal setting and goal striving with older adults within the context of goals at work and goals to work. In other words, how do older adults manage the additional set of goals regarding a balance of financial stability and psychological need fulfillment? How do these goals to work influence the setting and pursuit of goals at work? Further, we also need to consider not only how does the presence or absence of resources influence older workers' engagement on the job but how does this balance influence older workers' intentions to work, in general? By thinking about the work experience of older adults as a motivation to work interacting with a motivation at work, the remainder of this chapter advances the theoretical understanding of the graying workforce.

11.2 Motives: Reasons for Action

Motives provide the reasons for action and shape the goals and strategies that guide behavior related to employment. Few behaviors related to work are determined by a single motive. For example, students may work hard on a team project in order to get a good grade, to demonstrate their competence to other students, to avoid doing less enjoyable assignments, and/or to win a team contest and large monetary prize. The identification of different motives, their interrelationships, and the conditions that activate their salience are topics that have occupied personality and motivational researchers for many years.

Over the past few decades, researchers have converged on a hierarchical organization of human motives that place three broad motives at the apex of motive structures: relatedness or affiliation; autonomy or control; and achievement, purpose, or meaning (e.g., Deci & Ryan, 1985; Talevich, Read, Walsh, Iyer, & Chopra, 2017). Conceptualized as universal, these higher-order motives are posited to provide an organizational scheme for understanding how specific, lower-order motives are related. In the Talevich et al. (2017) framework, for example, money and wealth represent lower-order motives within the agency or achievement cluster, with self-efficacy and autonomy represented as lower-order motives within a related but separate facet of the agency motive cluster. In the context of work motivation, theories

of intrinsic motivation (e.g., Deci's Self-Determination Theory; Deci & Ryan, 1985) and job/work design (Parker, Morgeson, & Johns, 2017) further propose that work conditions play a central role in how these motives become salient and influence work goals and actions. For example, Job Characteristics Theory (Hackman & Oldham, 1980) posits that jobs that provide a sense of responsibility, significance, and autonomy promote motivation at work. Findings by Deci and colleagues show that the provision of extrinsic incentives may undermine intrinsic motivation when employees attribute extrinsic rewards as controlling (Deci & Ryan, 1985). Grant (2008) provides further evidence for the importance of social impact and social worth as mediating the positive impact of task significance on job behavior.

The convergent taxonomic structure of universal human motives suggests that in general, older individuals seek work and life circumstances that promote satisfaction of motives that allow for a sense of competence, a feeling of social belonging, and a sense of meaningful purpose in their environment. Nevertheless, the relative salience of these motives may shift as a function of the individual's circumstances, including age-related changes (Kanfer & Ackerman, 2004). Research investigating age-related differences in work motives and associated work goals indicates two age-related trends. First, work motives associated with a work-related development focus (e.g., new skill learning and promotion) decrease with age, while security-related work motives that minimize loss increase with age (de Lange, Van Yperen, Van der Heijden, & Bal, 2010; Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011). Second, work motives and long-term work goals associated with attainment of extrinsic rewards decrease with age, while intrinsic work motives for accomplishing meaningful work, utilizing existing skills, and helping others increase with age (Kooij et al., 2011).

In the context of the Kanfer et al. (2013) framework, the experience of work for older adults may thus be viewed as a complex balance of competing motivations. For example, as one ages, motivation to work in order to gain resources (e.g., increased income) may become less salient, but motivation to work to maintain resources (e.g., financial security) may become more salient. The costs associated with work such as lost time with family or increased stress and health issues may be particularly poignant for older adults and increase motivation to retire. Yet, for older adults who view work as a way of maintaining resources (either psychological or financial), rather than as a threat to resources, motivation to work may be heightened. Within the workplace, too, we see that older adults should experience motivation differently from their younger counterparts. Older workers should be more engaged by tasks and opportunities that allow them to maintain their psychological resources (e.g., self-esteem) rather than tasks or opportunities that potentially pose a threat to these resources, such as learning a challenging new task. Understanding these different manifestations of motivation at work within older adults may help better understand the psychological mechanisms underlying older adults' choices to engage in development opportunities, accept new assignments, or to leave the workplace entirely.

11.3 Lifespan Theories of Motivation

Three developmental lifespan theories have received substantial attention in the work and aging literature: Baltes and Baltes' (1990) Selection, Optimization, and Control theory (SOC), Carstensen's (1987, 1991) Socioemotional Selectivity Theory (SST), and Heckhausen's (Heckhausen, Wrosch, & Schultz, 2010) Motivational Theory of Lifespan Development (MTLD). These broad theories address how age-related changes in competencies, opportunities, and constraints at work affect an individual's work goals and strategies for goal attainment (see also Kanfer & Ackerman, 2004; Kooij & Kanfer, 2019; Rudolph, 2016). Rudolph and Zacher (in press) note several communalities of these formulations, including the view that adult development occurs as a life-long continuous process that is shaped by and shapes the environment in which the individual functions. However, each formulation focuses on different aspects of age-related changes and offers different explanations for the mechanisms and strategies by which these changes affect work-related motivation and behavior.

11.3.1 *Selection, Optimization, and Compensation Theory*

This comprehensive meta-theory highlights three adaptive behavioral strategies through which individuals shift their goals to manage age-related gains and losses in physical, cognitive, and psychological functions. Selection pertains to the prioritization of goals based on changes in age-related gains and losses and life experiences. Two forms of selection have been identified: elective selection and loss-based selection (Freund & Baltes, 1998). Elective selection refers to shifts in goal focus that direct attention toward accomplishment of a state or functional level. In contrast, loss-based selection refers to strategies undertaken in response to experienced difficulties (e.g., prioritizing work goals). Optimization pertains to the individual's management of available resources or means to accomplish one's goal (e.g., putting in extra time, effort, or optional learning). In contrast, compensation refers to the means that individuals use (e.g., getting help from colleagues) to compensate for problems in goal attainment.

11.3.2 *Motivational Theory of Lifespan Development*

Building on Heckhausen and Schulz' lifespan theory of control (e.g., Heckhausen & Schulz, 1995), this theory emphasizes the primacy of personal agency and ways in which individuals exert control in their environment. According to MTLD, individuals accomplish their goals using either primary or secondary control strategies. Primary control strategies are defined as behaviorally focused actions that aim to

directly modify the environment in line with personal goals and motives. In contrast, secondary control strategies reflect cognitive, self-regulatory strategies that individuals use to influence their emotional responses and motivation when primary control strategies are not possible. In the context of work and aging, MTLT proposes that opportunities to employ primary control decline and are offset by greater use of secondary (self-regulatory) strategies that facilitate goal adjustment or goal disengagement.

11.3.3 Socioemotional Selectivity Theory

This formulation by Carstensen (1987, 1995) emphasizes changes in time horizon associated with aging. Grounded in the social-cognitive context, SST posits that an individual's future time perspective shifts across the lifespan. During early adulthood, individuals tend to perceive the future as open-ended and full of opportunities, facilitating the salience of long-term instrumental goals related to acquiring more knowledge, information, and resources. However, as individuals age, the future tends to be viewed as more constrained with fewer opportunities. This shift in future time perspective is posited to lead to a shift in salience away from longer-term acquisition goals and toward socioemotional goals that maximize more immediately experienced positive emotional states.

SOC, SST, and MTLT provide powerful formulations for understanding gradual shifts that take place in key motivational systems (goal choice and goal striving) across the lifespan. These theories focus on the motivational processes by which individuals manage their resources to maximize development and well-being. SOC and SST theories emphasize the shifts in goal selection that occur in association with age-related losses and change in future time perspective. MTLT focuses on how adult development shifts self-regulatory strategies for goal pursuit. Organizing these perspectives within the Kanfer et al. (2017) framework, we see that older adults differ from younger adults not only in what motivates them but also in how they select and pursue their goals. Older adults should select goals that protect resources and minimize loss, which may be reflected in selecting socioemotional goals rather than performance goals or increased financial achievement. In pursuing these goals, older adults may optimize their resources in such a way that they capitalize upon their relatively higher levels of crystallized knowledge (Horn & Cattell, 1967) in order to engage in primary control behaviors to influence their environment. This may include selecting and pursuing work opportunities and tasks that can be achieved by drawing from knowledge and skills that the older worker already has. When faced with compensating for challenges in pursuing these goals, older workers may lean into more secondary control behaviors, focusing on protecting their psychological resources rather than overcoming these challenges. These behaviors may manifest in an increased motivation to leave the workforce and/or a decreased motivation at work.

11.4 Motivation at Work vs. Motivation to Work

As noted previously, Kanfer et al. (2017) suggest that the decision to continue in one's job beyond normative retirement age can be usefully distinguished from motivational dynamics that operate in the work context. As work motivation researchers have noted, there is typically substantial within-person variability in motivation at work. Over the course of a workday, an individual's motivation waxes and wanes as a function of energy level, events at work, and the demands of the work tasks. Research on job engagement—or the motivation, dedication, and vigor directed toward work activities—suggests that engagement involves the continuous interplay of cognitive and affective processes. However, when job demands consistently exceed the individual's resources, motivation and engagement falter. Interventions such as job crafting, work redesign, and supervisor support have been shown to have positive effects on job engagement through their effects on redressing the demand/resource imbalance (e.g., Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007). For example, job crafting to increase the meaningfulness of an individual's work role can increase intrinsic work motivation and job engagement (e.g., Tims, Derks, & Bakker, 2016).

In contrast to motivation at work, motivation to work reflects a longer cycle: a conscious, deliberative process in which individuals must evaluate the anticipated future costs and benefits of different courses of action for the likelihood of diverse motive accomplishments. For individuals with few financial reserves, the anticipated loss of income associated with retirement and its implications for accomplishment of higher-order security and self-protective motives may loom large in the retirement decision. Although the retirement decision may be associated with the decision to seek alternative employment to mitigate income loss (e.g., post-retirement work), the evidence suggests that finding new employment in later adulthood is difficult and that new employment is often at a lower rate of pay than one's previous job (Wanberg, Kanfer, Hamann, & Zhang, 2016). For these individuals, the decision to continue work rather than to retire may reflect a decision process consistent with the mindset of minimizing loss in the face of limited future opportunities.

In contrast, among individuals who possess financial reserves to support retirement, the decision process is likely to be more complex and related to motivation at work. For these individuals, the decision to remain in the job is likely to involve a belief that opportunities at work (vs. non-work activity alternatives) afford for the satisfaction of salient motives. The nature of the individual's job (e.g., job demands and job resources), individual differences in traits such as work centrality (i.e., the degree to which an individual views work as a main, important part of his/her life; Diefendorff, Brown, Kamin, & Lord, 2002), and the extent to which the current working experience is perceived as supportive of meaning, communion, and agency motives may contribute more evenly to the retirement decision and must be evaluated against the anticipated gains in motive satisfactions associated with engaging in alternative activities.

Several studies provide preliminary evidence on the determinants of motivation at work (and job engagement) and motivation to work (to retire) proposed by Kanfer et al. (2013). For example, de Wind et al. (2017) used a longitudinal design to examine the trajectories of work engagement in older workers (55–62 years) over the course of 3 years and the relationship between these trajectories and retirement behavior. They identified four groups of older workers based on their work engagement trajectories. A majority of older workers remained highly engaged with their work over the 3-year period of the study. About 12% of older workers remained at low levels of engagement during the span of the study. The remaining 9% of older workers showed changes in their work engagement, with 5% showing decreasing levels of engagement over the course of the study and 4% reporting increasing levels of engagement. Not surprisingly, individuals who consistently reported low levels of work engagement were more likely to retire early compared to individuals who showed steady high levels of work engagement. Further, men were more likely than women to retire early. These results support the role of both life circumstances and motivation at work as predictors of motivation to retire or to remain working.

In a more direct examination of the Kanfer et al. (2013) model, Beier et al. (2018) used a lagged design to link work motivation with successful aging (e.g., having a better trajectory of work and life outcomes compared to peers; Zacher, 2015) and retirement plans and expectations. First, the authors examined differential patterns in aging at work (e.g., increase, decrease, or no change in elements of work motivation such as job enjoyment, autonomy, and satisfaction). Similar to the findings by Templer, Armstrong-Stassen, and Cattaneo (2010), Beier et al. (2018) found that half of the participants reported relatively stable work motivations, implying usual aging; 19% of participants reported increased work motivation, suggesting successful aging; and the remaining 31% reported decreasing work motivation, indicating unsuccessful aging at work. Beier et al. (2018) suggested a relationship between promotion-focused motivational orientation and successful aging status, such that individuals higher in promotion-focused motivational orientation are significantly more likely to belong to the successful aging group compared to either unsuccessful or usual aging groups. Focusing on the motivation to continue working, Beier et al. (2018) found evidence to suggest that individuals who expected to be financially satisfied during retirement were less likely to delay retirement. Further, work centrality was positively associated with delayed retirement intentions and intentions to return to work post-retirement.

Using data from the Health and Retirement Study, Borawski (2016) tested the Kanfer et al. (2013) model with a cross-sectional sample of 1921 individuals aged 55 or older (oldest participant was 84). To-work goals were captured with items examining people's willingness to be employed, their search for work, and their willingness to reduce working hours. At-work goals were captured with items examining perceptions of job demands and work enjoyment. To-retire goals were captured using items that focused on desire to fully or partially retire. After controlling for prior health, demographic variables, and indicators of socioeconomic status, Borawski found that functional impairment and physical illness all significantly

negatively predicted at-work motivation and positively predicted to- retire motivation. It should be noted, however, that these effects were all quite small, primarily explaining less than 1% of variance in the outcomes above and beyond control variables.

Narrowing in on the influence of sociocultural and economic factors on motivations to work and to retire, evidence generally supports Kanfer et al.'s (2013) proposed links. For example, Staubli and Zweimüller (2013) examined the effects of a statutory increase in early retirement age (ERA) in Austria between 2001 and 2010. This policy change raised the ERA for men from 60 to 62 and from 55 to 58.25 for women. During the 10-year period following policy implementation, government retirement benefits claimed by men (aged 60–61) and women (aged 55–58.2) fell from roughly 38% and 52% to 3% and 7%, respectively. Similarly, during this period, employment for men and women increased from around 10% and 30%, to 30% and 60%, respectively. There was, however, an associated increase in unemployment claims from roughly 1% and 4% to roughly 10%. Together, these data suggest that governmental policies that delay receipt of retirement benefits correspond with a general increase in employment of older adults, supporting the hypothesized link in Kanfer et al. (2013) model.

Similarly, a study by Goda, Shoven, and Slavov (2011) examined the effects of the Great Recession in 2008 on individual retirement intentions. Data from the health and retirement survey collected from individuals over the age of 50 in 2010 showed significant increases in expected probability of working at age 62 (from 47.5% to 54.5%) and 65 (31.1% to 34.5%), compared to 2008. This increase in perceived probability of working was closely linked to the stock market valuation at the time when data were collected, such that as stock market performance decreased, individuals felt it was more probable that they would still be working at these ages. Additionally, unemployment rates were linked to these probabilities such that as unemployment rose, the reported probability decreased. On the other hand, Coile and Levine (2011) found evidence to suggest that individuals over the age of 62 are more likely to retire when the unemployment rate is high. Worker education moderated this relationship such that it is strongest for those with the lowest levels of education.

Focusing on the proposed link between local working conditions and motivation to retire or continue work, we see varied evidence. For example, a study (Bal, De Jong, Jansen, & Bakker, 2012) of 1083 healthcare workers across 24 units in The Netherlands found that the idiosyncratic deals older workers made with their peers interacted with the organizational climate to predict the motivation to continue working. Specifically, if individuals reported higher levels of development deals (e.g., increased training opportunities, challenging performance goals, or skill/career development opportunities), they were slightly more likely to be motivated to work. However, this relationship was moderated by the accommodative climate of the workplace toward older workers, assessed with items like “in this unit, older workers are encouraged to retire early,” such that if individuals worked in a low accommodating climate, high developmental deals increased their willingness to

work. The opposite held for individuals in high accommodating climates. Results also suggested that developmental deals may strengthen the relationship between developmental climate and motivation to continue working, such that having developmental goals in a highly developmental climate may maximize intentions to continue working. Further, if individuals reported high levels of deals allowing them greater flexibility in their scheduling and tasks, they were generally more motivated to work.

Bayl-Smith and Griffin (2014) found evidence in a sample of Australian employees over the age of 45 to suggest that perceived workplace age discrimination was associated with lower work engagement. Counterintuitively, however, age discrimination had a direct, positive effect on intended retirement age, after accounting for the indirect negative effect through work engagement. Timmons, Hall, Fesko, and Migliore (2011) conducted interviews with 18 employers who had targeted methods of retaining workers over the age of 50. The authors also conducted site visits with a subset of the employers. These qualitative study results suggest that a supportive work climate was critical to keeping older employees motivated to work for the organization. Specifically, job flexibility, comprehensive benefit packages, opportunities for professional growth and development, and a willingness to accommodate older workers' needs were frequently cited methods of improving retention of older workers. Zaniboni, Truxillo, and Fraccaroli (2013) found evidence to suggest that age interacts with task and skill variety, such that for older workers compared to younger workers, skill variety was a better negative predictor of intentions to leave the organization.

Looking toward the influence of person characteristics and person-context variables, we see that much work has also been done in this domain supporting Kanfer et al.'s (2013) original proposition. Taylor, Pilkington, Feist, Dal Grande, and Hugo (2014) surveyed employed individuals between the ages of 50 and 65 living within Australia. Results from these surveys suggested that individuals with lower education, who have a clear financial savings strategy, and who work in a sales field are more likely to intend to completely retire. Individuals who are self-employed and those who did not have strong attitudes regarding retirement reported intending to work beyond the age of 65. In fact, most respondents (74.1%) reported some intention of continuing to work, rather than completely retiring. Schmidt and Lee (2008) found evidence in a sample of 345 Canadians over the age of 45 to suggest that work centrality, occupational commitment, and commitment to leisure activities were all significant predictors of intentions to retire. Specifically, individuals who had higher levels of work centrality or occupational commitment were less likely to endorse retirement intentions, while those who were higher in commitment to leisure activities were more likely to report intentions to retire. Platts and Glaser (2017) studied individuals who had retired between the ages of 50 and 70 in Germany, United Kingdom, and Russia to determine who returns to work and what motivates this decision. Of those studied, 17% of Germans, 26% of British, and 42% of Russian participants had returned to work following retirement. The data suggested that men, younger retirees, those with more education, and those in better health with

higher incomes were more likely to return to work after retiring. Schlosser, Zinni, and Armstrong-Stassen (2012) collected cross-sectional data from retirees between the ages of 50 and 70 and found that those who felt financially secure and had enjoyed retirement were more likely to remain retired. On the other hand, those who were worried about finances, missed working, or wanted to learn new skills were more likely to return to work. Armstrong-Stassen, Schlosser, and Zinni (2012) also found that individuals who had a positive retirement experience or an increase in life satisfaction following retirement were less likely to return to work. Those who were experiencing financial stress or who wanted more opportunities to engage in meaningful work or roles (e.g., mentoring) were more likely to return to work after retiring. Taken together, these data support Kanfer et al.'s (2013) proposed link between individual characteristics and motivation to work or retire.

Lastly, it is pertinent to examine the empirical evidence regarding the role motivation at work plays in the retirement process. Much evidence supports the links between individual characteristics and work context on motivation at work (e.g., Rich, Lepine, & Crawford, 2010). However, Kanfer et al. (2013) also highlight that motivation at work should be linked to motivation to retire. Some evidence supports this proposition. Returning to Bayl-Smith and Griffin's (2014) findings, work engagement mediated the influence of cognitive and affective identification as an older adult on planned retirement age. Specifically, individuals who were high in cognitive or affective identification as an older adult were less engaged with their work and were thus more likely to report younger intended retirement ages. Echoing these findings, Desmette and Gaillard (2008) surveyed 352 workers aged 50–59 and found that those who self-categorized as older workers were more likely to endorse intergenerational competition and a desire to retire early. James, McKechnie, and Swanberg (2011) examined 6047 employees of all ages working within a retail company. Results suggested that like younger workers, older workers (55+) reported higher levels of engagement if they had higher levels of supervisor support and recognition, schedule satisfaction, career development and promotion opportunities, and job clarity. Only for those older adults who were retirement eligible (66+), career development and promotion opportunities were not significant predictors of work engagement. Results of a survey conducted by Inceoglu, Segers, and Bartram (2012) with two samples (9388 and 2512) of British workers suggest that extrinsically rewarding and resource intensive job features may be less motivating for older workers compared to intrinsic motivators like autonomy. Inceoglu et al. (2012) argued that this difference in values may be the explanation behind Ng and Feldman's (2008) meta-analytic findings that older workers engage in higher levels of organizational citizenship behaviors than younger workers. Considering a related but different construct, Sibbald, Bojke, and Gravelle (2003) found evidence to suggest that above and beyond age and minority status—which were both predictors of intention to quit direct patient care—higher levels of job satisfaction were associated with lower likelihood to report an intention to quit patient care. Dendinger, Adams, and Jacobson (2005) sampled 108 retirees of a university (both professors and non-faculty) between the ages of 56 and 77 who held bridge employment positions and

found that the need to share knowledge predicted both job satisfaction and positive attitudes toward retirement, and social motivation for working was linked only to positive attitudes regarding retirement. Although the authors did not directly test mediation, it should be noted that job satisfaction and positive attitudes toward retirement were positively correlated ($r = 0.33$), perhaps pointing toward a mediational link in support of Kanfer et al. (2013) proposition.

In light of the relative dearth of empirical examinations of the proposed differentiation and relationship between motivation at work and motivation to work for older adults, it is difficult to draw conclusive statements. However, considering the evidence that has been found along with the previously outlined theoretical perspectives, there are certainly some supported trends in the psychological experience of work for older adults. First, there does seem to be a relatively consistent link between work engagement (motivation at work) and delayed retirement (motivation to work). This link, however, is particularly poignant for older individuals who do not have to worry about the financial costs associated with retirement, emphasizing the role of loss avoidance in older adults' decision-making. Further, older adults with health concerns are less likely to be engaged at work and more likely to exit the workforce, potentially because work represents a threat to either their physical or psychological resources. Similarly, motivation to work seems to be predicted more by opportunities for flexibility and other methods of maintaining resources while meeting psychological needs, rather than by opportunities for development. This change may manifest itself as older workers showing decreased motivation at work in occupations that require frequent self-development or similar levels of proactive engagement.

11.5 Abiding Issues and Future Research Directions

Understanding the factors that affect work engagement and motivation in later adulthood is a topic of growing importance to public policy makers and organizational personnel. Although there is increasing interest and support for longer working lives among policy makers and individuals, there is great variability in the life circumstances and individual motives that drive employment and job engagement during later life. Our brief review of the motivational literature with respect to older adults suggests that age-related factors influence both motivation for employment and motivation at work. Motivation to work in later adulthood appears to be largely determined by two distal but related variable classes: life circumstances (in particular, perceived financial need) and individual differences in work attitudes, such as work centrality. In contrast, motivation at work and job engagement are largely driven by proximal variables that influence the individual's perceptions of person-job fit and of work roles that allow for satisfaction of important life goals. The distinction between to-work and at-work processes suggests that motivation at work is likely to be more under the control of organizations or supervisors than motivation

to work. Organizations that provide opportunities for work role redesign that allows older adults to protect their psychological and physical resources may see increases in retention and engagement of older workers. Unlike their younger counterparts, older workers may be more loss-averse and less motivated by opportunities to gain new skills or resources; by providing them with opportunities to capitalize on the skills and knowledge they have already obtained, organizations may create particularly engaging and rewarding jobs for older workers.

Dynamic lifespan formulations suggest that age-related changes in future orientation and competencies trigger a shift in the relative salience of different motive clusters. In the SST formulation, changes in future orientation from life-to-be-lived to life-until-death suggest that—all other things being equal—individuals experience an age-related increase in the salience of communion and meaning motives. Similarly, the SOC formulation emphasizes different protective strategies or mechanisms by which individuals change their environment and work goals to maximize adjustment.

The mapping of motive taxonomies to dynamic lifespan formulations suggests how aging and associated motivational processes to promote adjustment may alter an individual's profile of salient motives but does not account for the plethora of traits and personal factors that also affect work goals and motivation. We suggest that these factors can be in part accounted for by conceptualizing them as inter-individual differences in personal attributes that operate within a larger multilevel system to independently and jointly affect motive salience and work motivation. One important feature of such a system is recognition that different variables within the system operate on different timescales. For example, at the neurobiological level, there are large individual differences in the rate of decline among different cognitive abilities during later adulthood. At the same time, other variables such as work biographies, work attitudes, employability, and career and financial success are frequently driven by changes in external factors such as macro-economic conditions, culture, and technology that can occur unpredictably during a lifetime. Intra-individual change driven by biology and inter-individual differences driven by the combination of biology and circumstances operate in tandem and cumulatively to affect the salience of various motives and the associated formation of employment and work goals. For example, among older individuals with work biographies characterized by low-paying, physically demanding, and/or unstable work, sustenance motives—to gain or maintain employment (associated with lower level motives in the agency cluster)—may exert stronger influence on work goals and behavior than developmentally sensitive motives associated with the desire to engage in meaningful work. This is not to say that such individuals do not experience developmental shifts in motive strength, but rather that from a functional perspective such shifts take on secondary significance with respect to employment.

At the other end of the spectrum, sustenance motives may be less salient among older individuals with work biographies characterized by high levels of occupational and financial success and good physical health. Among these individuals, age-related motive shifts are likely to loom larger in the choice to desire and craft

employment so as to optimize aging and the attainment of motives associated with autonomy, competence, and purpose. Investigations of work motivation using an integrated approach that takes into account motive profile and inter-individual differences in work biographies appears a promising future research direction.

Considering all of the above outlined theoretical and empirical evidences, two fundamental questions remain that are of importance to both practitioners and researchers: (1) how can we improve older adult motivation at work and (2) how can we increase older adult motivation to work. Above, we have outlined support for a variety of job characteristics and individual traits or circumstances that may address these questions. Based on this summary, we next offer recommendations and propositions that can be implemented and evaluated for their efficacy (see Table 11.1).

11.5.1 Possible Organizational Interventions

From a person-centric perspective, we suggest that organizational interventions that sustain motivation at work and promote longer working life may be more effective than strategies that seek to enhance an individual’s motivation to return to work

Table 11.1 Possible organizational interventions and promising research directions in work motivation among older adults

	To-work	At-work
Possible organizational interventions	<p><i>Management practices:</i> Provide age-related benefits equally to avoid perceived bias Recognition and respect for older workers</p> <p><i>Organizational norms and practices:</i> Remediating negative age bias in hiring Advertise scheduling flexibility, EEO, opportunities to mentor Phased/partial retirement options</p> <p><i>Work structures/design:</i> Improving job search strategies among older workers Continued development opportunities Job transfers and job redesign</p>	<p><i>Management practices:</i> Increase psychological safety in workplace Make worker active agent in production process Promote family support for workplace</p> <p><i>Organizational norms and practices:</i> Provide physically and emotionally supportive workplaces Promote contribution rather than expectation Provide multiform learning opportunities</p> <p><i>Work structures/design:</i> Job crafting and work flexibility</p>
Promising research questions	<p>Are there age-related differences in emotion regulation during job pursuit? How to buffer the negative effects of poor health on remaining at work? How do individual work episodes (positive or negative) influence older workers’ intentions to work/retire?</p>	<p>How can reverse mentoring and other institutional programs keep older employees engaged? Can leaders engage in specific/unique behaviors with older workers to keep them engaged? How can technology be leveraged to keep older workers engaged?</p>

post-retirement. During the past 15 years, organizations have experimented with a number of interventions designed to enhance motivation to remain on the job, including the adoption of flexible work arrangements, job crafting, and bridge employment arrangements. Increased vacation time and flextime schedules (e.g., Rau & Adams, 2005) provide older adults with the means for meeting non-work demands (e.g., healthcare appointments) and sustaining socioemotional resources (e.g., family and friends). Job crafting and job redesign (e.g., Watanabe-Muraoka, Kawasaki, & Sato, 1998) enable older adults to utilize well-developed skills in different tasks or work roles that permit maintenance of positive self-concept.

Organizations may also promote motivation to engage in development opportunities by structuring such opportunities in ways that appeal to salient psycho-social and meaningfulness motives (e.g., Hofstetter & Cohen, 2014). Instead of directly targeting older workers or offering extrinsic rewards for development opportunities, organizations can embed intrinsically motivating qualities within development opportunities for all workers (e.g., Hennekam & Herrbach, 2015) to attract older workers and keep them engaged. Rather than offering training on a new skill (particularly new non-technical skills) via self-directed online platforms, organizations may offer training using self-paced and/or collaborative training structures. It may even be worthwhile for the organization to make these training opportunities open and attractive to employees' partners or loved ones. In doing so, organizations may remove the cognitive dissonance associated with the choice between work and family that may be particularly salient for older workers who view their time as limited, and work as a threat to their family time.

We also suggest that organizations can create environments that promote healthy lifestyles. Given that older workers are particularly loss-averse, they may be less willing than younger workers to endure work stressors or hazardous work environments. By reducing the unnecessary stressors within the work environment (e.g., abusive supervision and telepressure), organizations may find that older workers have improved work engagement and increased intentions to remain actively working. Further, if older workers view work as beneficial for their health—both physical and psychological—then perhaps they will be more willing to stay in or reenter the workforce. To achieve this perception, however, the role work plays in meeting psychological needs, particularly those of relatedness, must be highlighted by organizations. Further, organizations must be willing to create a work environment that meets older workers' increased needs for accommodations in order to avoid losing those workers who may have health-based limitations on performance. This subset of the older worker population is particularly at risk for lower levels of engagement and higher rates of turnover, possibly because work represents a loss of psychological resources through the reminder of their physical or cognitive limitations. By creating an environment that helps older workers meet their psychological needs for competence and autonomy even in the face of limiting health factors, work may actually be viewed as a rewarding experience, and thus older workers will stay, and stay engaged.

11.5.2 Promising Research Questions

With regard to older adult motivation to work, three promising research questions remain unexplored (see Table 11.1). First, there have been relatively few empirical studies investigating how older and younger individuals may differ in the cognitive and affective processes associated with job pursuit or the decision to turnover. Because older adults are more loss-averse than younger adults, we may expect to see different neurological activation patterns when making employment decisions, different self-regulation strategies when coping with the stress associated with work decisions, and different cognitive search strategies when determining what information is or is not relevant.

Second, although there is ample evidence, in general, to link qualities of work to negative health outcomes, more research is needed to understand whether older adults are a particularly vulnerable population to these stressors. Future research should examine differences between older and younger workers in exposure to, reactivity to, and recovery from workplace stressors and threats to health and well-being. Older adults may have limited exposure to these stressors due to self-selection into lower stress workplace environments because of their loss aversion. They may, however, due to lower resources, be more reactive to and take longer to recover from stressors. By exploring these differences and different methods of mitigating these effects, researchers may create a stronger understanding of how to maximize older adult motivation to work.

Third, we know very little about how older and younger workers differ in their moment-to-moment experiences of work. Certainly, there are differences in cognitive processing speed, biases, and emotional reactivity, but how do these age-related differences translate to the experience of work episodes? Investigating these micro-level processes can help create a stronger understanding of how work is perceived and meaning is made by older adults. This understanding, then, can be used to create workplaces and jobs that are highly rewarding for older workers to improve motivation to work, and at work.

Considering motivation at work, we must also address how changes in the modern workplace may influence older worker engagement. Specifically, relatively novel and understudied interventions like reverse mentoring that are designed to keep older employees engaged may be promising, but our understanding of their mechanisms is limited. Is it the opportunities to meet psychosocial needs that make these interventions effective, or their ability to help older adults reframe work as not a threat to resources, but an opportunity to maintain and even gain resources? With the rapid integration of technology into the workplace, all adults have needed to be able to learn and use a variety of new skills. We know that older workers are hesitant to pursue learning opportunities in the workplace that may harm self-esteem, so how can technology be integrated into the workplace without alienating older workers? Is there a way to use technology so it is not only not threatening to older workers, but actually helps them become more integrated and engaged with their jobs? Lastly, in the increasingly globalized and team-based workforce, what role can team

leaders play to better integrate older workers into their teams? How can leaders capitalize on older workers' knowledge and abilities without creating a high-stress environment that may pose a threat to the older workers' resources? By addressing these questions, researchers may better understand how to maximize older workers' motivation at work, and their experience of work in the modern workplace.

11.5.3 Conclusions

Older worker motivation is of crucial concern to public policy makers, organizations, and those individuals in later adulthood. In this chapter we argue that work motivation for all individuals derives from the anticipated or experienced satisfaction of three broad motive classes: achievement or sense of competence, belonging or sense of community, and meaningful purpose or sense of engaging in significant or worthwhile activities. Adopting a lifespan perspective, life circumstances and age-related changes in competencies across the lifespan operate in tandem to create a profile of older worker motive and opportunity landscapes that differ from that of younger individuals. For older individuals, this landscape may dissociate motivation at work from motivational decision-making to continue working, or to seek employment post-retirement. Lifespan theories of motivation suggest that financial stability—based on financial status, government policies, or stock market performance—is a significant factor in the employment decision, but likely plays a lesser role in day-to-day motivation at work and job engagement. Work attitudes such as work centrality and age-related changes in non-work opportunities for motive satisfaction may also play an outsized role in employment decisions for older workers compared to younger workers.

In contrast, motivation at work is typically driven by thoughts, feelings, and behaviors that relate to the working experience. Organizations that seek to promote older adult motivation at work must take account of age-related changes that can destabilize person-job fit and the broader sociocultural milieu in which work is performed. Consistent with findings in the broader literature, older adults who perceive the organization as discriminating on the basis of age and/or perceive their supervisor as unsupportive are likely to be less engaged. Job engagement is also more likely among older workers who perceive their work to be meaningful, socially rewarding, and beneficial to physical and mental health. Human resource management practices such as flextime scheduling, job crafting, and mentoring represent some of the more common methods by which to facilitate older worker job engagement. Other important but less well-studied areas for enhancing job engagement include the use of technology to improve person-job fit, collaborative learning practices, and organizational strategies that build stronger familial support for the older adult's work role. Our review suggests that the extension of work motivation theory and research to the graying workforce has tremendous potential for advancing both psychological theory and society.

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Chapter 12

Can Acquired Skill and Technology Mitigate Age-Related Declines in Learning Rate?



Neil Charness

In this chapter, I explore several questions. First, what role does age-related slowing in the rate of information processing, particularly learning rate, play in older worker performance? Second, to what extent does acquired skill mitigate age-related declines in information processing rate? Third, how might technology be deployed to mitigate any potential age-related declines in performance? (See also Beier, Chap. 2, for a discussion of related issues.) I begin by reviewing some changes in the age composition of the US labor force.

12.1 Demographics of the Workforce

As people age into the pensionable part of the lifespan in developed nations, many have the option to retire from work. When public and private pension programs were first introduced, they drew many aging workers out of the workforce. In the past decades, the trend toward earlier retirement reversed and workers are remaining in the workforce until later in life. There are many possible factors supporting this trend—some negative, some positive. A negative is the well-recognized shift in retirement financial risk from employers to workers: the shift away from defined benefit to defined contribution pension plans (Porteba, Venti, & Wise, 2007). Having less certainty about income levels in retirement coupled with the need to support increased lifespans may incentivize longer work lives for those still able to remain at work. A positive factor for longer workforce participation is the trend for improved health in the population and general increases in longevity even at the highest age levels (Vaupel, 2010), though disability-free lifespan may be shrinking (Crimmins

N. Charness (✉)

Psychology Department and Institute for Successful Longevity, Florida State University,
Tallahassee, FL, USA

e-mail: charness@psy.fsu.edu

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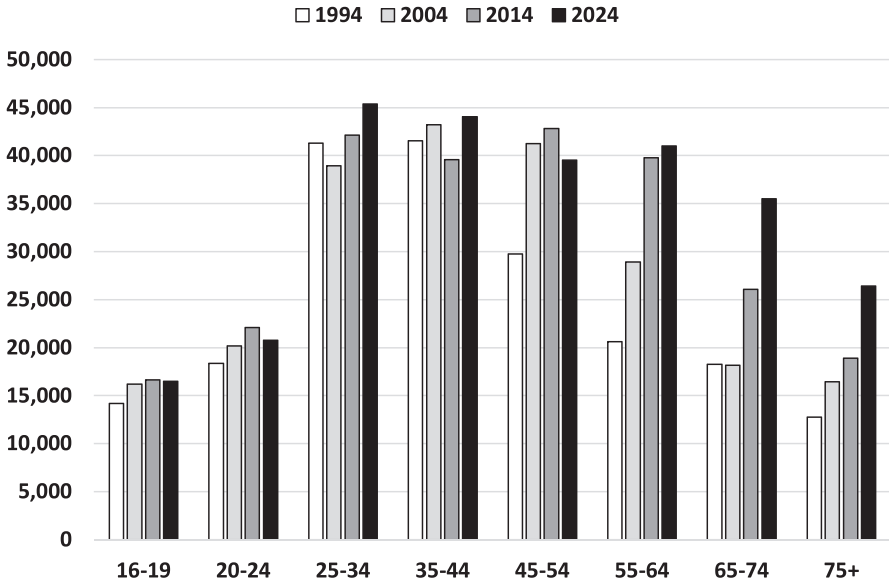


Fig. 12.1 Past trends and projections to 2024 for the number of labor force participants by age groups 16–19 years through 75+ years in thousands. Data from Toossi (2016)

& Beltrán-Sánchez, 2010). Another factor, discussed below, is a trend for improved working conditions and changing norms supporting continued work.

As Toossi (2016) notes, the US Labor Force is undergoing a dramatic shift in participation rates by different age groups/cohorts and is becoming more diverse in terms of gender and ethnicity. The data shown in Fig. 12.1 focusing on age groups show that the fastest growing groups are age 65–74 and 75+ in terms of projections to the year 2024.

Given that the data represent participation rates, not all the expansion is attributable to the baby boom cohorts entering new age groups, though that plays a role. Rather, older workers in the age 65–74 and age 75+ cohorts are expected to work longer. Recent polls (Gallup’s Economy and Personal Finance Survey, 2017) suggest that this trend is likely to continue, and any new growth in the economy following the Great Recession can be expected to boost those trends if the labor supply tightens. Another notable feature of the projected future workforce is its diversity. Projections are for increased participation rates by females compared to males, by Blacks and Asians compared to Whites, and by Hispanics compared to non-Hispanics. Although the business cycle is likely to be the most powerful determinant of worker participation rates, it seems likely that our workforce for the next few decades will be a more diverse, aging one.

The Toossi (2016) trends toward greater participation rates for older cohorts are echoed in a study of retirement benefit claim rates (Munnell & Chen, 2015). A lower percentage of individuals were claiming social security benefits at age 62 in 2013 (42% of men and 47% of women) compared to 1985 (52% of men and 64% of

women). The trends are all pointing in the direction of an aging workforce now and in the future.

Another recent trend, perhaps linked to the first, is the drop in retirement satisfaction in national surveys. Banerjee (2016) notes that cross-sectional and longitudinal surveys show a sharp decline from 1998 in satisfaction with retirement when about 60% of retirees reported very satisfying retirements, to 49% responding in that category in 2012. Banerjee used data from the Health and Retirement Study or the longitudinal comparisons and the question: "All in all, would you say that your retirement has turned out to be very satisfying, moderately satisfying, or not at all satisfying?" The trends differ for health and wealth status with those in better financial circumstances and those in better health experiencing less decline in retirement satisfaction. Gender did not seem to make much difference in satisfaction with retirement.

Finally, it is worth considering how norms about age and retirement may be changing in firms (Moen, Kojola, & Schaefer, 2017; Mulders, Henkens, & Schippers, 2017). Human resource policies may be shifting to provide greater flexibility at work to accommodate all workers. The consequence of providing flexibility as well as return-to-work opportunities may support the trend toward later retirement or re-engagement in work after a formal retirement. In short, the trend toward later retirement is likely to persist for structural and functional reasons.

12.2 Consequences of an Aging Workforce

Economists have expressed concern that an aging workforce is likely to result in declining productivity. Recent analyses for the United States (Maestas, Mullen, & Powell, 2016) and the EU (Aiyar, Ebeke, & Shao, 2016) suggest a roughly 1% decline in the US GDP and 2% decline in the EU total factor productivity (TFP) over the next decade attributable to workforce aging. This projected decline is mostly attributed to a combination of slowing productivity growth and labor force growth. These findings seem at first blush to be at odds with decades of meta-analytic studies by industrial/organizational psychologists showing no relationship between the age of a worker and productivity (McEvoy & Cascio, 1989; Ng & Feldman, 2008; Waldman & Avolio, 1986). One way to reconcile these findings is to note that psychologists look only at output, namely the relationship between age and piecework measures, or age and supervisor or peer ratings. Economists use a denominator in their estimates, usually the cost of the labor provided. If you examine salary as a function of age, you find that it tends to rise with age in cross-sectional views of the labor market, such as seen in Fig. 12.2.

Wages rise with age beyond the teen years, leveling off by the mid-50s and falling in the 60s. Thus, if productivity does not change much with age but wages rise, once a denominator is in place, it is clear that economic productivity should fall as the workforce ages: no change in output accompanied by an increase in input (salary) costs.

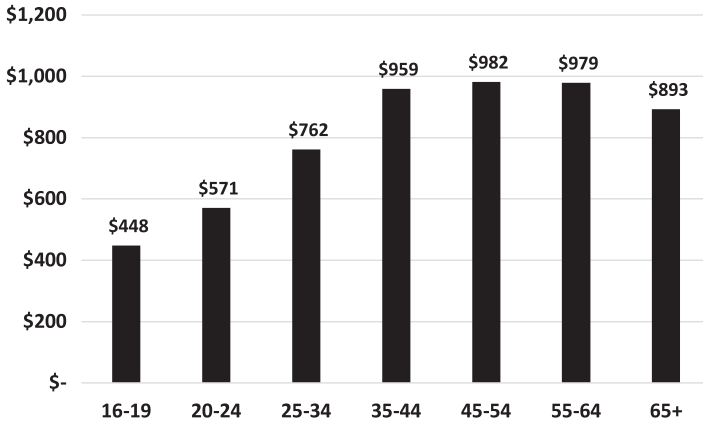


Fig. 12.2 US median weekly wage in Q4 of 2017 for full-time wage and salary workers, not seasonally adjusted. Data from <https://www.bls.gov/news.release/wkyeng.t03.html> (accessed 2/9/18)

On the other hand, assumptions that employers are rational and out to maximize firm profitability would seem to argue that a current wage earner should be rewarded fairly for productivity and that current wages should reflect productivity of individual workers. However, rationality is bounded for human decision makers by their limited cognitive abilities; hence, they satisfice rather than optimize (Simon, 1978) and they are prone to a variety of decision biases (Kahneman, 2002; Thaler, 2017). There are intriguing theories for why younger workers might be underpaid and older ones overpaid. For instance, Hutchens (1986) formulated the delayed payment contracts theory. It argues that employers use a later work life reward of overpayment to minimize shirking behavior until the reward can be received. However, tail-end baby boomers have held about a dozen jobs between the ages of 18 and 50 years (News Release USDL-17-1158, Bureau of Labor Statistics, 2017), suggesting that lifetime contract payment behavior is unlikely to entice today's younger (or older) job-hopping worker.

Why might we be anticipating lowered productivity with age? At the level of the individual, age-related changes in cognition—some positive, some negative—coupled with age-related changes in motivation may impact human capital formation.

12.3 Age-Related Changes in Cognition and Motivation

Both cognition, abilities that underlie thinking and problem solving, and motivation, inclinations toward behaviors, undergo age-related changes. Cognition affects job performance directly in terms of the efficiency with which tasks can be accomplished. Motivation affects willingness to engage in job-related tasks, for instance, willingness to seek training opportunities.

12.3.1 Cognition

Some of the earliest work in cognitive aging consistently found general slowing in information processing (Birren, 1974; Salthouse, 1996). Although there have been debates about whether there is a single slowing factor or multiple ones (e.g., Hale, Myerson, Faust, & Fristoe, 1995), practically speaking, slowing is a well-established phenomenon (Jastrzembski & Charness, 2007; Verhaeghen, 2014). A reasonable estimate is that an older adult (e.g., age 65+ years) will take roughly 1.5–2 times as long to complete an unfamiliar task as a young (age 20) adult when that task is based on a mix of information processing operations ranging from perception to decision making to psychomotor performance (Jastrzembski & Charness, 2007).

Such slowing extends to learning tasks too, not just to performing already learned activities. Verhaeghen (2014) provides meta-analytic estimates for the relation between adult age and a variety of mental processes or abilities critical to learning rate: speed of processing, $r = -0.53$; working memory $r = -0.42$; and episodic memory performance, $r = -0.38$. These constitute moderate to large effect sizes and are among the largest seen for individual difference factors such as age, gender, ethnicity, or socio-economic status. Even for realistic complex tasks conducted in laboratory settings such as learning a new word processing software package, older adults take about twice as long to proceed through the tutorials as young adults, with middle-aged adults more or less midway between, at least for the case of novice learners (Charness, Kelley, Bosman, & Mottram, 2001).

Nonetheless skill, a function of acquired knowledge, is an important mediator of these relationships. For instance, in the second experiment in Charness et al. (2001) investigating how experienced adults learned a different, unfamiliar word processor, the gap between young and middle-aged nearly disappeared, and the older adults performed about as well as young novice learners. That demonstration of the powerful role that skill can play in new learning has significant implications for training and retraining older workers. Experience can sometimes compensate for age-related slowing such as in the case of maintaining high rates of typing speed by buffering more text (Salthouse, 1984). Nonetheless, even older experts show slowing when asked to make quick decisions in their domain of expertise (Jastrzembski, Charness, & Vasyukova, 2006).

Recent progress on tracing brain mechanisms (e.g., Wenger, Brozzoli, Lindenberger, & Lövdén, 2017) has shown that there are multiple phases to skill acquisition. Initially, there is a growth of new cells and connections, followed by a pruning back and normalization process. However, very little is known about brain mechanism changes for skill acquisition processes in aging adults. Krampe and Charness (2018) review general theories about how age and skill trade-off to predict performance. Acquired skill is a powerful counterweight to normative losses in fluid ability with age.

A challenge for all workers is new learning because in a hyper-competitive industry (e.g., technology products), firms live or die based not on past performance or skill levels but on current competitive advantages. Hence firms rely strongly on

their human assets to outcompete other firms. Skill obsolescence is a major risk to workers and firms alike. As an example, one study examining copier repair personnel showed that time since training, rather than age, was the better predictor of how long a machine would operate properly (Sparrow & Davies, 1988).

The main hypothesis I am exploring in this chapter is that age-related slowing in basic cognitive operations, particularly in the rate of learning, can have widespread effects on learner motivation and can partly explain the reluctance of older workers to seek training. It may also explain the reluctance of firms to offer training to older employees, as well as the decline in productivity that economists are forecasting for our aging workforce. Later, I will speculate about techniques to mitigate the deleterious effects of a slowed rate of learning and the role that technological innovations might play.

Let me provide some caveats up front about these broad generalizations. First, people “age” at different rates, and there is a high variability in performance in older age ranges. Second, not all cognitive abilities show normative age decline. Crystallized ability—general knowledge from the culture, such as vocabulary knowledge—tends to increase with age. These trends can be seen in Fig. 12.3, which shows a cross-sectional scatterplot for crystallized ability (z -scores) and age.

Referring to this figure, one can see a high variability in performance across age decades. One can also see from the scatterplot that some 80-year olds perform at higher levels than all 20-year olds. Admittedly, cross-sectional comparisons suffer from a number of interpretive issues, including that different age/birth cohorts have

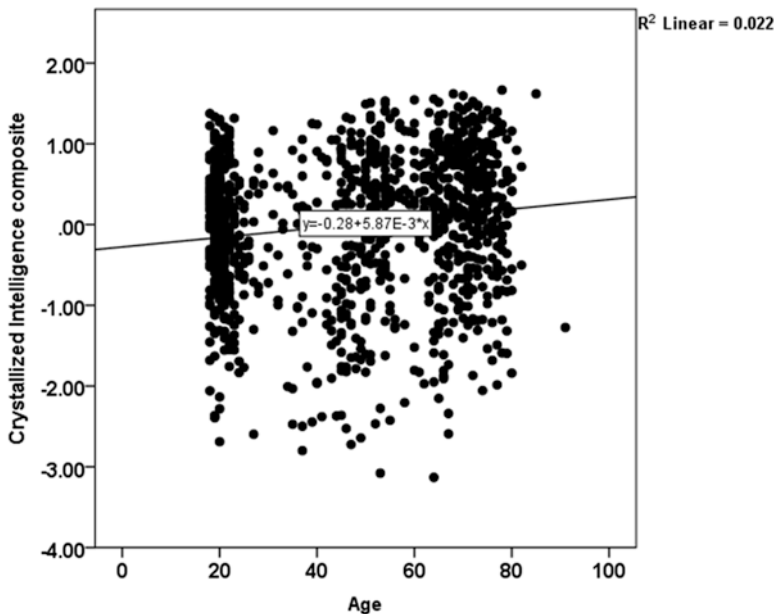


Fig. 12.3 Relation between chronological age (years) and crystallized ability. Data from Czaja et al. (2006)

had different experiences. For example, the Flynn effect, the generational improvements in fluid abilities (Fox & Mitchum, 2013; Trahan, Stuebig, Hiscock, & Fletcher, 2014), may exaggerate performance differences. For current work performance, such issues are moot if all the employers want to know is whom to hire and retain.

An age-related advantage in work task performance would be expected to hold when the task relies primarily on accumulated knowledge. Such crystallized knowledge tends to increase with age at least into the 50s and 60s (Salthouse, 2010).

12.3.2 *Motivation*

There are motivational changes with age (Carstensen, Isaacowitz, & Charles, 1999) that may be attributable to effects of perceived time horizons as opposed to a slower rate of learning. That is, if you expect your efforts to bear fruit for only a short period of time, you are less willing to engage in efforts than if your reward will be stretched out over many years. Older adults usually have fewer years ahead to recoup investments than younger adults; hence, as “rational” people age, they are less likely to be willing to engage in new learning or form new relationships compared to capitalizing on prior learning and relationships.

Still, there are intergenerational transfer motivators that might result in investment behavior even in very old adults. The classic example given in similar parables across cultures is the case of a very old man planting an olive tree. When asked why he was planting a tree for which the fruits would likely only be available after his death (some olive trees take 10 years to reach maturity), the man replied that just as his ancestors planted for him, so he was planting for his descendants. Nonetheless, when issues of kin are in the background, people usually weigh costs and benefits when making decisions, and the payback period for new learning may be a significant factor in the decision to invest time.

More concretely, realizing that it might take an hour to learn the basics for a potential new smartphone purchase may be considered unpleasant but judged to be acceptable. Taking 2 h for the same task might prove too daunting to want to invest the time, particularly in the context of competing time demands. The degree of slowing in learning rate normatively experienced by the mid-60s could easily turn 1 h into 2 h. Assuming that older adults are aware of their changing learning capabilities, so that they can monitor learning rate (a skill known as metacognition), they should be more reluctant to take on new learning. Evidence suggests that metacognition is reasonably well maintained with age (Hertzog & Dunlosky, 2011).

Considerable evidence has accumulated over the years, initially based on UK data, that older workers are less likely to volunteer for or to be offered new training than younger ones (Belbin & Belbin, 1972; Taylor & Urwin, 2001). Other international data are also consistent with such findings, even in industries experiencing rapid change such as information technology firms (Charness & Fox, 2010). Many reasons have been offered for such training and retraining gaps. One reason is age

bias on the part of managers against training older workers because they have a belief that older adults may have difficulty learning new things (Bal, Reiss, Rudolph, & Baltes, 2011), consistent with a general population age bias (e.g., Kite, Stockdale, Whitley, & Johnson, 2005). Another reason may be the belief that the firm is unlikely to recover training costs with an older worker despite evidence to the contrary (Brooke, 2003), partly because older workers change jobs less frequently (Swaen, Kant, van Amelsvoort, & Beurskens, 2002). Another explanation is that training is less effective for older workers (e.g., Kubeck, Delp, Haslett, & McDaniel, 1996); hence, managers are less willing to offer training, and older workers, based on negative experiences, are less motivated to seek out or accept training (e.g., Zwick, 2015).

Another threat to older worker performance, at least theoretically, is stereotype threat (Lamont, Swift, & Abrams, 2015). That is, experimental studies that prime older adults (mean age = 69.5 years) with negative stereotypes about the aging process (more so than those that present facts about aging), result in worse performance on memory and cognitive tasks (effect size = 0.28). However, there is little indication that worker productivity, as measured by variables such as piecework and peer and supervisor ratings, declines with age in the workplace (e.g., Ng & Feldman, 2008). The finding of little apparent change in productivity with age fits with the finding that stereotype threat effects tend to depend on placement of outcome variables, the temporal distance between the prime and measures of performance. Later-occurring measurements show weaker effects of primes (Lamont et al., 2015). So, laboratory-induced stereotype threat may not generalize to work performance given that performance is assessed over spans of months and years rather than hours. Nonetheless, it is easy to imagine that biases about aging could play into subjective evaluations of performance by peers and managers, masking true skill-related improvements with increased age.

To summarize this section, a variety of factors can play a role in the likelihood that firms or their workers will invest successfully in human capital. At the level of the workers, motivation to acquire new skills may wane for reasons such as recognition of an increasing cost for new learning, acceptance of age stereotypes that dampen enthusiasm for retraining, or diversion to challenges and opportunities other than those offered at work. Firms may also harbor beliefs that it is wasteful to offer training to older workers and that replacing them with younger ones who are less costly (wage cost as the denominator in a productivity variable) and who have faster learning rates may be the best strategy for improving their human capital. How can such barriers to maintaining and developing skills in older workers be surmounted?

12.4 Mitigating Obsolescence and Age-Related Declines in Abilities: The Role of Technology

Thus far I have painted a somewhat gloomy picture for the prospects of older workers to continue in employment settings past traditional retirement ages. Although a loss scenario seems better supported by the data on cognitive and motivational aging than a gains-with-aging one, I will argue that there are a variety of ways to mitigate such losses.

A useful framework is rehabilitating, augmenting, and substituting (RAS) for age-related declines in performance. If the work environment does not provide a good fit to worker capabilities, a human factors approach seems advisable. Namely one can improve the fit between a worker and a tool or environment by changing the worker or redesigning the tool and environment.

12.4.1 *Rehabilitation*

Rehabilitation of a failing cognitive function such as learning rate decline that can lead to worker obsolescence can be accomplished by improving cognitive fitness. Although the claims for general cognitive improvement through brain training are unproven (Simons et al., 2016), there is good evidence that aerobic exercise can restore brain function in aging adults (Colcombe & Kramer, 2003). Getting aging workers to engage in regular physical exercise will be challenging given general problems with ensuring adherence to exercise programs. Further, typical declines in fluid abilities with age are 1.5–2 SD units (Salthouse, 2010), whereas aerobic exercise effects fall in the range of 0.25 SD units. We cannot expect to fully regain youthful learning rates through rehabilitative aerobic exercise.

12.4.2 *Augmentation*

If you cannot change the individual sufficiently, you can intervene to change the work environment to support performance (e.g., Charness & Czaja, 2019). One approach is to augment a failing function with a technology aid, for instance, better environmental support for age-related memory decline (Charness, Best, & Souders, 2012). A good example is an age-related increase in memory retrieval failure, such as the “tip of the tongue” (TOT) phenomenon when you are trying to remember a lexical item such as a word, perhaps a person’s name, and you can sense that you know the answer but cannot retrieve it (Burke, Worthley, & Martin, 1988; Salthouse & Mandell, 2013). Today, with access to an Internet search engine, it is not that difficult to type or dictate search words and have the search engine resolve the TOT state. Artificial intelligence (AI) can augment declining human intelligence.

Augmenting human physical abilities with machines has a long history in the workplace, with engines run by steam power substituting for animal and human power during the industrial revolution. Today, robots and exoskeletons promise even more sophisticated augmentation possibilities. For instance, contrary to popular belief, older workers suffer fewer time-loss injuries than younger ones. Worker injuries often occur in the first year of employment, when skill levels are lowest (Root, 1981). Nonetheless, when injuries do occur, older workers are more at risk for serious injury or death (Rogers & Wiatrowski, 2005). A recent survey shows that fatality rates per 100,000 full-time equivalent workers increase strikingly with age, as seen in Fig. 12.4, though recent rates may be declining more for workers aged 65+.

12.4.3 Substitution

Redesigning the workplace, either by designing out risk from tools and environmental features such as slip and fall hazards or by warning and training the workers to avoid hazards, is probably the most common approach to injury risk. However, in line with the RAS framework of substituting for a failed function, we can consider a different approach to safety. Taking the human “out of the loop” is sometimes a goal for re-engineering a process or system. Consider truck drivers in private industry, who have a median age of 52 years (Short, 2014). Although the decade of the 50s is probably the safest one for drivers, older drivers (and pedestrians) are generally at greater risk for fatalities when involved in traffic crashes (Stutts, Martell, & Staplin, 2009), consistent with the fatality rates in Fig. 12.4 for all workers, likely

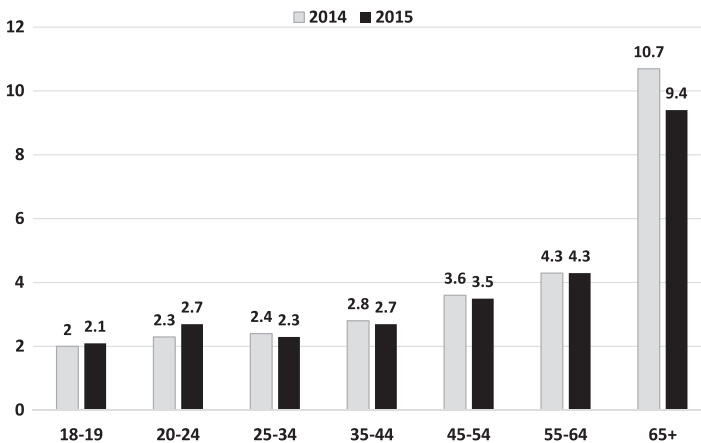


Fig. 12.4 Fatal occupational injury rates (per 100,000 FTE workers) by age group and year. Data from News Release BLS, Dec. 16, 2016. National Census of Fatal Occupational Injuries in 2015. <https://www.bls.gov/news.release/pdf/cfoi.pdf>

because of greater damage to the body from crash forces due to increased fragility with age (e.g., less strong bones due to osteoporosis). Could robots replace human drivers entirely? Autonomous vehicles hold considerable promise by substituting artificial for human intelligence in driving situations. Machines are less likely than humans to become distracted when driving, to fall asleep, and may be less costly to employ. Autonomous vehicles (AVs) can navigate reasonably safely in well-demarcated environments such as on highways. Substituting AVs for human drivers for long-haul trucking may reduce fatalities for older workers, though at the cost of employment in trucking. Such substitution may, however, allow lateral transfers in the industry from driving to management positions, or even in the short-term permit less lengthy driving shifts by having older drivers assume the responsibility of navigating from highway drop-off points through difficult-to-navigate urban environments to final destination points for cargo delivery.

Should AVs be slower to deploy than projected (typically “within the next few years”), then augmenting driver capabilities with advanced driver assistance systems (ADAS) such as blind spot detection (Souders, Best, & Charness, 2017), forward collision warning and braking, lane departure warning, and automated cruise control may augment older driver capabilities enough to keep them driving safely longer.

12.5 Summary

I have reviewed evidence that declines in learning rate with age may be a significant barrier to work longevity through a variety of linked mechanisms, including lowered motivation to train or retrain on the part of workers, and via age biases on the part of managers to offer older workers training opportunities. I have shown that knowledge generally increases from young adulthood into the 50s and 60s, and hence acquired skill can counter negative age-related changes in fluid abilities, resulting in little or no change in job productivity with age, as measured by peer and supervisor ratings. Nonetheless, increasing salary levels with age through the decade of the 50s means that economic productivity likely declines with age across the work life course and hence accounts in part for gloomy predictions about national declines in productivity due to an aging workforce from economists who define productivity as outputs divided by input costs. Finally, I have suggested how technology interventions might mitigate normative age-related declines in information processing, thereby improving worker-environment fit, using the RAS framework.

Obsolescence of workforce skills may be one of the most important deterrents to productivity gains, and hence to labor force growth and future employment opportunities for older workers. Finding efficient interventions to improve human capital such as training, retraining, and deploying technology enhancements to workplaces is more urgent than ever. Success will depend on surmounting barriers to training and technology acceptance by aging workers, such as negative attitudes to training

and poor technology-person fit. If designed well (e.g., Fisk, Rogers, Charness, Czaja, & Sharit, 2009), both training and technology tools can enhance the prospects of longer, healthier working lives for our aging population.

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Chapter 13

Training the Older Workers: Pathways and Pitfalls



Harvey L. Sterns and Diane M. Spokus

Older workers face some barriers to achieving their ideal work environment. They also indicate that these workers are strongly connected to their jobs and/or careers. Their work is an important part of who they are. Nearly nine in ten say that they are continuing to grow in their work and more than eight in ten say that their work is an important part of who they are. (AARP, 2014)

13.1 Introduction

The purpose of this chapter is to explore the early and current views on learning, resilience, motivation, and training, as well as human resource management issues for older workers. We address the pathways and pitfalls that many employers and employees face as the length of employment is extended for some individuals, while at the same time other workers are retiring and fewer younger workers may be entering the workforce (Krekanova, 2017).

Today, in contrast to previous decades, we are witnessing a significant increase in the number of older workers (see Chap. 1). This increase in the number of older workers today can be attributed to many factors such as the 2007 recession, when many baby boomers may have lost a good deal of their pensions; the increase in age required for full Social security benefits; the need for continued healthcare; the need

H. L. Sterns (✉)

Transition After Retirement Program, Institute for Life-Span Development and Gerontology,
The University of Akron, Akron, OH, USA

Northeast Ohio Medical University, Rootstown, OH, USA

e-mail: sternsh@uakron.edu; hsterns@uakron.edu

D. M. Spokus

Department of Health Policy and Administration, College of Health and Human
Development, The Pennsylvania State University, State College, PA, USA

e-mail: dms201@psu.edu

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for socialization; the need to provide for current and future financial needs; the need to continue doing meaningful work and remaining engaged; and the increased life expectancy of the baby boom generation. In addition, there are gender differences in retirement patterns. Most men, having started their careers very early in life, are sometimes ready to retire “on time,” whereas many women, especially from the baby boom generation, after having raised their children first, and having had intermittent roles in the workforce with less pensions, may be continuing to work longer, perhaps even longer than many men. Older women generally live longer than men and, therefore, often live alone. Since women have a higher life expectancy than men, their economic inadequacies necessitate remaining in the workplace. Since women have poorer economic security, their retirement experiences are shaped by their previous labor force history and widowhood. Due to the role women have traditionally had in a household, many women do not have full-time continuous work service history and thus do not qualify for pensions. Therefore, women may work longer than men and are motivated to optimize their skills through training or other professional development in order to remain competitive in the workplace.

Much of the discussion on older workers today seems to revert back to the same question: what is actually meant by an “older worker”? The Age Discrimination in Employment of 1967, as many know, defines older workers and protects individuals from age 40 and above—what Sterns and Doverspike (1989) called the *chronological/legal approach*. They also provide four other definitional approaches: functional, psychosocial, organizational, and lifespan. The *functional approach* identifies the biological and psychological changes that adults go through as they age. These changes include positive and negative gains such as an increased level of knowledge from years of experience. The functional approach suggests that the older worker’s job performance on a specific job be considered over non-job-related functional capacity. A *psychosocial approach* focuses on older workers’ perceptions of their own aging and may lead them to attend more to perceived age-related deficiencies, feeding into a self-fulfilling prophecy of aging as decline. Therefore, social perceptions play a role in how older workers perceive themselves (Sterns & Miklos, 1995) and in how they interact with others. The *organizational approach* addresses the issue that individuals age in jobs (seniority and tenure), and organizations age by how long they have existed. The *lifespan approach* emphasizes that behavioral change can occur at any point in the life cycle. Accordingly, there is no special year or date where we can differentiate young from old; rather there are substantial individual differences in aging (Baltes, Reese, & Lipsitt, 1980). Within this model, development is life-long, depends on history and context, is multidimensional and multidirectional, and is modifiable or plastic. Finally, not only is the normative age for retirement being redefined but so is the term “older worker” (Sterns & McQuown, 2015). Irrespective of the approach used to define “older worker,” in the coming years, there will be more people in the workforce aged 65 and older.

One critical challenge confronting organizations and older workers is the need to upgrade or learn new job skills to keep pace with changes in job demands. According to Hennekam and Herrbach (2015), organizational practices can foster and reinforce the negative stereotypes that continue to portray older workers as being ineffective and unable to learn. However, our early work (Sterns & Sanders, 1980) demon-

strated that people maintain intellectual and learning capabilities into later life. A key finding was the individual differences in learning that result from biological, psychological, and social influences. This appreciation of age-graded, history-graded, and non-normative life events added important insights in terms of understanding the continued capabilities of older adults, while also recognizing possible age changes in learning outcomes.

Continuous learning is part of human existence. Under ideal conditions, an individual will have had successful childhood and adult education experiences. Educational programs for adults and older adults are dramatically increasing all over the world. Many of these programs combine learning and leisure and are designed to foster learning as a lifelong pursuit (Manheimer, 2008). Work-related courses are reported to be the most prevalent form of lifelong learning among nontraditional-age students, followed by personal interest courses. Willis (1985) identified five common goals for adults seeking further education:

1. *To gain adaptive knowledge and skills.* This is often to keep up with new developments in a field and to gain skills for career advancement.
2. *To train for new occupations.* This is when old occupations become obsolete or for people reentering the job market.
3. *To understand and cope with technological and cultural change.* This includes updating in computer skills and adapting to new organizational changes.
4. *To understand their own aging processes.* This includes learning about lifespan changes in memory and other aspects of cognition and to learn strategies for making the most of their abilities.
5. *To develop new and satisfying retirement and leisure roles.* This involves career self-management and retirement planning and can be facilitated by special programs and self-study.

Clearly, employers see benefits of workplace education in improved morale, increased quality of work, better teamwork and problem solving, and greater ability to cope with new technology and other changes in the workplace (Papalia, Sterns, Feldman, & Camp, 2007). Today, however, less of the work-related education is employer-supported, and there is a push toward a shared responsibility between the employer and employee. More than 40% of the workforce and more than 50% of high school graduates lack basic skills needed in their jobs. Thus, this chapter focuses on individual choices made by adults and older workers to accomplish career and personal, lifelong learning goals.

13.2 Age and Training: Foundations from the Past and Current Recommendations

Industrial gerontology and research on training the older worker draws from over six decades of research. Work beginning in the 1940s and 1950s during and after World War II led to the need to offset the shortage of younger workers and to rebuild industry at a time of technological change. In 1946, the Nuffield Foundation awarded

a grant to the Cambridge Psychological Laboratory. The main goal of this effort was to apply findings to industry on the changes in skills and trainability that occurred with aging (Welford, 1976). Much of this early work was done by E. Belbin, R. M. Belbin, and S. M. Downs (Sterns, 1986; Sterns & Doverspike, 1989).

Several training techniques were developed that were directed to the special needs of the older workers during that time period and involved a number of training approaches: the discovery method, activity learning, and programmed instruction (Belbin, 1965, 1970; Belbin & Belbin, 1972). The *discovery method* is designed to increase motivation of the older worker by allowing the trainee to progress through the learning program and discovering for him- or herself how things work and why. Tasks are graded in difficulty and are presented in appropriate order. The trainer's role is to observe trainee errors and modify the training materials based on the trainee performance. The trainee determines the rate of the presentation. This method is designed to facilitate learning by taking into consideration changes in memory, abilities for learning verbal material, interference from a relevant event, and lack of meaningful context for learning tasks. The *activity learning method* is a technique in which the learner actively manipulates or processes the material to be learned rather than listening to, observing, or actively repeating it. It is believed that activity learning is successful when it stimulates creative thinking rather than merely a series of mechanical responses. *Programmed instruction* systematically presents materials graded in difficulty to the learner by using a book or computer program. An important advantage of programmed instruction is immediate feedback and positive reinforcement of current responses combined with a branching process designed to correct mistakes.

In addition, Downs and Roberts (1977) developed the CRAMP technique of training. The CRAMP training method divides learning into five distinct types: comprehension, which requires an understanding of the subject matter; reflex, which requires skilled movement and perception; attitude, which requires a change in attitude on the part of the trainee; memory, which requires retention of subject matter; and procedure, which requires knowing what to do in a given situation. This approach recognizes the characteristics of the trainee as well as the type of learning involved. The component tasks identified through task analysis are then keyed into appropriate training methods via the five learning types. Each of these methods had examples of successful outcomes that showed how specially designed training approaches could be effective in real-world settings. The outcomes of these early studies are described in detail in Sterns (1986) and Sterns and Doverspike (1989).

Task analysis was, and continues to be, an important component of the design of training programs (Sterns & Sanders, 1980) as it forms the basis for understanding the demands inherent in activities and the requisite skills. Many of these early approaches have been incorporated in the current work by Czaja and Sharit (2013) *Designing Training and Instructional Programs for Older Adults*, which provides key principles for designing training programs for older workers. The principles are based on many years of research on training older workers conducted by the authors and their colleagues. Overall, Czaja and Sharit (2013) emphasize the following recommendations in the design of training programs:

- Provide an overview of the task domain and objectives so that the learner can have a reference or cognitive structure as a way to organize and associate new learning materials.
- Emphasize learning by doing instead of passive learning.
- Minimize demands on working memory, provide cues and aids, and do not overload the learner with too much information.
- Consider using an over-learning strategy to ensure that the older learner is proficient on procedural components of the task.
- For complex tasks, proceed from the simple to the more complex aspects of the task and ensure reliable performance on basic components before moving on to higher-order components.
- Ensure the older learner is comfortable with the pace of the instruction. Avoid mass practice sessions; instead, pace out the practice sessions.
- Always try to end practice sessions with experiences that bolster confidence of the learner.
- Ensure that the gaps between practice sessions are linked and begin new sessions with an overview refresher of the previous sessions.

The effectiveness of these recommendations is well documented by research carried out over many decades, indicating that well-designed training is effective in teaching learners of all ages. Many times, the differences between younger adults and middle-aged adults are much smaller relative to differences within older adults. If training adults and older workers is challenging, one should carefully examine the training methodology before concluding that older adults are unable to learn (Czaja & Sharit, 2013).

13.3 Learning Is Ongoing Throughout the Lifespan

In today's complex society, education is never finished. An undergraduate or graduate degree is no longer enough for most adults as we look to the future. Major technological changes and changing job markets require a lifespan approach to education. Individuals need to prepare for changing careers, continual evolutions in technology, and changing job demands. When and if occupations become obsolete and new occupations emerge or require new skills, retraining and skill updating are key issues.

In this regard, lifelong learning for adults and older adults needs to address topics that are personally meaningful and relevant, are taught in settings that provide direct and active learning experiences, allow adults control over aspects of the learning process, and are cost-effective for the individual or the organization (Papalia et al., 2007). Rothwell (2002) examined the individual learner's roles, competencies, and work outputs as well as the workplace environment that motivated learners to learn or not learn in real time. The findings from this study indicated that individuals are able to improve their competencies by paying more attention to improving how they

learn what they learn. These findings underscore the need to provide learners with guidance on effective learning practices and principles. In addition, data also suggest that during the learning process, learners need to undergo shifts in consciousness in which they perceive themselves as more productive (Mezirow, 1981). This transformational journey often includes fear and uncertainty, testing and exploring, and affirming and connecting (King, 2002).

A distinction is generally made between training and instruction. Training is usually associated with formal programs that lead to individuals acquiring specific skills. Training is teaching that is related to one's job—employee development. Instruction is a more general term that refers to how to use new technology, such as smartphones, other household devices, and personal classroom learning. Training and instruction both lead to changes in knowledge and skills. Designing training and instructional approaches is challenging as people have individual differences in backgrounds, experiences, skills, knowledge, and abilities (Czaja & Sharit, 2013; Levy, 2017). This is especially true as the population is becoming more culturally and ethnically diverse (see Chap. 1). Thus, in addition to a task analysis, it is also important to conduct a person analysis to understand the characteristics and background of the trainee population before developing a training or instructional program.

13.4 Why Does All This Matter in the Changing Workplace Environment?

Today's workplace is highly dynamic and different from the workplace of prior decades on a number of dimensions. For example, technology is ubiquitous within work environments and is also changing how people receive instruction and training. E-learning programs are becoming increasingly common. Before the significant increase in online and World Campus learning programs, it was thought that without face-to-face contact and immediate feedback through classroom learning, training protocols would be less effective and that learners would find it difficult to identify with the learning and training experiences. It was also thought that a learner might feel dehumanized, less motivated because of inadequate feedback, and socially isolated because of lack of interactions with fellow learners. These are especially important considerations for older adults. A study by Hyun and Strauss (2001) reported that students behaved and interacted differently when enrolled in a face-to-face class versus the same class taken online.

However, based on the growth of online training, interaction through current online discussion groups appears to be effective. E-learning can provide flexible training options for learners and also permit them to engage in real-time lectures and discussions from wherever they are located. This may be especially beneficial for older adult learners who may have transportation or mobility restrictions. Through the use of systems like Blackboard and Canvas, learners have the opportunities to have "peer-to-peer" discussions via response posts. These interactive discussion forums provide learners with significant peer feedback from others in all

industry clusters, whether it is manufacturing, healthcare, information technology, or construction in all areas of the world. It can actually also offer a means of informal networking and sharing of experiences. Advanced technology and innovative coursework design has made this possible. As a result, more individuals are able to take courses and specialized trainings online to optimize their skills and increase their knowledge in multiple settings such as home, school, or workplace. This helps older workers by addressing a number of issues related to accessing educational and training programs and allows them to overcome barriers such as transportation and the freedom to work from other settings such as their home.

In addition to changes in the work environment, older workers are also different from those of previous generations. The baby boom generation is a more educated cohort than earlier generations, generally healthier, and more diverse on a number of dimensions. Thus designing training programs has become more challenging. The training experience must accommodate a variety of individual differences including differences in learning styles and coping skills. In the current competitive environment, it is also more necessary to explore programs that will motivate learners as well as enhance knowledge and extend the learning environment to make it more individually directed, accessible to those with disabilities, more global, and truly a lifelong educational resource for older adults. In this regard, the National Study of Employers (Matos & Galinsky, 2014) provides a comprehensive study of practices, policies, programs, and benefits provided by US employers to enhance organizational and employee success as well as addresses the changes and challenges in today's organizations. The Diversity Partners Project out of Cornell University provides training on disability etiquette and policies that could be accomplished through videos, worksheets, case scenarios, assessments, and discussion guides (Gurchiek, 2017).

In summary, the increasing population of older workers and retirees, combined with an increasing demand for educational and training programs for both professional and personal growth, is bringing about changes in the way educational and training programs are delivered. Technology is playing an increasing role in worker training and online learning is becoming common within many organizations. It is important that these e-learning programs are well designed and accommodate the needs of older learners. Programs that are difficult to use and access, unreliable, or lack technical support will cause frustration on the part of the learner and ultimately will not be adopted. The design of these programs also take into account factors that influence motivation to learn. Further, recognition of individual differences is important, and support by management for e-learning is critical to success.

13.5 Staying Ahead of the Curve

The goal of the AARP Career and Work Study is to explore the experiences of older workers. The study has surveyed workers aged 45–74 years at three time points: 2003, 2007, and 2013. The findings from the most recent survey (AARP, 2014) indicate that one of the primary reasons for wanting to work was financial need to

support a family, pay for healthcare, or maintain health insurance. However, respondents also indicated that the desire to work was also motivated by personal satisfaction and the need for social and psychological fulfillment. More than 90% of the workers surveyed stated that they believe staying in the workforce keeps them healthier and active. Over 80% reported that work was an important factor of their identity. In fact, they rated the importance of remaining in the workforce higher than the inability to find a suitable mate or establish a personal relationship (AARP, 2014). This finding points to the fact that continued employment for older adults is important on many dimensions; older adults view work as a means of fulfilling financial as well as social and psychological needs.

Older workers are also motivated to stay abreast with continued professional development because they fear loss of work might mean a loss of their work family. Given the importance of socialization in the workplace, a greater understanding of factors such as the social aspects of work, the need for fulfillment, and use of expertise that motivate older adults to seek continued professional growth opportunities needs to be incorporated into training programs. Retirement may decrease opportunities for easy social interaction. Therefore, when an individual retires, the group dynamics and socialization of a classroom setting may encourage an adult to define who they are based on an accumulation of unique experiences (Knowles, 1980). Knowles (1984) espoused the humanistic concept for learning theory and advocated that learners actively participate in the program planning process. Carl Rogers (1961) also promotes a more holistic approach to learning that can be applied to professional growth. If an individual's needs are not being met in the workplace, the individual will more likely than not thrive and continue to work. Herzberg (1987) coined the term "satisfier" when an employee is provided with certain motivational tools to do their job. Another assumption is that prior experience is important to well-being. According to Kanfer (2009), older workers are motivated when they have a sense of purpose, affiliation with others, professional identity, enjoyment, financial need and satisfaction, and a sense of competence from demonstrating skill expertise.

Although healthcare benefits remain a significant factor in older workers continuing to remain in the workforce, older workers also indicate that their ideal job would encompass a friendly work environment, respect from their co-workers and their supervisors, and opportunities to use their skills and talents. Older workers also have a desire to do something worthwhile, to learn something new, to help others, and to pursue something on their "bucket list" (AARP, 2014). According to Galbraith (1991):

... adult learners are varied in physical, social and psychological, ego, moral, and learning developmental directions... {and} each learner who enters the educational encounter has experienced different marker events, transitions, roles, and crises. (p. 19)

As a result, older workers may appreciate the opportunity to talk about this wealth of experiences and learn from one another through mentoring programs. Therefore, in terms of teaching, educators can add an important aspect to learning by incorporating classroom concepts to life experiences.

Thus theories and methods of instructional design are very important to employment training programs. Human resource managers may need to recognize that role-playing, experiential tasks, case studies, and simulation are significant components of instructional programs for older people (Ross-Gordon, 2003). Moreover, human resource managers must also understand factors that motivate individuals to participate in instructional programs and plan instructional experiences accordingly. Program content should be designed to allow flexibility in order to address learners' problems related to their families and work lives (Knowles, 1980, 1984). In other words, a problem-centered approach might be necessary during the process of program planning, so that it relates to an individual's urgent needs. Therefore, a needs assessment—once all learners are enrolled in a program—would help tailor objectives and content to meet specific goals of the learners.

Baby boomers have high expectations about what they want to do. They want to be heard, receive feedback, and have an impact on programs that are developed. Queeney (1995) states that an effective educational needs assessment strategy elicits ongoing information about program content and the characteristics and needs of the target audience, as well as provide effective tools to help capture the needs and wants of the target audience in program design. Human resource managers may also need to design courses that motivate and help individuals attain specific goals. This problem-centered approach may place emphasis on learning material that is related to an individual's self-development and self-satisfaction. Houle (1961) observed that individuals participate more in courses or programs when they have a specific goal to accomplish. This goal may be applicable in their everyday work lives.

Motivation is a key component in learning for the purposes of self-fulfillment (Knowles, 1980, 1984). According to Cross (1981), learners may be intrinsically or extrinsically motivated. The key to program planning for older workers is to design programs that encourage intrinsic learning while providing an incentive to want to learn.

13.6 Engaging and Challenging Older Workers

Many training programs are designed for individuals entering the workforce. However, for an aging workforce and the need to remain employable, educational programs across the lifespan need to be addressed. According to the AARP Work and Career Study (2014), one of the things employers need to know about training and development for workers age 50 and over is that many older workers want the opportunity to and are able to learn something new. The Center on Aging and Work at Boston College (2015) stated that the biggest challenge in training and development for older workers is creating training and development opportunities that make sense for all workers in all stages of their career. Reverse mentoring, networking, e-learning, and intergenerational cross-training are viable options instead of using the more traditional classroom type, with mixed levels and types of learners training methods.

The Manitoba Study conducted by Sloane-Seale and Kops (2013) was an online survey that examined the challenges and benefits organizations confront when engaging older workers. At the time of the survey, 25% of the province's population was over 55 years of age with predictions of significant growth. The findings indicated that mentoring and training opportunities helped to retain older workers was a challenge for organizations. Another study outcome was that when organizations created meaningful jobs and made sure that all workers were treated equally and had career opportunities, older workers were positively motivated. Lastly, similar to the findings of Rothwell, Sterns, Spokus, and Reaser (2008), an additional finding was that the employers surveyed relied primarily on in-house recruitment efforts to fulfill vacant positions, like rehiring former employees and using referrals from existing employees.

A healthcare study, consisting of an older worker survey, conducted in a small rural hospital by Spokus (2008), examined job characteristics, social support, and organizational characteristics that determined older workers' intent to leave their job. The target population included workers over the age of 55. The results showed that significant factors such as quality of work life and the presence of a support system affected staying in the workplace. As people age and become empty nesters, work colleagues become family and a social support system. Therefore, supervisory and colleague support were major determinants of older workers remaining at work.

Findings from the Society for Human Resource Management (SHRM) (2014) Aging Workforce Research Initiative identified some significant advantages of older workers. Advantages of older workers (defined as being over age 55) compared to younger workers included that they are more mature, have more experience, and a stronger work ethic, and also have an ability to serve as workplace mentors for younger workers. Another outcome of the study was that older workers had significantly better basic and applied skills, such as writing. The strongest of these skills were professionalism and a strong work ethic. In addition, a few of the organizational steps taken to prepare for the loss of older workers was to increase training, in particular, developing and offering cross-training, succession plans, more flexible work options, and processes for capturing institutional memory. The study also examined the extent to which employees in the organization were receptive to working with older workers and found that 53% agreed they were receptive, and 39% stated to some extent they were receptive to working with older workers.

13.7 Moving Forward with New Policies

The baby boom generation is not strictly a US challenge. It is a global challenge, and organizational cost containment negatively impacts older workers who are highly paid. According to a 2011 survey of business executives and benefit administrators, 71% of the respondents viewed aging as an opportunity. However, 43% viewed it as a risk and only 13% of business executives claim to have not considered the implications of rising longevity, and nearly one in three said their firms were not

at all effective at adapting human resource strategies to older workers. Despite the fact that many individuals work productively well into their late 70s, organizations need to get on board. Older workers themselves cannot do it alone, and there has to be an organizational incentive that intentionally provides support for older workers. In other words, there are many considerations to think about if older workers are going to be encouraged to work longer and if organizations are going to consistently support those who are productive and able to work and maximize the many advantages that older workers offer.

The ideal adult learner environment according to Knowles, Horton, and Swanson (2005) anticipates learning needs that arise at various life points and understands how life events facilitate or inhibit learning in a particular situation. This environment includes preparing adults for life changes, capitalizing on “teachable moments” to accelerate learning, providing special benefits for self-management, providing learning experiences that are meaningful, and acknowledging that older workers with wisdom and experience are expensive to replace. Over the last decade, the research literature has underscored the need for organizations to prepare for the workforce shortage due to the upcoming retirement wave of baby boomers. This need for organizational preparation is particularly true in certain occupations such as healthcare. A growing emphasis is that attracting and retaining older workers is important.

Generational stereotypes need to be considered in the design of programs to retain and train older workers; however, individual differences within generations must also be fully appreciated. Age-biased judgment can be avoided by having sufficient information and time to evaluate the target audience. In fact, it is important to discuss training when appraising older adults as well as when considering ways to actively engage employees. Evidence suggests that older workers may actually prefer group learning experiences where information is delivered in small chunks, which allows for the proper transfer of information from short- to long-term memory and capitalizes on “teachable moments” to accelerate learning. Planning and learning experiences that are more meaningful is critical to older trainees (Rothwell et al., 2008).

Unfortunately, older workers are less likely to be offered opportunities to be trained than younger workers, though they may need more training opportunities (Farr, Tesluk, & Klein, 1998; Rothwell et al., 2008). Though older workers may need more time to master training materials, they can improve their abilities by having training opportunities. Also, older workers may lack confidence in training situations, which makes them reluctant to volunteer for training (Sterns, 1986). This reluctance is especially likely when organizations offer fewer training opportunities to older workers, or when stereotypical beliefs are held by older workers who are themselves reluctant to seek developmental opportunities. A study by Simpson, Greller, and Stroh (2002) found that although older workers were less likely to take part in developmental activities, they participated in more targeted occupation-based skills such as computer training than did younger workers (Simpson et al., 2002). Another reason for unfavorable reactions of older workers toward training could be due to the design of training programs, which do not accommodate the

needs and characteristics of older learners. Thus, training should be designed with a consideration of older workers' physical, cognitive, and psychological characteristics (Warr, 1994).

A meta-analysis on the effects of training in organizations also confirmed that the effectiveness of organizational training programs varies depending on the specific training delivery methods, skills being trained, and post-training criteria to measure the effectiveness of the program (Arthur, Bennett, Edens, & Bell, 2003). For example, Callahan, Kiker, and Cross (2003) examined the training methods for older adults and found that all three methods—lecture, modeling, and active participation (i.e., discovery learning)—were effective. They suggest that self-pacing in training and smaller training group size resulted in favorable training outcomes when it comes to technology-related skill training.

Czaja et al. (2006) found that the levels of computer self-efficacy and computer anxiety were related to the amount of computer use. They also suggested that supportive learning environments that include more flexibility in training time and providing positive feedback on learning can help older workers overcome low self-efficacy and high anxiety. Thus, training programs need to be carefully designed and executed to meet older workers' needs and characteristics.

Ackerman (1996) suggested that learning can be influenced by individual characteristics such as prior knowledge, preferences, and intellectual ability. In this regard, Beier and Ackerman (2005) found that prior knowledge was a more significant predictor of knowledge acquisition for adult learning in a training module that allowed self-paced learning over a longer period of time than in a training module of highly structured and time-constrained video learning. They also found that if a learning environment meets the specific needs of older adult development, older adults can improve their learning of new knowledge or skills. Another example of the importance of prior knowledge or experience is a study conducted by Czaja and Sharit (1998). They found that previous computer experience was the biggest predictor of the performance in the computer-based data entry tasks. This finding suggests that younger workers may have advantages in computer-based performance because they are more likely to have been exposed to technology than older workers. Even when previous computer experience was considered, older participants performed significantly more slowly than the younger adults due to slower psychomotor speed (Czaja & Sharit, 1998). In sum, training needs to be framed as a lifelong process, suggesting that one might not survive in the changing work environments without updating skills essential to their career (Hall & Mirvis, 1996).

Bosworth (2007) noted that more than half of the US's 120 million workers between the ages of 25 and 64 have no post-secondary degree or credential of any kind. Although these numbers are changing and the education level of older adults is on average increasing, a concerted effort needs to be made to create a climate for working adults to invest in their own education and adopt a lifelong learning perspective. Opportunities to continue formal education as well as short-term training are the key to future employability and job enrichment.

The 2008 MetLife Foundation/Civic Ventures Encore Career Survey found that encore careers are a viable choice for many people. The findings indicated that half

of the sample aged 44–70 who were not in encore careers desired to be in such a work situation. Education, public service, healthcare, and many non-profit jobs have great appeal to older adults. Individuals who have previous educational experience are willing to engage in new learning and to prepare themselves for new work roles.

Some individuals will continue to have fairly traditional careers with continuity of jobs, and others may have interrupted and difficult job histories. Many middle-aged and older adults will continue to work longer out of choice or necessity. Others may experience layoffs and need to find new employment. In order to survive this unprecedented time, workers of all ages need to be more resilient, show self-initiative, and continue to learn and update their skills. The lifespan developmental approach suggests that individuals vary in career development and processes depending on where they are positioned in terms of their life cycle.

For many individuals who have a “normal” development experience, there will be a strong impetus toward advanced education and to continue in work roles. The best predictor of later life education is previous level of education. One of the great challenges of individual experiencing a career is staying engaged in one’s work and maintaining professional competence. This is especially true today in our technology-driven workplace. There are many factors that contribute to the desire to maintain and improve one’s skills.

The current gerontological literature supports the fact that many older workers have strong skill levels, can successfully update their skills and be trained, and can successfully make the transition to retirement with flexible options (Hedge, Borman, & Lammlin, 2006; Rothwell et al., 2008; Shultz & Adams, 2007). They may, however, require more supportive job-finding situations, additional training to be competitive, and assistance in planning for retirement. Importantly, workers at all ages can benefit from sophisticated hiring approaches, training, and retirement planning programs that target older workers (Sterns & Chang, 2010).

Education and training provide important opportunities to facilitate career development at all periods in the work life (Rothwell et al., 2008). The need to integrate work and learning is essential for continued adaptation in the work setting. For many individuals the work place is an important source of continued learning either on the job or by more formal training programs. It must be emphasized that one of the larger providers of adult education in middle and older adulthood is the work organization, not higher educational institutions. Many of today’s older adult workers who are in need of training are casualties due to poor training design or the worker choosing poor training opportunities. A major issue today is ensuring equitable access to training opportunity for older adult workers.

Age bias affects not only supervisors or decision makers in the workplace but also older workers themselves. Maurer, Wrenn, and Weiss (2003) suggested that stereotypical beliefs that older workers are less likely to learn and less likely to be motivated for development were held by older workers themselves as well as by their managers and coworkers. For example, beliefs that older workers were incompetent and unable to learn were associated with greater beliefs that they should retire (Maurer, Barbeite, Weiss, & Lippstreu, 2007). This suggests that the effects of age bias should be considered in contexts of both older workers themselves and their work.

Considering the complex nature of jobs and performance criteria today, performance of workers over the lifespan should be carefully examined based on individual characteristics as well as on organizational and contextual situations around the older workers in question (Sterns & Gray, 1999; Sterns & Huyck, 2001). In addition, job knowledge or skills that older workers have accumulated can compensate for the potential age-related declines in performance. Hedge et al. (2006) also suggest that older workers with a higher level of expertise or experiences can be as effective as younger workers. Other than task performance, little research has been done on contextual and adaptive performance among older workers (Cleveland & Lim, 2007). Since the work environment is rapidly changing and the demand on the service industry is rapidly growing, contextual and adaptive performance is becoming increasingly important.

Ng and Feldman (2008) found that there was a slight negative relationship between age and performance in training programs. When moderators (e.g., average age, organizational tenure) were taken into account, the age–performance relationship appeared to be an inverted U-shape in different age groups. Specifically, they found the strongest positive relationship between age and core task performance for the age 31–35 group, but weaker positive for the under-30 age group, and negative for the age group over 40. They also found a more positive relationship with age when job complexity was low, or when employees were non-managers.

13.8 Career Self-Management

Self-management and personal responsibility are key concepts for the present and future. It is a shared responsibility between the older adult worker and their employer (Rothwell et al., 2008; Sterns & Subich, 2002, 2005). Personal decision-making is complex and involves many different dimensions. A major issue is how middle-aged and older workers will negotiate the current challenging environment and how they will succeed. As a result, additional assistance and decision support are needed. As Hall (2004) suggested in his protean career definition, both adaptability and self-awareness are important factors to successfully managing one's career. These factors make it possible for people to learn from their experiences and develop new abilities on their own. In sum, workers regardless of age need to be more resilient and adaptable to new environments.

Several years ago, it became apparent that self-management of career and personal responsibility would be necessary to negotiate the world of full- and part-time work in the future. However, the emphasis was on individuals being able to plan for the opportunities that would be available to shape one's later life work and on being creative in reshaping the later life period to fit continued work, retirement, and work in retirement. The design and redesign of one's later life has been a major theme in that context (Rothwell et al., 2008).

In response to fast changing economic, social, and organizational environments, self-management and personal responsibility continue to be predominant themes

for the 2000s. Sterns and Subich (2002) emphasized that people of different ages may have similar career issues regarding training and updating their skills because attitudes about the work context in mid-career are becoming increasingly important in determining whether a person will remain in the same career, change careers, or leave the workforce. Thus, career development training that targets workers at all ages may help not only older workers but also future generations. Furthermore, Ekerdt (2008) supports the protean career perspective, in that career lines (i.e., sequence of jobs in the labor market) are fewer and less secure due to organizations outsourcing many functions. Charness (2013) raised the important observation that—at least in the IT industry—there is evidence that older workers may not be seeking job-related training or be motivated to update their skills. Companies need to create situations that encourage training and retraining to maintain a productive workforce.

13.9 Challenges Faced by Midlife and Older Workers

A major issue in continued employment is maintaining professional competence. Remaining competitive with current skills may make an employee more valuable to an organization. Perceived organizational culture sends important messages to current employees. Middle-aged and older employees are usually aware of a changing climate in the treatment of long-serving employees. As noted, older workers today may stay in the labor force for various reasons. According to Mor-Barak (1995), older workers can have different motivations for work which can be categorized as four reasons: (a) social reasons to be connected to others, (b) personal reasons to be respected and to gain personal satisfaction, (c) financial reasons to maintain their living, and (d) generativity to share and pass skills and knowledge to younger generations.

As older workers continue to thrive in the workplace, a dynamic process of adaptation and change is required to meet everyday challenges. Unfortunately, misperceptions about older adults often affect how an organization treats their mature workers. For example, there are age-related declines in some aspects of cognitive functioning, such as fluid abilities, and a strong, positive relationship has been demonstrated between job performance and cognitive ability in the literature. Combined, these findings may suggest that older workers would demonstrate a decline in job performance, although no support has been discovered linking age directly to decreased job performance (Salthouse & Maurer, 1996). They may be partially due to the fact that tacit knowledge or practical intelligence is one domain of cognition that has been found to remain stable into later life (Park, 1994). Cognitive pragmatics may be called a source of “natural” resilience as it serves as a potential gain or source of protection in the presence of possible cognitive losses in fluid ability or mechanics of intelligence (Staudinger, Marsiske, & Baltes, 1995). These pragmatics may enable older adults to compensate for losses in fluid abilities and maintain a particular level of performance in the workplace. Overall, the research literature

does not support the concept of a universal decline in job performance as a function of age. Older workers may continue to perform well or may show changes depending on the particular demands of a specific job situation. The precision of the performance measures is important, and the nature of individual change may be gradual if at all.

It is important that both employers and workers be aware of these findings to help avoid negative biases regarding the performance capabilities of older workers. This may require assessing the organizational culture and taking steps to ensure that full support is given to older workers by strategically planning for management strategies, training, recruitment, and retention. For example, according to Cappelli and Novelli (2010), friction occurs when younger supervisors manage older workers who have much more experience and knowledge than they do. New models of management may be needed to offset these types of challenges. At the same time, adult and older workers have the challenge to keep knowledge, skills, and abilities current.

Changes in the nature of work demands may also play a role with respect to the performance of older workers. Few jobs demand physical strength, and most do not demand the full capabilities of the person to perform essential job functions. Age-related declines in physical and cognitive/perceptual abilities may be countered by changes in job design, work strategies, work station design, and training or retraining (Kanfer, 2009). Another important determinant is person-job (PJ) fit, which refers to correspondence of a person's KSAs and the job demands that influence motivation, time, and effort in a work role.

Developmental changes in the strength of achievement, affiliation, generative and other motives over the life course may alter allocations of time and effort to the job or reduce interest in work, depending on perceived opportunities for motive in the work role. Perceptions of poor PJ fit may reduce job self-efficacy and also reduce work motivation. (Kanfer, 2009, p. 215)

Kanfer also states that there are four broad area themes for age-related changes: loss, gain, reorganization, and exchange. Age-sensitive changes in different dimensions of intellectual development (i.e., loss or gain) may affect the fit between personal attributes and job demands. PJ misfit can lead to boredom and a perception of lack of challenge. Thus, training programs also need to address changing capabilities and interests.

13.10 Conclusion

Starting in the 1940s there has been an evolution in our approaches to learning across the lifespan. The capabilities of an individual adult and older adult workers are shaped by their education, training, and work experience. Given the recent technology revolution, a major issue since the 1970s has been to ensure that workers of all ages but particularly older workers have the needed skills for current job

demands. One important area continues to be work obsolescence and maintaining professional competence. Improvements in training design has led to a more positive pictures of adult and older adult training. However, this is still an area of needed research as the workplace continues to evolve. In summary, the lifespan developmental approach proposes that individuals vary in their life experiences and that individuals and contexts are interactive. Consideration of factors other than worker age and the implementation of lifespan intervention theory provide important new approaches to training and retraining.

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Part IV
Trends in Jobs and Work Patterns

Chapter 14

How Do Employers Respond to an Aging Workforce? Evidence from Surveys Among Employers, 2009–2017



Jaap Oude Mulders, Kène Henkens, and Hendrik P. van Dalen

14.1 Introduction

Population aging is driving the need for longer working lives in developed countries across the globe (OECD, 2017). As the relative share of older individuals in both the workforce and the overall population increases, many societies are trying to promote labor force participation and postpone the timing of retirement of older workers by implementing policy reforms. It is clear that these reforms have substantial implications for the current generation of older workers. They have to work far more years than they had anticipated in order to receive their pension income. In many cases, older workers have had to postpone their retirement unexpectedly, which has sometimes led to resentment, disillusionment, and a drop in motivation (Van Solinge & Henkens, 2017).

When the share of older workers is increasing, the implications for the employers and organizations employing those older workers are likely to be substantial.

J. Oude Mulders (✉)

Netherlands Interdisciplinary Demographic Institute/KNAW/University of Groningen,
The Hague, The Netherlands
e-mail: oudemulders@nidi.nl

K. Henkens

Netherlands Interdisciplinary Demographic Institute/KNAW/University of Groningen,
The Hague, The Netherlands

University Medical Center Groningen and University of Amsterdam,
Groningen, The Netherlands

e-mail: henkens@nidi.nl

H. P. van Dalen

Netherlands Interdisciplinary Demographic Institute/KNAW/University of Groningen,
The Hague, The Netherlands

Tilburg University, Tilburg, The Netherlands

e-mail: dalen@nidi.nl

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Employers are confronted with greater shares of older workers in their organizations, who are likely to stay employed for a longer time than both the older workers themselves and their employers had envisioned (Oude Mulders, 2016). However, how employers deal with these issues remains a largely unanswered question. While most of the research in this field has focused on the employee's perspective of working longer, research from the employer's perspective is relatively scarce. Understanding how employers view the aging workforce and how they adjust their human resource (HR) policies and practices in response to an aging workforce is crucial for a deeper understanding of the labor force dynamics of aging societies (Henkens et al., 2017). After all, employers are essential actors in shaping employment opportunities for older workers, and their attitudes and behavior may constrain the options that are available for older workers. In this chapter, we therefore address these issues, focusing on the case of the Netherlands, a country that was characterized by high rates of early retirement in the recent past, but that is now transitioning to a society with comparatively high labor force participation rates of older workers and an increasing age of labor force exit (Visser, Gesthuizen, Kraaykamp, & Wolbers, 2016).

We pose the central research question: *In which ways have employers adapted their attitudes and organizational policies and practices to deal with an aging workforce?* We do so by comparing results from two surveys about the effects of an aging workforce on attitudes and organizational policies and practices among Dutch employers. One of the surveys was conducted in 2009, the other in 2017. In our comparison of employers' policies and practices from 2009 to 2017, we focus on what we consider to be five central aspects that concern employers in an aging society. First, we study how employers view the development of labor costs and labor productivity—two main factors associated with the employment of older workers—in a continuously aging society. Second, we examine the extent to which employers use specific HR practices in order to manage an aging workforce, in particular focusing on policies directed at increasing the employability of older workers. Third, we focus on the development of employers' age-related workplace norms over time. We look at how norms about the appropriate timing of retirement have changed in tandem with the increase of the statutory retirement age and actual ages of labor force exit. Fourth, we study changes in employers' recruitment practices. Earlier research has shown that many employers have age biases in their recruitment of new personnel, leading to high levels of old age unemployment. An important question is whether the position of older workers has improved in recent years. Fifth, we study employers' preferences for future public policy adjustments, aimed at a better functioning of the labor market in an aging society. Although this study is carried out in the Netherlands, we believe that our analyses provide important insights for other countries developing retirement reforms to deal with an aging population.

The remainder of this chapter is organized as follows. First, we will discuss the demographic and policy context of the Netherlands, providing information about the extent of population aging and the policy changes that have led to increased labor force participation and increasingly longer working lives. Then, we briefly

discuss the methods of the two surveys that we analyzed, held in 2009 and 2017 among two different but representative samples of Dutch employers. Next, we discuss the empirical findings, focusing on the topics described above. In our analyses we will focus on the changes of employers' responses over time. Sectoral differences are not the main focus of this chapter. We will mention sectoral differences only where they seem relevant. Finally, in the discussion section, we analyze the biggest changes in employers' attitudes and behaviors and discuss possible future developments.

14.2 Demographic and Policy Context in the Netherlands

The population of the Netherlands, like that of most other developed countries, is aging rapidly and will continue to age for several decades. This trend is mainly the result of two demographic developments that have coincided in the post-World War II decades: declining fertility rates and increasing life expectancy. First, fertility rates have declined sharply, mainly between the 1950s and 1980s. For example, Dutch women born in 1935 had on average 2.5 children, whereas women born in 1965 had on average 1.8 children, a rate which has since stabilized and is projected to remain at this level (Van Duin & Stoeldraijer, 2014). Second, life expectancy has increased substantially in the same period. For example, life expectancy at age 65 was on average 14 (men) and 17 (women) years in 1960 but had increased to 20 (men) and 22 (women) years in 2014. While the rate of increases in life expectancy has since slowed down a little, the trend toward longer lives is projected to continue (Van Duin & Stoeldraijer, 2014).

These demographic developments will give rise to changes in the relative shares of different age groups in the population. It is estimated that the relative share of older people (i.e., aged 65+) in the Netherlands will increase from approximately 18% now to about 26% in 2040, whereas the share of people in traditional working age (i.e., aged 20–64) will decrease from approximately 59% now to 52% in 2040. Population aging is currently expected to stabilize around the year 2040, meaning that the relative shares of different age groups will remain roughly the same from that point onwards, and there will be no return to a population age structure with larger shares of younger people (Van Duin & Stoeldraijer, 2014).

Like in other countries, these demographic developments have put pressure on the sustainability of social security and pension systems in the Netherlands, and the government has implemented numerous labor market and retirement-related policy reforms in recent years to alleviate some of the effects of population aging on government finances. The focus of these policy reforms is mainly to prevent and discourage early retirement from the labor market, a phenomenon that was very common until the early 2000s. In the Netherlands, collectively financed early retirement schemes were designed in the 1970s and 1980s to deal with the growing problem of high unemployment rates, declining industries, and growth stagnation. These schemes allowed for older workers to retire several years before reaching the

statutory retirement age of 65 with retirement benefits that were characterized by high replacement rates. In addition, there were generous and flexible “alternative pathways” into early retirement, most prominently through collectively financed unemployment and disability benefits (Kapteyn & De Vos, 1998). These generous early exit opportunities created an “early retirement culture” in which early retirement was encouraged and even expected of older workers to open up jobs for unemployed younger workers (Hofäcker & Unt, 2013). This resulted in very low employment rates for older workers. Around 1990, the employment rate of older workers reached its lowest point, with just over 50% of men and about 20% of women aged 50–65 in employment. While the employment rate of older women had always been low until that time, especially older men were much more often out of employment than in earlier times.

Since the 1990s, however, governments with aging populations have been reforming their employment and retirement policies to stop the trend toward earlier retirement and instead promote longer working lives. In the Netherlands, the collectively financed early retirement schemes were first converted to schemes with later retirement ages and a larger component of individual savings. Later, in 2006, all fiscal support for early retirement schemes was discontinued, thereby effectively ending the government’s support for such schemes. Of course, early retirement is still possible, but it is now financed and designed in an “actuarially fair” manner: whoever wants to retire earlier than the official retirement age will have to incur pension income penalties, thereby making this route far less attractive than it was before (Euwals, Van Vuuren, & Wolthoff, 2010). In addition, the generosity and accessibility of unemployment and disability benefits has been greatly reduced by policy changes, which has also made early exit from the labor market difficult (Euwals, Van Vuuren, & Van Vuuren, 2012). Finally, in 2012 the Dutch government passed a law that would increase the eligibility age for the flat-rate public pension gradually from 65 to 67 in 2021, after which it will be tied to changes in average life expectancy at age 65. According to current projections, the statutory retirement age is expected to increase to about 71 years in 2060 (OECD, 2017).

These policy changes have had a strong effect on the labor force participation of older workers in the Netherlands. This is illustrated in Fig. 14.1, which shows the labor force participation rates of Dutch older workers between 2003 and 2015. There is an increase in the labor force participation of older workers between ages 50 and 59, but the changes are most pronounced for the age group 60–64, with participation in this group rising from 22% in 2003 to 51% in 2015. The increase in labor force participation of older workers aged 65+ is also visible, but is still at a relatively low level. The trend toward later retirement is also evident from the average age at labor force exit, which has increased from 61 years in 2006 to 64 years and 5 months in 2015 (Statistics Netherlands, 2016). The pathways of early exit from the labor market have thus been largely closed off, and there is a clear trend toward longer working lives. With the statutory retirement age gradually increasing and the continued adaptation of older workers to work at higher ages, employment rates of older workers are expected to continue to increase in the near future.

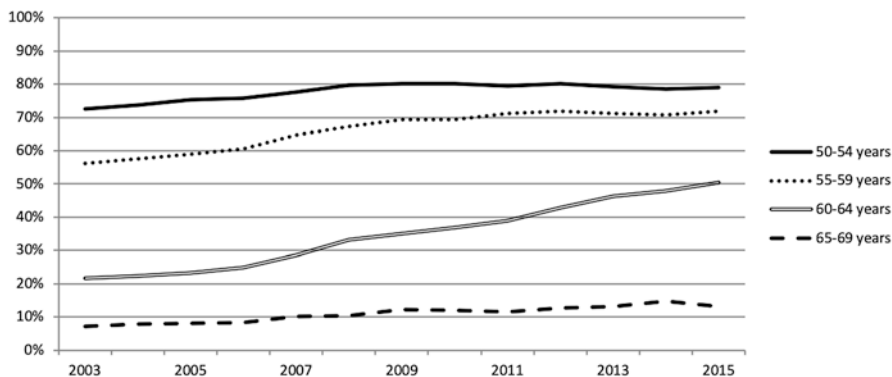


Fig. 14.1 Labor force participation rates of older workers in the Netherlands, 2003–2015. Source: Statistics Netherlands

14.3 Methods

In this chapter, we analyze data from two large-scale surveys of Dutch employers on the topic of workforce aging and longer working lives—one held in 2009 and the other in 2017. The 2009 survey was part of a larger European project about employers’ practices and policies regarding an aging workforce, which involved data collection among employers in eight European countries (for more details see Conen, 2013). Here, we only use data from Dutch employers. These data were collected through a hard copy survey between February and May 2009. Out of a sample of 4700 organizations, 1077 organizations responded, for a response rate of 23%. The sample was stratified according to size and sector to ensure sufficient responses from a diverse set of organizations. Sample weights were used in the analysis to correct for the sampling design.

The 2017 survey was similar in topic and design to the (Dutch part of the) 2009 survey. A similar sampling approach was chosen, with the sample being stratified according to size and sector, but with sample weights constructed to correct for the sampling design. The data were collected between December 2016 and March 2017, with 1358 responses out of a sample of 6000 organizations for a response rate of 23%. The response rate was thus the same as it was in 2009 and is also comparable to other large-scale employer surveys in organizational research, nationally and internationally (Baruch & Holtom, 2008; Conen, Henkens, & Schippers, 2011). Again, hard copies of surveys were mailed to the organizations, but now an online response option was added, with half of the responses being hard copy and the other half being online responses.

14.4 Costs and Productivity of an Aging Workforce

One of the central issues associated with the aging of the workforce is the issue of (the perception of) rising costs and declining productivity (Conen, Van Dalen, & Henkens, 2012). In most organizations, wages increase with organizational tenure, so that older workers are in general more costly for employers than younger workers. Wages rising with seniority fit within implicit contract theory and are meant to keep workers motivated throughout their career within the firm (Lazear, 1979). Although seniority wages are common in most jobs, the extent to which wages rise with tenure may differ greatly between organizations, industries, and countries. Earlier research has shown that the presence of the seniority principle in wage setting is relatively pervasive in the Netherlands, meaning that organizational tenure is rewarded to a larger extent in the Netherlands than in most other countries (Conen et al., 2012). This may be partly due to a strong tradition of collective bargaining between employers' and employees' representatives. The Organization for Economic Cooperation and Development (OECD) has identified the comparatively steep level of seniority-based wages in the Netherlands as a potential problem as population aging continues and has suggested a wage-setting mechanism that is based more on performance and less on tenure than the current mechanism (OECD, 2014).

A closely related issue is the development of workers' productivity as they age. It is generally acknowledged that workers of different ages have different qualities that may contribute to their productivity, mostly being related to their physical and mental capacities as well as the experience and knowledge they have built up over previous years. For example, older workers are generally considered to possess more "soft skills" such as better social skills and more commitment to the organization, whereas younger workers are generally considered to possess more "hard skills" such as mental and physical capacities and the willingness to learn and apply new technologies to the work process (Van Dalen, Henkens, & Schippers, 2010). Still, studies examining the relationship between age and productivity find no overall effect of age on general productivity, although links to more specific aspects of job performance have been found (Ng & Feldman, 2008). The extent to which productivity is affected by the aging of the workforce thus seems to depend crucially on the type of job and the specific characteristics of the employees. However, negative stereotypes about older workers' productivity remain persistent and may influence the ways in which employers respond to an aging workforce (Posthuma & Campion, 2009).

Figure 14.2 shows how employers think labor costs of their organization would develop in the case of continuing workforce aging. The results show a small increase in the proportion of employers that expect rising labor costs. In 2009, 75% of employers expected labor costs would increase as a result of aging staff, whereas in 2017, 81% of employers thought so. Almost no one expected a decrease in labor costs: in 2009 only 1%, and in 2017 0%.

Figure 14.3 shows how employers expect labor productivity will develop in the case of continuing population and workforce aging. Here, the differences between 2009 and 2017 are far more striking. In 2009, 34% of employers expected a decrease

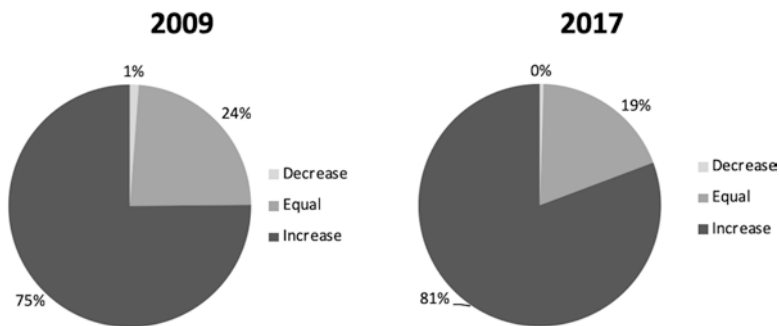


Fig. 14.2 Employers' expected labor costs in case of a continuing aging workforce. Note: Based on the question "If the average age of your workforce would increase by 5 years, what would be the effect on labor costs?" Source: Employers' surveys 2009 and 2017

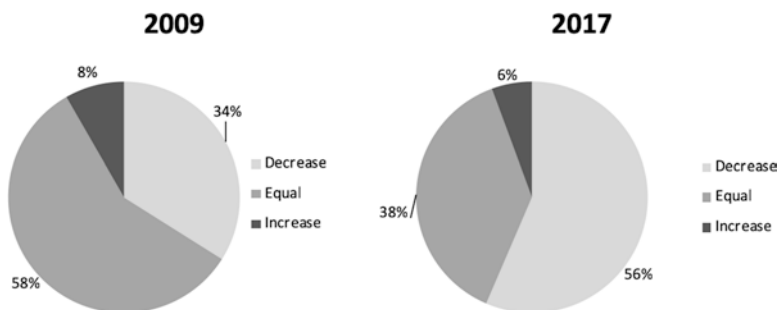


Fig. 14.3 Employers' expected labor productivity in case of a continuing aging workforce. Note: Based on the question "If the average age of your workforce would increase by 5 years, what would be the effect on labor productivity?" Source: Employers' surveys 2009 and 2017

in overall productivity, 58% expected productivity to remain roughly the same, and 8% expected an increase in productivity. In 2017, 56% of employers expected a decrease in overall productivity as a result of aging staff, 38% expected it to remain the same, and only 6% expected an increase. Overall, the results indicate that employers have become more pessimistic about the effects of workforce aging. The growing gap between labor costs and productivity in an aging society can have strong implications because when wage costs increase while productivity stagnates or declines, profit margins will be under pressure and organizations may need to restructure or downsize.

These results are worrisome, because longer working lives are a new "fact" employers have to deal with. In particular, the concerns about productivity seem to reflect the decrease in the opportunities for employers to provide an easy exit to less productive older workers before statutory retirement age since 2009. Instead, the statutory retirement age has also been increased gradually and will continue to increase in the near future, implying that employers need to employ their older

workers even longer in the future. Especially when it comes to heavy physical labor, employers may expect a decline in productivity at later ages.

14.5 Investing in Older Workers' Workability

While employers' views about the costs and productivity of an aging workforce provide valuable information about why many employers view population aging as a challenge, it does not reveal which strategies or policies employers choose to deal with an aging workforce. This information might be extracted more directly through their application of different HR practices that affect the workability of employees. The application of HR practices serves multiple important functions, such as creating working conditions for different sets of employees, creating opportunities for employees' individual development, but also signaling an organization's strategic purposes and intentions toward current and prospective staff (Rau & Adams, 2013). HR practices aimed specifically at older workers are especially important for understanding how organizations deal with an aging workforce, since organizations may use their HR practices to, for example, encourage or discourage working until or even after retirement (Oude Mulders, Henkens, & Schippers, 2017). Van Dalen, Henkens, and Wang (2015) offer a useful taxonomy of age-based HR practices, distinguishing three types: (a) accommodation practices to compensate for the possible decline in physical and cognitive capacities of older workers, (b) development practices to increase the productive capacity of older workers, and (c) exit practices that enable older workers to retire from the labor force, either fully or partially.

Figure 14.4 shows how often Dutch employers have applied a number of HR practices that affect working conditions and workability of older workers. The

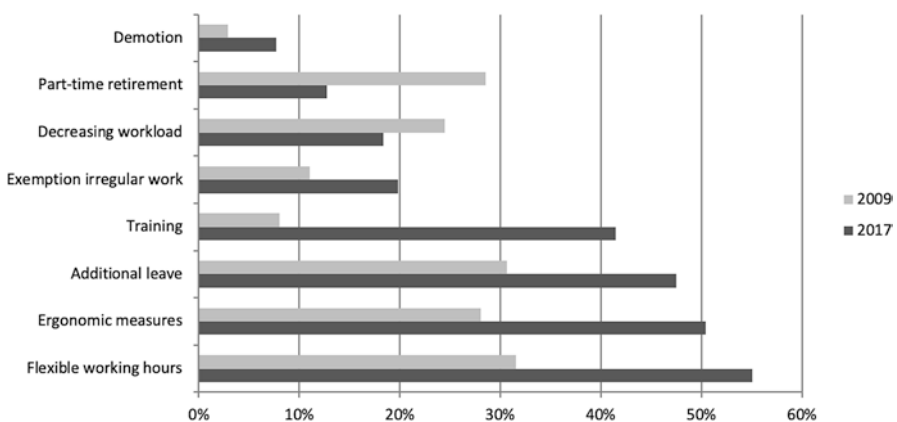


Fig. 14.4 Employers' application of age-based HR policies. Note: Based on the question "Which of the following HR policies are applied in your organization?" Source: Employers' surveys 2009 and 2017

results clearly show a moderate to strong increase in the application of most of the HR practices, mostly accommodative and development practices, but a decrease in exit practices. More than half of Dutch employers now offer one or more accommodation measures aimed at compensating the potential age-related loss in physical and cognitive functioning. Offering flexible working hours and ergonomic measures are the most commonly applied accommodative HR practices, with over half of the employers offering those measures. The increase in offering additional leave for older workers is striking, given that this is a typical HR practice that can be perceived as increasing the costs associated with employing older workers. Still, the increase in the application of this measure shows that many employers think allowing older workers to take additional leave improves their workability in the long run, possibly by reducing the risk of absence due to illness.

Demotion—the reduction of an employee’s rank and salary—is often mentioned by managers and policy makers as a means of increasing the employability of older workers in an aging labor force. However, in practice demotion is rarely applied (Bowlus & Robin, 2012; Josten & Schalk, 2010). Our results indicate that although the percentage of organizations that use demotion for older workers as an instrument of HR policy has more than doubled, it is still quite rare and is the least frequently applied policy instrument. Most likely this is due to the fear that the application of demotion will demotivate other employees (Van Dalen & Henkens, 2016; Verheyen & Guerry, 2018).

Even though there is a clear overall increase in the application of accommodation measures, the biggest difference in employers’ HR practices between 2009 and 2017 is the large increase in the application of the development-related HR practice of offering training opportunities to older workers, with only 8% of employers offering this in 2009, but 40% offering it in 2017. It seems Dutch employers are embracing the potential benefits of lifelong learning and are realizing that offering training opportunities to older workers can increase their long-term workability, thus also being beneficial to the organization. Finally, there is a very clear decline in the application of exit-related HR practices. Offering part-time retirement arrangements to older workers, thereby allowing them to partially retire before their full retirement, has decreased considerably, with 29% of employers offering part-time retirement in 2009, and 13% offering such arrangements in 2017.

The increase in the application of accommodative and development age-based HR policies should be seen within the Dutch labor market context. Due to relatively high level of employment protection legislation, it is difficult and costly to dismiss older workers. Given that the opportunities for early exit from the labor market have also been strongly diminished, organizations have a vested interest to ensure the workability of older workers until they reach mandatory retirement age, which is coupled to the statutory retirement age. This has most likely increased the need to invest in the long-term mental and physical fitness of older workers, driving the increase of development and accommodation of HR practices. The decrease in offering exit opportunities should also be viewed in this context. While many older workers see part-time retirement before full retirement as an attractive option, both employers and employees have been shown to be reluctant to implement it due to

the high costs associated with partial early exit from the labor market. Overall, the changes in employers' application of age-based HR policies show a growing sense of urgency among employers to ensure long-term workability of older workers.

14.6 Retirement Age Norms

The normative context in which decisions regarding the employment of older workers are made is another important factor to consider. Individuals, including important organizational actors such as CEOs or other top managers, have normative ideas about factors such as the appropriate timing of retirement, which may affect the ways in which they deal with the problem of workforce aging (Oude Mulders et al., 2017; Radl, 2012; Settersten & Hagestad, 1996). Such age-related workplace norms may stem from factors such as personal values about the appropriateness of working at later ages, individual experiences with older workers, observed attitudes, and behavior of others, but also from institutional factors such as a statutory retirement age coupled to a public pension and mandatory retirement regulations.

The *retirement age norm* is an important normative concept that taps into a person's expectations about the appropriate timing of retirement, or at what age workers should retire. It may specify a single age at which one thinks people should retire, or it may specify lower and upper boundaries between which the retirement transition should occur. The retirement age norm held by important organizational actors has proven to be an important predictor in employers' behavior regarding older workers. For example, the retirement age norm influences decisions such as the retention of older workers (Karpinska, Henkens, & Schippers, 2013), the hiring of early retirees (Oude Mulders, Van Dalen, Henkens, & Schippers, 2014), but also more broadly organizational practices aimed at extending working lives (Oude Mulders et al., 2017).

Table 14.1 shows the lower and upper boundaries of the retirement age norm from Dutch employers in 2009 and 2017. The lower boundary indicates the age at which employers think workers are generally too young to retire, whereas the upper boundary indicates the age at which employers think workers are too old to work at least 20 h a week. Additionally, Table 14.1 shows the statutory retirement ages in those years, as well as the average age of actual labor market exit in the Netherlands. The table illustrates an overall increase in both the lower and the upper boundary of the retirement age norm from 2009 to 2017, with the lower boundary increasing from 58.9 to 59.9 years and the upper boundary increasing from 66.4 to 67.6 years. The statutory retirement age increased from 65 in 2009 to 66 in 2017 and will increase to 67 in 2021. The average age of labor market exit increased from 62.5 to 64.4 from 2009 to 2017.

While norms are relatively slow to change, it is interesting to note that the retirement age norm gradually seems to change in response to increases in the statutory retirement age and the average age at labor market exit in recent years. At the same time the figures show increasing diversity among the age norms of employers.

Table 14.1 Employers' age norms regarding the appropriate age of retirement, statutory retirement ages, and average ages of labor market exit in 2009 and 2017

	2009		2017	
	Mean	SD	Mean	SD
<i>Retirement age norm</i>				
Lower boundary	58.9	4.0	59.9	5.4
Upper boundary	66.4	4.8	67.6	5.0
Statutory retirement age	65		66 ^a	
Average age of labor market exit	62.5		64.4 ^b	

Note: Based on the questions "At which age do you in general consider a person too young to retire?" (lower boundary) and "At which age do you in general consider a person too old to work 20 h a week or more?" (upper boundary)

^aThe statutory retirement age was gradually increased throughout 2017; it was 66 at the end of 2017

^bFigure from 2016, as this was the latest available data. Source: Employers' surveys 2009 and 2017

In 2017, 43% of employers reported an upper boundary retirement age norm that was lower than the statutory retirement age at that time, whereas in 2009 only 17% did so. This suggests that employers—although adjusting to higher retirement ages—have concerns about the pace of increasing the retirement age.

14.7 Older Workers and Shortages on the Labor Market

Longer working lives manifest not only through continued employment of older workers but also by unemployed older workers being hired and older workers switching jobs. Traditionally, labor shortages are deemed to be the most effective stimulus for the position of older workers in the labor market. Here, we analyze which practices employers turn to when they are confronted with a shortage of suitable personnel. The results from both surveys are presented in Table 14.2, with the results being divided into subcategories focusing on certain target groups (such as older workers, females, or migrants), practices aimed at current employees, and practices aimed at reducing labor demand.

The results show that overall, employers applied a more diverse range of practices in 2017 than they did in 2009. Looking more closely, we can see that there is an increase in practices aimed at certain target groups, mainly focusing more on the employment of women, especially in male-dominated industries and for top positions in organizations. However, there is no change in focus on hiring older workers, with just 10% of employers focusing on hiring older workers in case of shortages. This is in contrast with findings that showed an increased likelihood of hiring older workers in better economic conditions (Oude Mulders, Henkens, Liu, Schippers, & Wang, 2018). Employers also do not focus more on increasing the productivity of current employees. An equal proportion of employers (17%) in 2017 encouraged their employees to work until statutory retirement age as they did in 2009, whereas

Table 14.2 Employers' hiring and retention practices in case they encounter labor market shortages

	2009	2017
<i>Practices aimed at target groups</i>		
Recruiting more women workers	19%	29%
Offering higher wages	16%	17%
Recruiting more older workers	10%	10%
Recruiting staff from abroad	8%	10%
Recruiting former staff who has taken (early) retirement	4%	4%
<i>Practices aimed at current employees</i>		
Encouraging workers to work until statutory retirement age	17%	17%
Working more hours	7%	11%
Encouraging workers to work beyond statutory retirement age	8%	6%
<i>Practices aimed at reducing labor</i>		
Outsourcing labor	4%	25%
Substituting technology for labor	15%	22%
Relocating production capacity abroad	4%	5%

Note: Based on the question "If you are or were to be confronted with a shortage of suitable personnel, which practices do you or would you consider?"

Source: Employers' surveys 2009 and 2017

encouraging workers to work *beyond* the statutory retirement age has decreased from 8% in 2009 to 6% in 2017. Of course, this shift is likely to be related to the increasing statutory retirement age (see Table 14.1 or the policy context above), which already led to older workers working longer than before. The biggest increase in employers' practices, however, comes from practices that are aimed at reducing labor demand. Especially, outsourcing labor has become far more popular, with an increase from 4% in 2009 to 25% in 2017. This is likely the result of changing economic conditions: in 2009 the Dutch economy was still feeling the effects of the global financial crisis of 2007–2008 and was experiencing a strong growth in unemployment, whereas in 2017 the Dutch economy had recovered from the economic crises of the past decade and the labor market is showing shortages in many sectors.

14.8 Future Policy Reforms

Of course, not only employers and employees play an important role in the labor market. As mentioned earlier, the government also plays an important role in shaping the context for longer working lives with its labor market and retirement-related public policies. In the public debate, there is a lot of attention for longer working

lives, with many commenters pointing to the growing inequality between lower and higher educated workers and solidarity between generations. Some argue that the current policy that will lead to a statutory retirement age above age 70 by 2060 is unsustainable, especially for lower educated older workers and those in physically demanding jobs. This view is also reflected in, for example, the high levels of discontent among low-educated workers about the implemented public pension reforms (Van Solinge & Henkens, 2017). Many people are calling for additional policy reforms to alleviate the effects of workforce aging and make longer working lives more attainable.

Table 14.3 presents a number of possible policy reforms to that end, and the extent to which employers support those reforms. It is clear that the increasing public pension age is considered to be the biggest issue, especially for physically demanding jobs: 79% of employers support a lower statutory retirement age for workers in such jobs. Almost two thirds of employers are also in favor of a more flexible labor market, which could be attained by relaxing the employment protection legislation and making dismissal of employees easier and less costly. While this may reduce the problems associated with workforce aging for employers, it may also lead to increasing unemployment among older workers, especially considering employers' assessments of the costs and productivity of older workers (see Figs. 14.2 and 14.3). Sixty-one percent of employers are in favor of the government stimulating, possibly by subsidizing, part-time retirement, as this may ease the transition from full-time work to full-time retirement. This could potentially contribute to longer working lives if workers take part-time retirement instead of full-time retirement but could also hamper the transition if workers take part-time retirement instead of working full-time but do not postpone their full-time retirement. Over half of the employers would also like to see the government encouraging the possibility of demotion, most likely because this could decrease the costs associated with workforce aging and may bring the wages of older workers in line with their productivity. Finally, 45% of employers are supportive of decreasing the strength of seniority wages in the Netherlands, as was suggested by the OECD (2014).

Table 14.3 Employers' desired policy reforms

	2017
Lower retirement age for heavy physical labor	79%
More flexible labor market	64%
Stimulating part-time retirement	61%
Stimulating demotion	57%
Decreasing seniority wages	45%

Note: Based on the question "Older workers need to work longer than before. Related to this, which public policies do you find desirable?"

Source: Employers' Survey 2017

14.9 Discussion

After decades in which workers and employers used the exit route of early retirement, current retirement reforms force both employers and employees to adjust to the idea of extending working life (Beehr & Bennett, 2015). The development and implementation of pension reforms aimed at longer working lives can be witnessed in most developed countries. While increasing evidence shows how older workers extend their careers in response to these pension reforms, much less is known about employers' attitudes and behaviors. In this chapter, we analyzed responses of Dutch employers to workforce aging over the past decade.

The results indicate that employers have become increasingly involved in managing their aging personnel. With respect to their HR policies and practices, we see a clear tendency to invest in the productivity of older workers. Employers are more likely to provide training to their older workers than in the recent past. Also, accommodative policies such as flexible work schedules and ergonomic measures have become more prevalent. The existence of policies aimed at an early exit route have decreased. In addition, the workplace norms about the appropriate retirement age are gradually increasing in line with the increasing retirement age. As such, one might conclude that employers are highly responsive to the increasing retirement ages enforced by the recent public policy reforms. At the same time, however, the results indicate growing concerns among employers about the lack of flexibility that the pension system offers to employers and older workers in managing the retirement transition. Our findings show that expectations of employers have become far more pessimistic in the past decade about how an aging workforce will affect labor productivity. Furthermore, there is overwhelming support among employers for public policies to support earlier exit for those in physically demanding occupations and for encouraging part-time retirement.

In short, employers' responses to the aging workforce are a double-edged sword: employers are becoming more proactive in investing in the workability of older workers and accommodating longer working lives, but also still feel the need for an early retirement option for older workers whose capacity to work until high ages is limited. This may well become a stylized fact of the present and future organization where employing workers aged 60 years and older is no longer an exception but the rule.

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Chapter 15

A Narrative Review: Understanding How Employment Context Influences the Occupational Health and Well-Being of Older Workers in Low-Wage Jobs



Jennifer E. Swanberg, Lily Scheindlin, Gail Betz, and Aya Zouhri

15.1 Introduction

15.1.1 *Older Workers and Low-Wage Work*

It's true. The predicted silver tsunami is here, and its presence is influencing US labor force trends. Increasingly, Americans aged 55 and older are delaying retirement (Cahill, Giandrea, & Quinn, 2015). By 2024, the US Bureau of Labor Statistics (BLS) projects that almost 25% of the US workforce will be composed of people 55 years and older, a dramatic increase from 1994 when about 12% of people of the workforce were in the same demographic group (Morisi, 2016). Another predicted

J. E. Swanberg (✉)

Department of Health Policy and Management, School of Professional Studies, Providence College, Providence, RI, USA

e-mail: jswanberg@ssw.umaryland.edu; Jennifer.swanberg@providence.edu

L. Scheindlin

Departments of Epidemiology and Public Health, University of Maryland School of Medicine, Baltimore, MD, USA

Masters in Public Policy Program, The Heller School for Social Policy and Management, Brandeis University, Waltham, MA, USA

G. Betz

Health Sciences and Human Services Library, University of Maryland, Baltimore, MD, USA

A. Zouhri

University of Maryland School of Social Work, Baltimore, MD, USA

Jackson Park Center, Youth Tutoring Program, Seattle, WA, USA

e-mail: ayaz@ccsww.org

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trend: more people 65 and older will continue working (Desilver, 2016). According to the analysis of employment data from the BLS conducted by the Pew Research Center, almost 20% of those 65 and older, approximately 9 million people, were employed full- or part-time in May 2016 (Desilver, 2016). This is in stark contrast from May 2000 when 4 million individuals 65 and older, or about 13% of older Americans 65 and older, were employed.

Why are more Americans aged 55 and older working? The population demographics are shifting. Baby boomers, those individuals born between 1946 and 1964, are entering into older age groups. The first wave of this group turned 65 years old in 2011, and the last will hit this historically “traditional” retirement age in 2019. Americans are living longer. In 1980, Americans at age 65 could expect to live 16.4 more years, or until about the age of 81.4 (National Center for Health Statistics, 2017). In contrast, in 2015, Americans at 65 could expect to live 19.4 more years to the age of 84.4 (National Center for Health Statistics, 2017).

The longer life expectancy requires enough income to live. Yet, many low-income workers approaching retirement have little or no savings (GAO, 2015). The Government Accounting Office (GAO) analysis of the 2013 Survey of Consumer Finances (GAO, 2015) revealed that about half of households aged 55 and older have no retirement savings. This is especially true among households aged 55–64 in the lowest two income quintiles. Only 9% of households in the lowest income quartile had any retirement savings. And while 42% of households in the second lowest income quartile report having retirement savings, the median amount was \$19,000 (GAO, 2015). The GAO report also revealed that 50% of households aged 65 and older live mostly on income from Social Security, another indication of the financial vulnerability of older Americans.

As well as staying employed for financial security, more and more older adults remain employed beyond the traditional retirement age to stay healthy and active and because work provides a sense of meaning in one’s life (AARP, 2014). AARP’s (2014) Work and Career study reports that 52% of workers aged 55 and older report that they plan to work well into retirement because they enjoy the job and want something interesting to do (AARP, 2014). Yet, the need for money was the most important reason older workers were continuing to work—60% reported this to be true, up from 54% in 2007 (AARP, 2014).

While aging and work scholars (Cahill et al., 2015; James, McKechnie, Swanberg, & Besen, 2013) write about the trends associated with the delay in retirement—bridge jobs, part-time work, and phased retirement—no one, to our knowledge, has examined the challenges faced by older workers who are employed in occupations that pay low wages. This is a significant oversight in the literature because older workers who have been primarily employed in occupations that pay low wages may experience greater financial insecurity than their higher-wage counterparts and may have accrued limited retirement savings (GAO, 2015). They may not have the luxury to think about working part-time or phasing into retirement. Moreover, the job conditions inherent to low-wage work may place additional burdens on older workers.

15.1.2 Low-Wage Work

Half of the workers in the United States or about 58.3 million workers are employed in jobs that pay less than \$15 per hour (Economic Policy Institute, 2016)—wages that make it difficult for working families to thrive, let alone save for retirement. People in these jobs are performing tasks that are vital to society: they care for our elders, children, and infirmed; clean our hospitals, offices, and hotels; serve us meals, coffees, and spirits; ensure we have our pharmacy prescriptions, home building supplies, and cash for the weekend; and build new homes and office parks, repair roads and roofs, and cook many thousands of meals. Low-wage jobs are physically demanding; they often require heavy lifting, long hours of standing, climbing tall ladders, or working with toxic chemicals (Ghilarducci, 2018; Kalleberg, 2013; Krause, Scherzer, & Rugulies, 2005). Likewise, they are psychologically demanding. These jobs are fast-paced, provide limited autonomy or decision-making authority (Kalleberg, 2013), and offer limited job security (Landsbergis, Grzywacz, & LaMontagne, 2014). The number of work hours and times people are assigned to work may fluctuate and vary from week to week, making it difficult to plan finances, family responsibilities, or coordinate a second job (Swanberg, Watson, & Eastman, 2014). Low-wage jobs also offer few or no benefits such as paid sick leave, vacation days, or pension plans (Kalleberg, 2013), making it challenging for workers to manage work–family responsibilities or to accrue retirement savings (Jones, 2017). These types of jobs offer little opportunity for advancement or development (Fusaro & Shaefer, 2016), essentially guaranteeing that workers will be stuck earning low wages that foster economic insecurities and leaving older workers with little choice other than to remain working longer (Toossi, 2012). The ill effects associated with low-wage job conditions may be compounded for workers aged 55 and older because of health- or age-related physical limitations, ever-changing technology, or age-related stereotypes.

We argue that older workers who are in occupations that pay low wages are doubly vulnerable members of our society. In addition to managing the aforementioned challenges inherent in low-wage work, older workers are likely to encounter other challenges associated with being an “elder” (see Fig. 15.1). According to a study by AARP (2013), two thirds of workers aged 45–74 have experienced or witnessed age-related discrimination at work (AARP, 2013). Workers in this AARP study reported being passed over for a job for which they applied because of age (19%), passed up for promotion (12%), or denied access to training or development

Fig. 15.1 Confluence of aging and low-wage employment and its impact on occupational health and well-being



opportunities because of age (10%). Slightly less than 10% also reported losing a job because of age. Job insecurity is real among older workers (AARP, 2013). They fear they may not find comparable employment right away or they may be required to take a cut in pay. Further intensifying the vulnerability of older workers in low-wage occupations is the fact that women and people of color are disproportionately represented in these low-wage jobs (AARP, 2013). The intersection of race, ethnicity, gender, and age among workers with little power within organizations creates heightened risks for unfair treatment and associated consequences.

Despite the potential increased vulnerability of this working population, little is known about the demographic characteristics of this segment of the workforce or about the occupations and industries in which they are most heavily represented. Similarly, limited research has examined the effect of low-wage employment conditions on the occupational health and well-being of older workers in the United States. This chapter addresses these gaps in knowledge by (a) describing the demographic and employment characteristics of older workers in low-wage jobs and (b) conducting a narrative review to critically examine the current literature to further our understanding of how employment context influences the occupational health and well-being of older workers employed in low-wage jobs.

15.2 Study Methods

15.2.1 Demographic and Employment Characteristics

We use the research report published by the Urban Institute titled *Occupational Projections for Low-Income Older Workers, Assessing the Skill Gap for Workers Age 50 and Older* (Mikelson, Kuehn, & Martin-Caughey, 2017) to describe the demographic, occupational, and industrial characteristics of lower-income older workers, as it is the most current and comprehensive report of its kind to provide a thorough comprehensive snapshot of the demographic, economic, and employment circumstances of low-income older workers. The report incorporates several data sources including the American Community Survey (ACS), the Health and Retirement Study (HRS), the Bureau of Labor Statistics' (BLS) Employment Projections, and the Occupational Information Network (O*NET). For the purposes of the results presented in this chapter, we rely primarily on data presented in the report about low-income older workers from the 2015 ACS and the 2014 HRS. The ACS (United States Census Bureau, 2016) is a nationally representative household survey conducted annually by the US Census Bureau. The HRS (Health and Retirement Study, 2018) surveys a representative sample of about 20,000 Americans 50 years and older every 2 years, with a focus on changes in labor force participation and health transitions of older workers. This Urban Institute report uses the

term “low-income” older workers rather than “low-wage” older workers.¹ Accordingly, “low-income” is defined as those earning 300% or less of the federal poverty level (FPL) after adjusting for household size (Mikelson et al., 2017). A one-person household with income up to \$35,310 and a two-person household with an income up to \$47,790, using the 2015 FPL, are considered low-income older workers. “Older workers” are defined as workers who are 50 years and older. Definitions for “low-income” and “older workers” adopted by Mikelson and colleagues are comparable to definitions used by the AARP Foundation.

15.2.2 Narrative Review

As a guide this narrative review followed several steps outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement, which includes a flow diagram designed to enhance transparency of more rigorous reviews such as systematic reviews or narrative reviews (Moher et al., 2009). Studies were selected for inclusion in this review by meeting the following criteria: (a) study was published between 2010 and 2018²; (b) study happened in the United States; (c) findings were published in a peer-review manuscript in English; and (d) research focused on older workers employed in low-wage occupations. Due to concerns regarding the limited number of articles specifically focused on older low-wage workers, we included articles that studied older workers in occupations that are known for paying low wages.

With the assistance of a research librarian in consultation with the research team, we ran comprehensive searches. Databases searched include Abstracts of Social Gerontology, Business Source Premier, Ovid Medline, and Scopus. The searches were run in December 2017 and updated in February 2018. A combination of keywords and database-specific subject terms were used to find the most relevant articles. Some search terms used include: (old* worker* OR aged worker* OR aging workforce) AND (low* income* OR unskilled OR nonstandard). A variety of blue-collar occupations were also included, such as construction OR paraprofessional OR retail.

As shown in Fig. 15.2, the search of all four databases generated 1843 articles. After removing duplicates ($n = 1554$), an appraisal of titles and abstracts was conducted following the inclusion criteria. Upon completion of this initial screening, 1474 additional articles were excluded. Two reviewers assessed the full text of the remaining 80 articles based on the inclusion criteria. Discrepancies and uncertainties were discussed until consensus was attained. The final review included ten manuscripts.

¹When addressing the first study question, we will use the low-income older worker. When reporting results of the narrative review, we will use the term low-wage older worker.

²This timeframe was adopted to review research published since the publication of the first book on Aging and Work by the first two editors of this book in which this chapter is included.

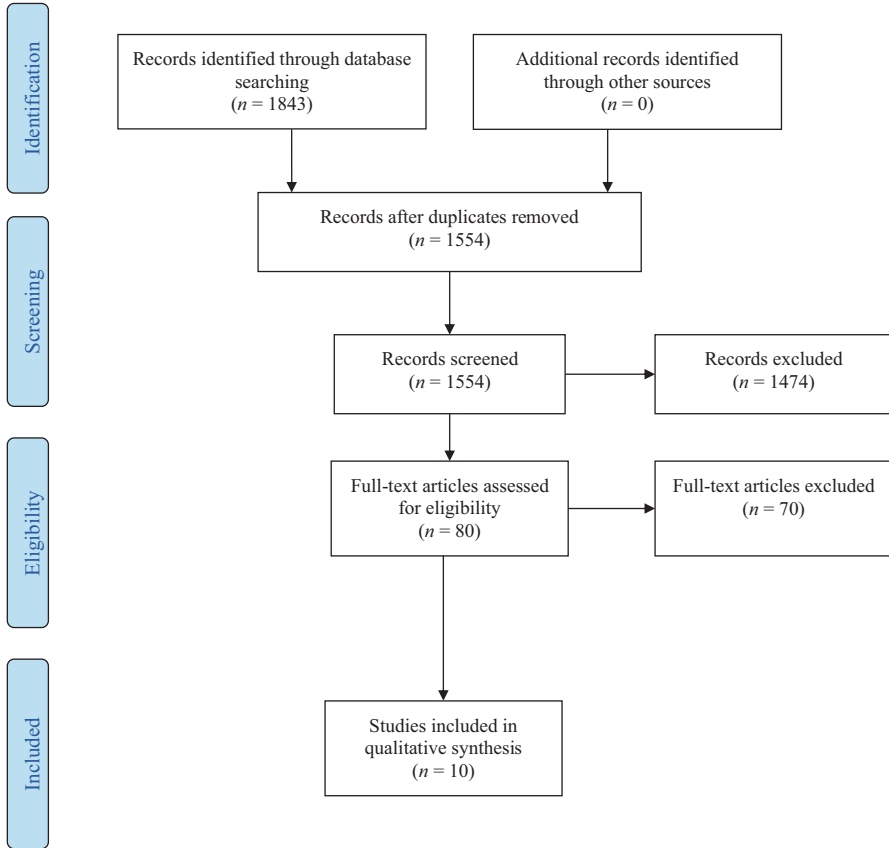


Fig. 15.2 PRISMA flow diagram

15.3 Results

15.3.1 Demographic and Employment Characteristics of Low-Income Older Workers

US Census Bureau data estimate that in 2015, there were 13.2 million low-income older workers aged 50–70 and older in the United States. Nearly two thirds (65%) of this low-income older worker population were between the ages of 50 and 59, 28% were 60–69 years old, and 7% were 70 and older. This working population is nearly split evenly between males (48%) and females (52%). Non-Hispanic whites make up the majority of the group (59%), followed by Hispanics (19%) and non-Hispanic Blacks (15%). A higher proportion of low-income older workers work full-time (67%), and about half earned a high school diploma or less. Fifty-one percent of low-income older workers are married and 14% have some type of health difficulty. Fifty-two percent of low-income older workers have a household income

of 200–300% of the FPL; 36% have a household income of 100–199% of the FPL; and 12% have a household income below 100% of the FPL.

Several trends emerge when examining demographic characteristics by three age categories (50–59, 60–69, and 70 and older). In the 50–59-year-old age group, low-income older workers are more racially and ethnically diverse in comparison to the other two age groups. For instance, 45% of workers 50–59 identify as Black, Hispanic, Asian, and other, in comparison to 36% of workers aged 60–69 and 25% of the oldest age group. The proportion of low-income older workers working full-time declines with age from 75% of 50–59-year olds to 59% of 60–69-year olds to 26% of workers 70 and older. Put another way, the percentage of low-income workers aged 50 and older working part-time increases with age. Marital status is another category in which there is a dramatic change across age groups. Widowed low-income older workers make up 5% of the population in the 50–59 range, but 26% for the 70 and older category. As one may expect, health difficulties become more common as workers become older. Workers experiencing any health difficulties grows as the population ages, from 11% of 50–59-year olds to 15% of 60–69-year olds, to 26% of those 70 years and older.

In what low-wage industries and occupations are older workers represented? There is no single industry that employs a large majority of older workers. The top seven most common industries are: health and social assistance (15%), retail trade (14%), and manufacturing (10%), followed by education services (7%), construction (7%), accommodation and food services (7%), and administrative support industries (7%). The top four occupations in which low-wage older workers are employed include: office and administrative support (14%), sales and related occupations (10%), transportation and material moving (10%), and building and ground cleaning and maintenance (10%).

15.3.2 The Influence of Employment Conditions on the Occupational Health and Well-Being of Older Workers in Low-Wage Jobs

Throughout the narrative review process, the authors found no articles that explicitly assessed the effects of low-wage employment conditions on the occupational health and well-being of older workers. However, we identified ten studies that directly or indirectly examined the effects of working conditions on older workers employed in jobs that we categorized as low-wage jobs (see Table 15.1). Employment conditions discussed in these studies were grouped into two broad themes: *work environment* and *job conditions*. Dimensions of the work environment that were examined in these studies were clustered into three areas: perceived discrimination, learning and development opportunities in the workplace, and social relationships at work. Similarly, job conditions of interest to researchers across the identified studies also clustered into three categories: physical demands, low wages, and decision authority and skill discretion.

Table 15.1 Studies examining the influence of employment context on older workers employed in low-wage jobs ($N = 10$)

First author (year)	Research objective	Employment conditions		Industry/occupation	Study design	Sample	Year study conducted/ data collected
		Work environment	Job conditions				
Butler (2013)	Studied lifetime financial security and perceived advantages of hiring older workers as home care aids	Perceived discrimination	Decision authority and skill discretion, low wages	Home health care	Qualitative	$N = 31$	2011
Chi, Maier, and Gursoy, (2013)	Examine perceptions of hospitality employees have of their younger and older managers by generation and job positions across three generational cohorts	Perceived discrimination		Hospitality, hotel management	Exploratory, mix-methods that used qualitative and quantitative methods	Focus group: $N = 91$; 33 managers and 58 line workers Survey: 905 participants $N = 143$	2013
Choi (2015)	Identify injury-type trends as it relates to the age and trade of construction workers		Physical demands	Construction	Quantitative	$N = 143$	2004–2006
Frank-Miller, Lambert, and Henly (2015)	Determine if older women are hired into different types of jobs than younger women and if age is related to starting wages	Perceived discrimination		Retail	Quantitative, secondary analysis of corporate administrative records	$N = 3109$	2006–2009

James, et al., (2011)	Investigate the relationship between several dimensions of job quality and employee engagement in older workers in retail settings and whether predictors of engagement vary by age	Learning and development opportunities Supervisor and coworker support	Decision authority and skill discretion	Retail	Quantitative, cross-sectional surveys	N = 6047	2009
James et al. (2013)	To explore the relationship between employee perceptions of discrimination of older workers and employee engagement	Perceived discrimination		Retail	Quantitative cross-sectional survey	N = 4500	2011
Ravichandran, et al., (2015)	Examined older workers' perceptions of training they receive in food service establishments	Learning and development opportunities, social relationships	Low wages	Foodservice	Qualitative; exploratory, 2 focus groups	N = 19	2011
Sanders and McCready (2009)	Examine how older blue-collar workers continue to perform physically demanding jobs as they age	Social relationships	Physical demands, decision authority and skill discretion	Maintenance	Qualitative; in-depth interviews; case studies; observations	N = 2	No date

(continued)

Table 15.1 (continued)

First author (year)	Research objective	Employment conditions		Industry/occupation	Study design	Sample	Year study conducted/ data collected
		Work environment	Job conditions				
Sanders and McCready (2010)	Examined the contribution of workplace job design to dimensions of successful aging	Social relationships	Decision authority and skill discretion	Retail, homebuilding	Quantitative; cross-sectional survey design	N = 109	No date
Welch, et al., (2008)	Investigate the intersection of aging with work limitations, chronic medical and musculoskeletal conditions and physical functioning		Physical demands	Construction	Quantitative; cross-sectional survey	N = 979	2004

15.3.2.1 Work Environment

Perceived Discrimination Four studies examined the effects of perceived discrimination on older workers employed in low-wage jobs. The first study, by Butler (2013), explored lifetime financial insecurity and perceived advantages of home care agencies employing women over age 55 as home health care aides. The rising need for personal care services as the population ages has increased the demand for home care workers and heightened home care agencies' concern about a potential labor shortage. To address this social issue, authors of this qualitative study conducted interviews with 31 women aged 63–80 recruited through home care agencies located throughout Maine. Women were asked about their financial security, job history, and views about older workers doing personal care work. Using a grounded theory approach, the data were analyzed to reveal emergent themes using qualitative software NVivo 9 for analysis.

Overall, results suggest older home care workers perceive that there are a number of advantages of employing older workers in comparison to younger workers, most notable of which were experience, wisdom, and showing patience and understanding with clients (Butler, 2013). Yet, participants also perceived unfair treatment due to their age. In comparison to younger workers, older home care workers were given fewer shifts, and their schedules were more unpredictable and inconsistent. Varying and erratic hours, unexpected shift changes, short notification about schedule changes, reduced work hours, and other unforeseen changes to their work schedule were commonplace for older workers. Although study respondents reported they benefited from having flexibility in their schedule when needed, they also reported poor morale and negative feelings toward their job due to the perceived age-related discrimination.

The second study that addresses the influence of perceived age discrimination on low-wage earning older workers examined how general perceptions of older workers influenced younger workers' opinions of older adults in managerial positions (Chi et al., 2013). After researchers developed items to assess employees' perceptions of their younger and older managers through a series of focus groups, they assessed the content validity of the items and refined them accordingly. The final perceived age discrimination measure was included in a cross-section survey administered to 1577 employees working at 29 randomly selected hotels in two regions of the United States. Results indicate that managers from the millennial generation have a more negative perception of their older managers compared to managers from baby boomer generation or Generation X (Chi et al., 2013). Researchers suggest that implicit biases towards older workers in line-level and/or management positions could result in unequal allocation of resources such as on-the-job training opportunities for older workers.

Another study focused on the relationship between employee engagement and intentional and unintentional age-related discrimination among a sample of over 4500 employees aged 18–94 working at a national retailer (James et al., 2013). Employee engagement was assessed using an 8-item measure that determined the

cognitive, emotional, and behavioral aspects of employee engagement. Results indicate that perceived age-related discrimination is related to lower levels of employee engagement among workers of all ages and that for older workers there is a more negative association between unintentional age discrimination and employee engagement. Intentional discrimination had a more adverse effect on employment engagement for younger workers.

In this last study interested in age-related perceived discrimination, Frank-Miller et al. (2015) examined whether female frontline retail employees 55 years and older working at national retailers in the Midwestern and Eastern regions of the United States were hired into different types of jobs in comparison to younger female colleagues. Study authors also examined whether an employee's age is related to starting wages after controlling for race, ethnicity, geography, and job tenure. Based on the level of previous work experience, older women should be placed in jobs that pay more. However, results indicate otherwise. Analysis of corporate administrative data (employees' date of hire, starting hourly wage, birthdate, job type, job status, race, and geographic region of the store) indicate that while women over 55 were more likely to be hired for higher-quality jobs than women aged 18–22, they were less likely to be offered higher-quality jobs than their mid-life counterparts, aged 23–39. Results also indicate that although the youngest group of women earn lower wages than women 55 years and older, women aged 23–54 earned significantly more than women 55 years and older (Frank-Miller et al., 2015).

Learning and Development Opportunities Two studies investigated the relationship between learning and development opportunities at the workplace and job outcomes among older workers. Ravichandran, Cichy, Powers, and Kirby (2015) assessed older workers' perceptions of the training they receive at food service jobs and whether training received is associated with job satisfaction and other related outcomes (Ravichandran et al., 2015). Researchers conducted two focus groups with 19 older workers³ ($n = 9$; $n = 10$) who were employed in a variety of food service settings (e.g., independent and chain restaurants, hospitals, schools) in one city. Focus groups inquired about the type and method of training received (formal, informal, or incidental), the time allocated for training, the feedback received about their performance during the training, and the use of technology as a training tool. Overall, results indicate that worker retention, job performance, and job satisfaction increase among older workers when they receive training at work. Older workers who received training also reported higher job efficiency, better understanding of how to perform job tasks, more opportunities for job advancement, and higher pay. Although study participants prefer on-the-job training, most employees reported insufficient access to on-the-job training and an overall dissatisfaction with the other types and quality of training offered.

In response to literature that suggests there are preconceived ideas among organizational leaders that older workers are not interested in job advancement and training opportunities, James et al. (2011) used social exchange theory and the norm

³Detail about participants' ages beyond "older worker" was not provided.

of reciprocity as a framework to understand the influence of job quality, including career development opportunities, on employee engagement. Researchers examined if engagement differed by age. Employees ($N = 6047$), aged 18–94, were surveyed as part of a large-scale study of job quality among frontline workers employed by one national retailer. While results indicate that career development opportunities were associated with employee engagement for all groups of workers (ages 18–24, 25–39, 40–54, 55–65), career development was not associated with employee engagement for retirement eligible workers classified as workers aged 66 and older.

Social Relations on the Job Four studies addressed the effects of social relations at work, including relationships with supervisors, managers, and coworkers on older workers' employment experiences. The first, by James et al. (2011) and previously described, investigated the relationship of supervisor support among older retail workers' employee engagement. Findings show the importance of recognizing age diversity among groups of employees as results indicated differences in the effects of supervisors' support on employee engagement. Supervisor support had the largest effect size on employee engagement for two groups of older workers—those who are aged 55–65 and those 66 and over—in comparison to the other age groups.

Sanders and McCready (2009) followed two older, blue-collar workers in physically demanding jobs, one custodian (age 63) and one mechanic (age 62), over a 2-month period to determine how they were adapting to the physical nature of the job given their age. To gather in-depth information about the men's experiences, the author conducted semi-structured interviews and work observations over a 2-month period and had workers complete the Musculoskeletal Body Map, which asks workers to indicate parts of the body where they have experienced discomfort over the 12 months. Results indicated that, due to the autocratic management style of their supervisors, both workers had to make their own job modifications to succeed in their working environments, physically and emotionally. The most common work adaptation was reducing the physical job demands, specifically reducing loads lifted and energy expended throughout the day. Both participants reported that older age brings specific physical challenges that make work adaptations necessary and that if management fails to alter the work environment to fit their changing needs, doing so becomes their responsibility. Workers also reported feeling content in the job, despite lack of support from management. Both maintenance workers are primarily working to save money for retirement and for health benefits rather than seeking advancement opportunities as they had earlier in their life.

In contrast, Ravichandran et al.'s (2015) study on training needs of older food service workers, previously described, addressed the importance of managerial support for a good quality workplace environment and worker retention. Management support appeared to be integral to job satisfaction in older workers (Ravichandran et al., 2015). By encouraging employee pride and comfort at work, supportive management significantly increased older workers' satisfaction and happiness at work.

Extending social relationships at work beyond the supervisor, three articles examined the relationship between coworker support and older worker well-being. First, Ravichandran et al.'s (2015) article analyzes training efforts in the foodservice

industry and emphasizes the importance of older workers finding support and encouragement from their coworker community base. Coworker and supervisor support proved important for maintaining positive attitudes and commitment from older workers (Ravichandran et al., 2015).

Similarly, the Sanders and McCready (2009) article describes the importance of coworker connections for a productive and positive working environment. Results indicated coworker interactions are valuable in creating an enjoyable work environment for older workers that lead to feelings of job security. As evidence of this, researchers note the following about the two participants in the study:

Steve and Tony appreciated opportunities for both daily social interactions with other school employees as well as the deeper camaraderie among coworkers. Steve explained that now he had fewer opportunities for social interaction during his routine job tasks...because the supervisors were younger than Steve and Tony the workers tended to frame their concerns as intergenerational issues. (Sanders & McCready, 2009, p. 117)

The last of the four studies that addressed social relationships at work illustrated the positive effects of coworker support on older workers' well-being. Sanders and McCready's (2010) study of 142 older workers employed in homebuilding retail stores studied the contribution of workplace design (opportunities for decision-making, skill variety, coworker support, and supervisor support) on healthy aging. Job design contributed to 23% of the variance in generativity. Generativity in this study measured passing on skills to younger generations and being creative and productive. Results also indicate that coworker support was positively associated with two measures of healthy aging: personal sense of control and generativity.

15.3.2.2 Job Conditions

Physical Job Demands Three of the reviewed studies were interested in the effects of job demands on older low-wage workers. Sanders and McCready's (2009) study of two maintenance workers emphasized the physical nature of these jobs contributing to bodily discomfort and decreased productivity. Physical job demands presented as the major issue for these older participants. They had to adapt their own working style and conditions in order to perform the job as expected as a form of job security. The meaning of work for these two older workers shifted from seeking upwardly mobile opportunities to that of financial security. As Sanders and McCready (2009), write, "although workers adapted to their age-related and work-related challenges, the cherished notion that paid work maintains older workers' self-esteem, self-identity, health, socialization, and skill use was not realized for these blue-collar workers" (p. 120).

Physical job demands were also investigated in terms of their relationship to injuries among older workers in the construction industry in a study by Choi (2015). This study identifies trends in injury type as it relates to worker age and the construction trade (e.g., general contractors, bridge builders, and concrete flat work). Authors of this study use injury data that were collected as part of a highway project

in the Midwestern region of the United States. Injury data were collected over a 2-year period, from 2004 to 2006, and included information such as type of work, occupation, demographic information (age, sex, wage, trade, forms of training completed), injury type, injury time and date, associated costs, and lost time from work. During the time period in which injury data were collected, 143 injuries were reported. Results indicate that older workers had increased prevalence of sprain- and strain-related injuries to the ankles/foot/toes, knees/lower legs, and multiple body parts as a result of falls from higher locations or overexertion. In comparison, younger workers suffered from finger/hand injuries due to cuts/lacerations and bruises.

The third study by Welch, Haile, Boden, and Hunting (2008) examined the prevalence of medical and musculoskeletal conditions among working roofers between the ages of 40 and 59, and examined the association between these conditions and age, physical functioning, and work limitations. Using questionnaires, Welch and colleagues investigated the ways aging with work limitations intersects with musculoskeletal (MSD) conditions and physical functioning. They recruited research participants from a Roofers International Union who were members and actively employed as a roofer as of March 2004. The survey included questions about MSD conditions experienced within the past 2 years, missed work and job accommodations related to these conditions, frequency and duration of MSD symptoms, health and economic status, and basic demographics. Results revealed that workers with medical and musculoskeletal conditions were older, had the highest prevalence of work activity limitations and the lowest health status. Moreover, older workers may be at a higher risk of early disability retirement compared to younger workers with similar conditions and work limitations.

Low Wages Two articles addressed the outcomes of low wages on older workers specifically. Butler's (2013) study of home care aides reveals that over half of the participants reported that their income could not fund their basic needs. This study presented images of older workers in low-wage-earning jobs experiencing deep financial insecurity. Older women explained the challenges of developing a healthy savings with insufficient income. Study participants for whom their weekly income was insufficient to meet monthly expenses supplemented their income with government-funded programs. Ravichandran et al.'s (2015) study about training for older workers discusses the same theme of how low-wage-paying jobs contribute to financial insecurity. Earning low wages is one of the main reasons older workers find themselves continuing to work post retirement age, as relying on jobs that pay low wages makes accruing stable income toward eventual retirement increasingly challenging.

Decision Authority and Skill Discretion Four studies examined the effects of decision authority and skill discretion on older workers. In James' et al. (2011) study, scheduling proved important when measuring and analyzing engagement of older workers. Satisfaction with one's work schedule predicted levels of employee engagement. Butler's (2013) study also noted age affecting potential work hours. As

noted previously, women reported feeling that their supervisors favored younger workers and doing so awarded them with more work hours and shifts. Limiting older workers' decision-making authority over schedule and number of work hour preferences had adverse consequences on worker morale and financial security. Sanders and McCready's (2009) study tracking two maintenance workers noted how autocratic management styles helped older workers adapt their own work environments, molding to personal and differing abilities, allowing them to stay employed.

Skill variety, which includes what skills older workers need to use in whatever decisions they are making, was one of the most important job design variables for successful aging outcomes in Sanders and McCready (2010) among retail workers. Skill discretion acts as an outcome to the ways autonomy and control influence the workplace for older adults and subsequently their productivity, creativity, and sense of responsibility to younger generations of workers (Sanders & McCready, 2010).

15.4 Discussion

Betty Friedan (1994) described aging as "not lost youth but a new stage of opportunity and strength." However, older workers berated with ageist images and biases imply that working into older age is either not possible or not recommended. These perceptions are outdated and harmful, especially to working poor older adults. There are approximately 13.2 million older low-income workers in the United States, half of whom have a household income of below 200% of the FPL, or less than \$31,860 for a two-person household (US Department of Health and Human Services, 2015). Although the proportion of full-time workers declines with age, large numbers of older low-income workers are continuing to work past the traditional retirement age of 65. We also learned that this working population is equally male and female, and in the future as the population ages, it will become more ethnically and racially diverse. Older workers are represented across a variety of low-wage industries and occupations, many of which are represented in the studies included in this narrative review.

Older workers employed in low-wage jobs are a doubly vulnerable working population. They are vulnerable to adverse consequences associated with perceived age-related discrimination and unintentional unfair treatment on the job, including lower levels of employment engagement (James et al., 2013), poor morale (Butler, 2013), implicit bias (Chi et al., 2013), financial insecurity (Butler, 2013; Frank-Miller et al., 2015; James et al., 2013), and unequal access to better work assignments (Frank-Miller et al., 2015), work hours and shifts (Butler, 2013), and training (Ravichandran et al., 2015). They are also vulnerable to work environments and job conditions inherent to low-wage work including limited on-the-job training and career development opportunities (Ravichandran et al., 2015), ineffective management behaviors (Sanders & McCready, 2009), high physical job demands (Choi,

2015; Sanders & McCready, 2009; Welch et al., 2008), and limited control and autonomy on the job (Butler, 2013; Sanders & McCready, 2010). And they are vulnerable to the consequences associated with the intersection of these factors such that the ill effects of low-wage job conditions are intensified because of the negative perceptions of older adults, the physical realities of aging, or the financial realities of a long-term career in low-wage employment sectors.

We also learned that certain work environments and job conditions represented in these studies of low-wage jobs result in positive experiences for older workers. Learning and career development opportunities (James et al., 2011; Ravichandran et al., 2015), supervisor and coworker support (James et al., 2011; Ravichandran et al., 2015; Sanders & McCready, 2009), and skill discretion and decision authority (Sanders & McCready, 2010) resulted in enhanced employee engagement, job satisfaction, and job commitment—factors that promote job retention and contribute to financial security.

15.4.1 Health and Financial Well-Being

Specific to the intersection of age and low-wage work conditions, evidence across the studies reviewed indicates that this combination of factors can adversely influence worker health and financial well-being. Physically demanding jobs have an obvious impact on older workers. For example, Sanders and McCready's (2009) investigation of the physical consequences of maintenance work show how long-term exposure to physical labor adversely affects physical health. Yet, their study also demonstrates that adapting job tasks and functions to accommodate age-related physical limitations allowed participants to continue working, save for retirement, and maintain health insurance.

Many of the reviewed studies in some way illuminate the physical toll that low-wage work has on older workers. Construction and roofing industries pose considerably greater risk of injury with increased age (Choi, 2015; Welch et al., 2008). Other low-wage industries including maintenance, home care, and retail also pose risk to workers. To minimize the chance of becoming hurt or to prevent early retirement, employer safety training specific for older workers or workers with physical limitations is necessary. Likewise, workers as they age would benefit from proactively adapting their own jobs and implementing additional safety measures. As demonstrated in Sanders and McCready (2009), supervisors may fail to implement safe work practices or to create a safe work culture for employees as they age.

The financial implications of low-wage employment are another paramount concern of older adults (Butler, 2013; Frank-Miller et al., 2015; James et al., 2013). Earning wages at the lower end of the wage spectrum makes it difficult for workers to save (Butler, 2013) and to retire in the immediate future (Sanders & McCready, 2009). Workers across studies had long job tenures in the low-wage sectors. While workers in one study continued to work into their older years explicitly to save for retirement (Sanders & McCready, 2009), workers in other studies used their income

for daily living (Butler, 2013). Limited income prevented them from saving for retirement even with the knowledge that they had no savings.

The potential of being one injury away from lost wages or early retirement was work-related financial pressure that emerged in studies of workers in high-risk industries represented in our narrative review (Choi, 2015; Sanders & McCready, 2009; Welch et al., 2008), which is a pressure that is likely to be experienced by older workers in other physically demanding low-wage occupations.

Perceived age-related discrimination is another factor that contributed to the economic insecurity experienced by older workers (Frank-Miller et al., 2015; James et al., 2013). Across several studies (Butler, 2013; Frank-Miller et al., 2015; James et al., 2013), wage seems heavily based on age. Though counterintuitive, older workers were paid lower wages than younger workers because of implicit biases. Lower wages led to increased financial instability and perpetuated the inability to establish any savings (Frank-Miller et al., 2015). Personnel decisions influenced by perceived age-related discrimination is another way older workers' financial stability was compromised. As illustrated in one study, older women performing home care work experienced age-related discrimination, and as result were not assigned as many shifts as their younger counterparts and thus saved less (Butler, 2013). This compounded the adverse financial consequences associated with a history of low-wage employment. In another study, younger managers' perceptions of older workers influenced hiring decisions, preventing older workers from securing a higher paid position that their experience level would otherwise dictate (Chi et al., 2013).

Employee engagement is also influenced by unintentional age-related discrimination (James et al., 2013). Disengaged employees perform less well on the job (Glaspie & Nesbitt, 2004). Poor job performance could then result in termination or limit chances for pay increases—all factors that influence the financial stability of older workers.

15.5 Limitations and Future Research

To our knowledge, this is the first review of the literature on the effects of low-wage work conditions on the occupational health and well-being of older workers. Like all narrative reviews, this one has several limitations. First, this is not a systematic review or an exhaustive review of the literature. As such, we may have missed relevant articles during our search despite our attempts to create a process that would identify studies that met our narrative review criteria. Second, researchers may have explored the effects of employment conditions on older workers in low-wage jobs within studies that we reviewed but did not report these findings in the published literature. Third, though our focus on low-wage work was intentional, it may have been too narrow to fully understand the state of knowledge of the effect of low-wage employment context on the health and well-being of older workers. Nonetheless, we retained a narrow scope because the nature of low-wage work has its unique characteristics that may place older workers at higher risks of adverse outcomes. Fourth,

we realize that other factors may contribute to adverse occupational health and well-being outcomes of older low-wage earning workers. Nonetheless, we believe that given the occupational exposure faced by workers in low-wage jobs, it was important to focus solely on employment context for this narrative review. Despite these limitations, this narrative review of low-wage employment context makes a meaningful contribution to the aging and work literature.

Future research on older workers employed in low-wage occupations should focus on developing evidence-based practices that reduce occupational risks for this population of workers and enhance their overall quality of life. As the workforce ages and the proportion of low-wage jobs continue to rise in the US economy, there is a need to develop age-friendly work environments, management practices, and physical and psychosocial job conditions to ensure workplaces are safe for workers as they age (Silverstein, 2008). This research should be occupational and industry-specific and seek to disseminate best practices for age-friendly workplaces that can be adapted to specific worksites. While there is a need to create safe and age-friendly workplaces for all workers, research priorities should be placed on occupations with high physical demands (e.g., home care, construction, and maintenance) and psychosocial demands (e.g., retail and food service) and on racially and ethnically diverse older low-wage earning populations, as demographic evidence indicates this is the future of workforce (Mikelson et al., 2017).

15.6 Conclusion

The goal of our narrative review was to address the influence of low-wage employment context on the quality of lives of older workers—a population at risk of economic insecurity, perceived age-discrimination, and injury due to the physical nature of low-wage jobs. New knowledge about this doubly vulnerable population might heighten awareness of their circumstances and encourage employers to create age-friendly workplaces that may minimize the chance that low-wage older workers will experience age-related discrimination or retire before they are ready and that enhance their overall quality of life by staying engaged in the workforce for as long as they want.

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Chapter 16

The Role of Aging, Age Diversity, and Age Heterogeneity Within Teams



Jensine Paoletti, Jacqueline M. Gilberto, Margaret E. Beier,
and Eduardo Salas

16.1 Introduction

As the workplace becomes more economically and technologically complex, organizations are increasingly relying on teams (Blustein, 2013). One of the strengths of teams is that they are productive work solutions regardless of employee age (Joshi & Roh, 2009). This is especially important as older workers are choosing to remain active members of the workforce and postpone retirement for longer (Lewen, 2007). Despite stereotypes about older adults being less productive and less resilient, recent research suggests teams with a higher average age report better production quality, fewer sick occasions, and lower team burnout (Gellert & Kuipers, 2008).

The power of the aging of the global workforce has been described as “The Silver Tsunami” (Mitchell, 2014). A recent report from the Society of Human Resources and Management (SHRM) claims that by 2060, there will only be 2.5 working-aged adults for every retirement-aged adult—nearly 30% decrease from 2020 (Gurchiek, 2018). As older workers postpone retirement, engage in “bridge employment,” and reenter the workforce, accommodating greater workplace-age diversity is becoming a higher priority for organizational leaders (Charness & Czaja, 2006).

In this chapter, we aim to review and synthesize the literature on age diversity in teams. We begin by delineating the relevant definitions related to aging and teams. Next, we explain social and organizational findings about teams and their relationship with older workers. This chapter will cover (a) research regarding major team

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J. Paoletti · J. M. Gilberto · M. E. Beier · E. Salas (✉)
Department of Psychological Sciences, Rice University, Houston, TX, USA
e-mail: Jensine.paoletti@rice.edu; Jackie.Gilberto@rice.edu; beier@rice.edu;
Eduardo.salas@rice.edu

processes, (b) how older workers and age diversity affect important team outcomes, and (c) strategies for maximizing team outcomes for age-diverse teams, including leadership practices. Finally, the chapter concludes with directions for future research.

16.2 Definitions

We apply the ABC framework to understand what constitutes effective teamwork. “A” stands for attitudes, which refers to an internal state that serves as a precursor to behaviors, particularly team interactions, given an event or situation. “B” stands for behaviors or actions that the team takes (Salas, Rosen, Burke, & Goodwin, 2009). Team behaviors have been extensively studied, within a number of frameworks to help conceptualize their effect on team performance including team leadership, mutual performance monitoring, backup behaviors, and adaptability (Salas, Sims, & Burke, 2005). “C” stands for cognitions or thoughts and knowledge associated with the teamwork and taskwork. Teamwork refers to the interpersonal components of working together, while taskwork refers to efforts to accomplish the team’s shared goal or goals (Salas et al., 2009). Much of the research in this domain consists of shared mental model research and discusses the shared knowledge and understanding that team members have to recognize and reach their goals (see Mohammed, Ferzandi, & Hamilton, 2010).

Team attitudes, behaviors, and cognitions fall within the Input, Process, and Outcomes (IPO) framework (Salas et al., 2009). Team inputs often refer to task characteristics and team composition; therefore, a team’s inclusion of older adults fits within this component of the model. Team processes include communication, coordination, and leadership. Team outcomes include performance and satisfaction (Salas et al., 2009). This chapter mainly focuses on team composition (and thus inputs from the IPO framework), but we acknowledge that age-composition of teams will also affect team processes (e.g., communication, coordination, and leadership).

16.2.1 Teams

Kozlowski and Ilgen refer to a team as two or more people who interact socially and share a goal, perform tasks relevant to their organization, have some task interdependence but different roles, and work together in an organization (Kozlowski & Ilgen, 2006). Similar to the only other known review of aging and teams (Smyer & Pitt-Catsouphes, 2009), this chapter defines teams in this way.

16.2.2 Tenure

Organizational tenure, or the time spent within an individual organization, is thought to affect performance partially through organizational socialization (i.e., the extent to which employees internalize the culture and values of their organization; Bell, Villado, Lukasik, Belau, & Briggs, 2010). In the context of teams, organizational tenure is referred to as team tenure or the length of time within the team. Team tenure positively affects important team processes like decision-making tasks (Bell et al., 2010). Differences in team member tenure are thought to increase teams' innovation performance by providing a mixture of new ideas and past experiences within the team (Bell et al., 2010). Team tenure also predicts the need for the explicit communication within teams, as greater tenure may result in a more closely shared mental model (Bell et al., 2010).

16.2.3 Age Diversity

Age diversity is defined as age distribution differences among a group of employees either in specific organizational workgroups or the organization (Pytlovany & Truxillo, 2015). Age diversity can further be conceptualized using a more general diversity framework as a separation (i.e., differences in values, beliefs, or attitudes), variety (i.e., differences in knowledge or experiences), and disparity (i.e., differences in socially valued assets or resources; see Harrison & Klein, 2007). Age diversity as separation explains the discrimination against older workers by other team members. Age diversity as a variety construct best explains the conceptualizations of older workers as experts. Finally, conceptualizing age diversity as a disparity construct grounds suggestions for utilizing older workers as team mentors. Though not all teams are age-diverse (e.g., teams of all older workers or younger workers), it is important to consider the effects of age variance within teams to maximize important team processes. As we will see below, age diversity has a complex relationship with most team performance, but a somewhat more direct relationship with top management team performance.

16.3 Older Adults in Teams

16.3.1 Team Performance

Team performance is often the most important outcome to both researchers and practitioners. Team performance consists of a combination of individual taskwork and interpersonal teamwork (Salas et al., 2009), and there is evidence that the age diversity of teams affects these important outcomes. Two meta-analyses within the

last 10 years have taken different approaches to quantitatively synthesizing the literature on the relationship between age diversity and team performance. One meta-analysis that involved assessing the role of age diversity included moderators of study location (i.e., lab or field studies) and type of age diversity, namely separation, variety, and disparity (Bell et al., 2010). This meta-analysis found no significant effects of age diversity on team performance. However, they do suggest that generational differences should be studied as a predictor of team performance, which is currently not captured in the empirical data in the meta-analyses and therefore cannot be included in meta-analyses (Bell et al., 2010). The other meta-analytic finding focused on occupational demography, where researchers used information from the US Bureau of Labor Statistics to categorize workplaces as “majority younger worker settings” if there was a lower proportion of older workers than the American average or 18% (Joshi & Roh, 2009). If workers over the age of 55 comprised more than 18% of the organization, the authors considered it a “balanced setting.” Comparing the role of team age diversity in these two organizational contexts demonstrated no reliable differences. Additionally, there was no effect found of team age diversity and team performance (Joshi & Roh, 2009). This is good news for employers who are concerned about age diversity negatively affecting team performance.

Beyond these meta-analyses, research suggests that the need for cognition, defined as the extent to which the team enjoys being thoughtful (versus taking cognitive shortcuts) plays a vital role in team performance for age-diverse teams (Kearney, Gebert, & Voelpel, 2009). High need for cognition enhances or maintains team performance in age-diverse teams, and low need for cognition has a detrimental effect on performance in age-diverse teams. This effect is partially through team communication, as teams with higher need for cognition tend to communicate more (Kearney et al., 2009). However, simply relying on age diversity as a method to increase team performance is also not supported by the results of a number of studies (e.g., Bell et al., 2010).

Another study examined the effect of age homogeneity in teams where the teams were composed of younger, middle-aged, and older adults using 15 teams of each age category to complete a decision-making simulation task (Streufert, Pogash, Piasecki, & Post, 1990). Numerous performance metrics were captured within the age categories: activity and speed (simple performance), approach diversity (intermediate performance; i.e., number of independent actions to achieve goals), and strategy and planning (complex performance). On many simple, intermediate, and complex decision-making tasks, young and middle-aged teams performed similarly, and age-homogenous teams of older adults performed more poorly. However, older teams performed equally to other teams in emergency response tasks. The authors elaborate that the perceived seriousness of the emergency situation reduced the older teams’ tendency to participate in inefficient discussion, streamlining the decision-making process. Streufert et al. (1990) attribute older teams’ lower performance to unfocused discussions throughout the course of the simulations.

According to theory on demographic diversity in work groups, organizational tenure has been considered high in job-relatedness and low in visibility

(i.e., organizational tenure makes a difference to the job knowledge but team members do not usually notice who has higher or lower levels of organizational tenure) and is therefore predicted to positively correlate with substantive (task) conflict but correlate less with affective conflict (Pelled, 1996). Relatedly, team tenure is considered highly job-related and highly visible and therefore predicted to relate to substantive and task conflict (Pelled, 1996). Researchers posit that conflict about the task goals and procedures is positively correlated with cognitive task performance, while affective conflict, or the interpersonal skirmishes within a team, is predicted to correlate directly with turnover (Pelled, 1996). Meta-analytic evidence demonstrates that task conflict, or differences in ideas and viewpoints about the work, is positively correlated to team performance within decision-making teams (O'Neill, Allen, & Hastings, 2013). This meta-analysis did not examine turnover, but it did show that relationship conflict, similar to affective conflict, is negatively correlated with team performance (O'Neill et al., 2013). Another meta-analysis found that the team members' mean organizational tenure, but not organizational tenure diversity, was positively correlated with team performance (Bell et al., 2010). Higher levels of organizational tenure were hypothesized to correlate with more organizational socialization and more tacit knowledge of the organization. Another hypothesis suggested that differing levels of organizational tenure and therefore different levels of organizational socialization might be important for creative team outcomes. This meta-analysis found no such relationship between team tenure and team performance.

Top Management Teams (TMT) Even though meta-analyses have not found a relationship between team age diversity and performance outcomes, a more nuanced approach may be more appropriate. For instance, research focusing on a special type of team—Top Management Teams (TMT)—suggests age diversity may be related to performance outcomes. TMT often include the highest levels of managers within an organization (Carpenter, Geletkanycz, & Sanders, 2004). TMT often have their performance measured with outcomes such as firm performance. One TMT study correlated team age heterogeneity with sales growth and found a curvilinear relationship (Richard & Shelor, 2002). Specifically, they found that there was a positive relationship between age heterogeneity and sales growth at low and moderate levels of heterogeneity, but at high levels of heterogeneity, there was a negative relationship to sales growth (Richard & Shelor, 2002). This pattern of results indicates that moderate levels of age heterogeneity result in more creative, open discussion (Williams & O'Reilly, 1998). At high levels of age heterogeneity, the predictions of social attraction and social categorization theories are visible, implying that team members begin to view each other as part of their aged in-group or some other aged out-group (Richard & Shelor, 2002). That is, a very age-diverse team may trigger formation of in-groups and out-groups because the members will draw age-related boundaries within their teams.

Another field study failed to find significant effects of age diversity on TMT performance when comparing the effects of tenure, education level, functional, and perceived environmental uncertainty diversity (i.e., the extent to which team

members agree or disagree about the levels of uncertainty in the conditions external to the organization; Simons, Pelled, & Smith, 1999). This study suggested that more job-related diversity (tenure, educational, functional, and perceived environmental uncertainty diversity) was a better predictor of TMT performance compared to age diversity. In a lab study, 159 managers participated in a simulation where they acted as the TMT within a larger organization. In this study, 35 teams were assessed on their firm's final market share and cumulative net market contribution (Kilduff, Angelmar, & Mehra, 2000). Age heterogeneity of these teams positively predicted both outcomes, even when accounting for national heterogeneity, functional heterogeneity, cognitive diversity, decision difficulty, and effectiveness (Kilduff et al., 2000). Taken together, the research is not conclusive on the role of age diversity in TMT.

16.3.2 Team Satisfaction

Beyond team performance, research has focused on affective outcomes like team satisfaction and commitment, as well as cognitive outcomes, such as learning or development. One study that focused on blue-collar and white-collar workers in an automotive plant found no effects of age diversity in team outcomes of satisfaction, involvement, mutual learning, decision-making, and feedback (Gellert & Kuipers, 2008).

16.3.3 Team Training

Research on training older workers is scarce, thus, in this section we review the literature on individual-level training considerations for older workers and describe how these factors may affect team performance and satisfaction.

The most consistent finding in the age and training literature is that age is negatively associated with training performance (Avolio, Waldman, & McDaniel, 1990; Kubeck, Delp, Haslett, & McDaniel, 1996). Although theoretical training considerations for older adults have been suggested, there is a distinct lack of empirical evidence supporting applied training solutions for this population. What has been suggested focuses almost exclusively on compensating for individuals' age-related declines in cognitive (Beier & Ackerman, 2005), physiological (Callahan, Kiker, & Cross, 2003), and motivational (Beier, Teachout, & Cox, 2012) traits and abilities. Changes in these three abilities can affect a number of cognitive, affective, and behavioral team processes making learning and performance more difficult for older workers (Smyer & Pitt-Catsouphes, 2009). Though consideration of age-related changes in abilities is certainly important, this perspective does not consider environmental factors that may account for training performance disparities, such as stigmatization of trainees during training. Below, we summarize how both individual

changes in abilities and age-related stereotypes can affect important team processes.

Age-related processing declines can have notable effects on cognitive team processes, such as formation of team mental models (i.e., team knowledge structures used to perform), transactive memory (i.e., collective storage of team knowledge), and team learning (i.e., the effort by which teams successfully achieve their goals; Smyer & Pitt-Catsouphes, 2009). Negative effects on cognitive team outcomes may be further exacerbated by reduced resources associated with metacognitive control (i.e., a person's ability to think about their own cognitive processes and adapt them in a given situation); metacognitive control lessens with age resulting in poorer ability to regulate complex information (Kraiger & Culbertson, 2012).

Age is also related to declines in vision, hearing, and motor skills, which can affect older workers' ability to perform these tasks (Charness & Czaja, 2006). However, accommodations can be made. To this end, managers and team leaders should consider potential physical demands of team tasks content. If team goals require performance of physically strenuous activities, accommodations can be made for older team members who may have trouble participating.

Motivational changes may also affect older workers. Age influences older workers' decision to engage in training and transfer skills back in the workplace (see Beier et al., 2012). In particular, perceptions of value and effort regarding training engagement may change as we age. Older adults may not view training outcomes as valuable as younger adults do, and therefore they may perceive training to be less valuable and more effortful (Kanfer & Ackerman, 2004). Another motivational concern is the extent to which age affects older workers' self-efficacy, and in turn team efficacy (i.e., the shared efficacy in team knowledge, skills, and abilities; Smyer & Pitt-Catsouphes, 2009). Self-efficacy has been shown to be related to successful training performance, and research supports a negative relationship between age and self-efficacy for training (Maurer, Weiss, & Barbeite, 2003). One possible explanation for this relationship is internalization of pervasive negative stereotypes. If older workers believe they lack sufficient ability to perform, self-efficacy will drop. Managers and team leaders should consider highlighting older trainees' strengths (e.g., work expertise) and discouraging low expectations of their performance or engagement from other team members during training. Internalizing negative expectations, real or perceived, can lead to negative performance outcomes regardless of an older worker's actual ability.

16.3.4 Team Communication

Team communication, sometimes called information exchange, is the process of sharing information verbally and nonverbally between members of a team (Mesmer-Magnus & DeChurch, 2009). A study on team's need for cognition (preference for broad cognition vs. preference for cognitive shortcuts) found an interaction with age diversity and elaboration of task-relevant information, a team communication

metric (Kearney et al., 2009). Age-diverse teams with a high need for cognition had the highest level of elaboration of task-relevant information. Age-homogenous teams had slightly lower levels of the communication variable, while teams low in need for cognition but high in age diversity had the lowest levels of communication. Need for cognition is thought of as a motivational factor of team communication: when need for cognition is high, the team tends to have more discussion. Communication here is measured as elaboration of task-relevant information, and teams low in diversity but high in need for cognition may discuss information that is already a common knowledge on the team rather than discussing new information. However, high levels of age diversity indicate less shared perspective, more discussion of new information, and therefore higher levels of information elaboration (Kearney et al., 2009).

A field study of Swiss financiers explored the effect of objective and perceived age diversity on team communication. They noted that team members' individual perceptions of age diversity were positively related to knowledge exchange (Ellwart, Bündgens, & Rack, 2013). The authors hypothesize that perceived age diversity signals diverse expertise and perspectives to the other team members, prompting greater knowledge exchange and supporting the information and decision-making perspective. However, the study also found that perceived age diversity was also related to lower team identification (Ellwart et al., 2013), a construct defined as "emotional significance that members of a given group attach to their membership in that group" (Van Der Veeg & Bunderson, 2005, p. 533). This indicates support for the social categorization theory, which states that people prefer others who are like themselves. Yet, another study found that the team's need for cognition affects the age-diversity–team identification relationship. Recall the need for cognition is the team's tendency to avoid cognitive shortcuts. They found that age-diversity only leads to lower team identification when there is a low team need for cognition, while a high need for cognition enhances the team identification for age-diverse teams (Kearney et al., 2009). It is also worth noting that average team member age and organizational tenure was found to be unrelated to team communication in a recent meta-analysis (Marlow, Lacerenza, Paoletti, Burke, & Salas, 2018). The same analysis found a positive, moderating relationship of team familiarity (highly related to team tenure) to the team communication–team performance relationship (Marlow et al., 2018). That is, high levels of team familiarity strengthened the direct correlation between team communication and team performance.

16.4 Where Age in Teams Can Go Wrong

There are many potential pitfalls for organizations when promoting age diversity and inclusion of older workers and teams in the modern workplace. We outline several hazards for organizations to understand and mitigate here.

16.4.1 *Faultlines*

Faultlines refer to the psychological, social, or cultural distance that occurs between people who are supposed to be close within a group setting, namely work teams (Bezrukova, Jehn, Zanutto, & Thatcher, 2009). Faultlines oppose team cohesion directly by creating two or more small groups within the established team. Faultlines have also been found to be marginally, negatively related to production energy (Kunze & Bruch, 2010). Much of the faultline research focuses on the role that demographic variables play in dividing teams; in particular, many studies on faultlines inquire the role of gender and/or race within a team (Bezrukova et al., 2009). Less research has been done on the role of age as a faultline driver, but one study chose to study age within faultlines in a Fortune 500 company. This study sought to understand the role of age faultline strength and distance within the context of team identification. The researchers found that team identification, or the extent to which individuals see their team as part of their identity, can attenuate the negative consequences of faultlines regardless of age (Bezrukova et al., 2009).

16.4.2 *Attitudes About Older Team Members*

Common age-related stereotypes include beliefs about older workers' ability to learn, motivation to engage in work tasks, and ability to perform (Beier, 2008; Warr, 1999). To understand how age-related stereotypes manifest, age-related changes in abilities must first be considered. Unlike other forms of workplace discrimination such as gender or racial discrimination, ageism is rooted in robust findings surrounding age-related declines in ability (see Beier et al., 2012).

Common aging stereotypes result from the knowledge that age brings varying degrees of cognitive, physiological, and motivational changes. One of the most propagated stereotypes is that our learning ability declines as we age; in an organizational context, this shortcoming is seen as older workers failing to develop new skills (Avolio & Barrett, 1987; Hedge, Borman, & Lammlein, 2006). Concerns regarding organizational development also stem from perceptions about older workers' motivation. A common stereotype is that older adults have poor training engagement because they do not believe learning new skills will benefit them at such a late career stage (Posthuma & Campion, 2008). Ultimately, many of these age-related stereotypes boil down to one belief: older workers perform poorly compared to their younger coworkers (Hedge et al., 2006; Shore, Cleveland, & Goldberg, 2003). These negative beliefs may manifest within age-diverse teams as concerns over older team members' commitment to team success and ability to contribute to team performance.

Despite evidence suggesting age-related stereotypes do not hold true for many older adults and that age-related declines vary greatly in size and onset, many negative generalizations about age persist (see Posthuma & Campion, 2008). These

biases are serious, as stereotypes lead to negative perceptions of individuals regardless of character or ability. One study on generational perceptions of older workers found that greater age differences between younger and older team members predicted negative perceptions of older team members (James, Swanberg, & McKechnie, 2007). Specifically, younger generations (i.e., Gen X and Gen Y) were less likely to perceive older team members as good mentors, productive and adaptable employees, and as having the ability to work well with younger supervisors. Other negative attitudes included perceptions about reliability, flexibility, and training motivation.

Knowing that age-related stereotypes can negatively affect older workers' self-expectancies for learning and performance, it is important to examine how to combat them (Levy, 2003). Researchers can do this by examining how age-related stereotypes are primed in team situations. Further, examining how the saliency of age diversity within teams can affect perceptions of age-diverse team members is important.

16.4.3 Expertise Vs. Negative Stereotypes

It is important to contrast the above review of age-related ability declines with the conceptualization of older workers as experts. Perhaps the most notable benefits of aging are higher levels of knowledge acquired through experience and education (i.e., crystallized abilities, or "Gc"; Hertzog, Kramer, Wilson, & Lindenberger, 2009). As discussed above, age-related cognitive declines may hinder older team members' ability to contribute to novel team mental model formation. However, older workers are more likely to have accumulated significant work experiences that shape their job-related knowledge and skills than their younger counterparts. These experiences inform successful work habits that facilitate better work outcomes (Gellert & Kuipers, 2008). Older adults can use their knowledge about successful work behaviors to promote organizational habits that improve overall team functioning. For example, rather than forming new mental models, older adults can draw from their existing knowledge and utilize existing mental models to meet team goals; these skills may ameliorate the aforementioned concerns related to team mental model formation and cognitive declines. Older team members can also use their expertise of successful organizational strategies to facilitate team coordination and reduce stress, improving team affect and cohesion. By presenting older members of age diverse teams as experts, managers and team leaders can motivate teams to take advantage of older workers' existing knowledge about successful performance.

16.5 What Organizations Can Do

Readers should not be dismayed by the challenges of older teammates described throughout the chapter. There are several research-supported methods to reduce negative effects to team processes and outcomes and promote inclusion and performance.

16.5.1 *Age and Expertise*

The immense value of older workers' expertise has management professionals concerned about the "lost knowledge" that would result from the mass-exodus of retirement-aged employees (Hirsch, 2017; Smyer & Pitt-Catsouphe, 2009). A recent report by the Society of Human Resource Management (SHRM) urges HR professionals and managers to commit resources to retaining seasoned employees, so a significant amount of technical job knowledge does not leave with retirees. Further, the report calls for more emphasis to be placed on strategies that facilitate knowledge transfer from older, experienced employees to younger, less experienced employees. Without these efforts, the monetary and performance costs of this loss of experience is expected to be considerable (Hirsch, 2017; Smyer & Pitt-Catsouphe, 2009).

16.5.2 *Leadership Styles*

Leader inclusivity, or the extent to which the leader encourages and appreciates the diverse professional contributions of the team members, increases team identification by increasing the perception of shared goals and reducing status differences within the team (Mitchell et al., 2015). Recall that team identification has been shown to reduce the impact of faultlines (Bezrukova et al., 2009). Moreover, research shows that leader inclusivity positively predicts performance partially through team identity (Mitchell et al., 2015). These leader behaviors can be implemented by leaders within and external to teams.

Shared Leadership Another team process, shared leadership refers to decentralized leadership behaviors performed collectively within a team (Carson, Tesluk, & Marrone, 2007). A study of 26 German consulting teams examined shared leadership, age diversity, team coordination, and team performance (Hoch, Pearce, & Welzel, 2010). The researchers found that age diversity predicted team performance; age diversity also interacted with shared leadership in a two-way interaction, and with shared leadership plus coordination for a three-way interaction. Age-diverse teams performed better with low shared leadership than high shared leadership, and the opposite was true of age-homogenous teams (Hoch et al., 2010). When

coordination is added into the picture, a more nuanced view can be seen. Specifically, the data demonstrate that high levels of team performance occur with high shared leadership (versus low shared leadership) for teams that have low coordination and low age diversity (Hoch et al., 2010). The other extreme (high coordination and high age diversity) showed no effect of high versus low shared leadership. For the two “middle” categories, low coordination with high age diversity and high coordination with low age diversity, low shared leadership was the best option for high team performance (Hoch et al., 2010).

Transformational leadership Transformational leadership, as opposed to transactional or laissez-faire leadership, is a popular method of evaluating leader effectiveness. Bass’s (1985) book delineated the four components of transformational leadership. Transformational leadership is composed of (a) idealized influence, sometimes called charisma, which includes emotional connection to the followers; (b) inspirational motivation, or the extent to which the vision is disseminated to the followers; (c) intellectual stimulation, which includes encouraging creativity and soliciting input from followers; and (d) individualized consideration, or the presence of mentorship and attention to the followers (Judge & Piccolo, 2004). Research on transformational leadership with age diversity has demonstrated the usefulness of the construct on age-diverse teams (Kearney, 2008). A study examining the difference between the leader’s age and the mean age of the team members found that age difference and transformational leadership interacted with team performance such that the highest levels of team performance occurred when there is a large age difference between leader and follower age and high levels of transformational leadership. By contrast, transformational leadership had little effect when a small age difference existed (Kearney, 2008). Transformational leadership has also been found to attenuate the effects of age-related faultlines in a multinational study of a construction tool manufacturer (Kunze & Bruch, 2010). Specifically, age-related faultlines interacted with transformational leadership such that high levels of transformational leadership resulted in high productive team energy, and low transformational leadership plus high faultlines produced low team energy (Kunze & Bruch, 2010). This pattern of results indicates that transformational leadership can be used as a strategy for achieving team performance and mitigating faultlines with age-diverse teams.

16.5.3 Technology Considerations

There are notable age differences in technology adoption and communication preferences (i.e., the “Digital Divide;” Charness & Czaja, 2006). Though surveys show that older adults are generally willing to adopt new technologies, many may feel they lack sufficient training to use them successfully. If older workers perceive adoption and use of new technologies within their work teams to be valuable and less effortful, they are more likely to use them (Kanfer & Ackerman, 2004).

16.5.4 *Mentorship*

According to classic mentoring theory, there are four phases in the mentoring process (Kram, 1983). The first, *initiation*, begins when the junior member of the mentoring dyad begins to identify the senior member as a role model in the organization. Meanwhile, the senior member sees the junior as teachable, and a professional relationship of learning emerges. Next, the *cultivation* phase often follows a pattern of assigning developmentally challenging projects, appropriate performance and development, and increase in emotional intimacy over a period of years (Kram, 1983). Evidence from a study of mentoring relationships among education professionals indicates unique content of mentoring behavior; specifically, education mentors tend to offer observation-based feedback, professional development, strategies for increasing evaluation, instructional support, and obtaining resources for the mentee (Israel, Kamman, McCray, & Sindelar, 2014). This indicates nuance in the behaviors of mentors within the second phase of mentoring based on their field. *Separation*, the third phase, is marked by a reduction in support paired with an opportunity for independence for the mentee. Lastly, *redefinition* of the dyadic relationship occurs when the former mentor and mentee conceptualize their relationship as one of equality and friendship (Kram, 1983). The Society for Human Resource Management (SHRM) considers mentoring one of their top methods of addressing the aging workforce within organizations. SHRM finds that mentoring is an efficient way to transfer tacit organizational knowledge between employees. They cite NASA, which uses a phased retirement plan that is coupled with on-the-job mentoring and information exchange between the outgoing employee and their protégés (Hirsch, 2017).

16.5.5 *Organizational Culture*

The human resources (HR) literature points to a number of tactics that can be used to create an organizational climate that promotes employees of all ages. Age-diversity climate has been defined as “an age-neutral organizational behavior toward all groups; that is, not only should older employees feel free from age-related discrimination but so should younger workers (e.g., perceiving no disadvantages from seniority rules)” (Boehm, Kunze, & Bruch, 2014, p. 671). These age-diversity climates have been predicted by inclusive HR practices such as valid selection systems, encouraging older workers to maintain their skills via training, and merit-based training (Boehm et al., 2014). Research suggests that the effects of surface-level diversity in teams decrease over time (Harrison, Price, Gavin, & Florey, 2002). Age diversity, as measured by team standard deviation of age, was predictive of perceived surface-level diversity, which lost its predictive power over time (Harrison et al., 2002). Future research should continue to examine the effects of age diversity over time and attempt to isolate the effect of age from other forms of demographic

diversity. Another study found that organizational climates that supported age-diversity, unsurprisingly, were found in organizations that were more age diverse and exhibited a positive affective climate (Boehm et al., 2014).

16.6 Future Research Directions

As described above, teams are an increasingly important factor in organizational success. Research on the effects of age diversity on team and task work outcomes remains new, and results are mixed. The research cited above suggests that the salience of age diversity (i.e., when team members are made aware of the diversity) is related to such negative team outcomes as ageism, conflict, burnout, and reduced innovation (Wegge et al., 2012). These findings suggest that training team leaders on the effects of ageism and the positive components of aging, as well as informing them on ways age-related changes in performance and motivation may also help address the issues related to high age-diversity salience (Wegge et al., 2012). Another suggested method of reducing age-diversity salience is through balancing the team composition among the various represented age groups. This approach reduces the perception of self-to-team dissimilarity and encourages a perception of team heterogeneity and has been supported in the research literature (Shemla, Meyer, Greer, & Jehn, 2014). Faultlines have been found to be associated with team conflict, lower satisfaction, and poor team performance, but team identification can serve as a buffer for these faultlines (Shemla et al., 2014). On this note, more research is needed on the role of team identity in age-homogenous, older populations. Additionally, some organizations may be averse to balancing the team's composition by age, as it is reminiscent of quotas and affirmative action. Therefore, age-related leadership training may be the preferred method of reducing age-diversity salience.

Finally, as the effects of age diversity and older teams are understudied in general, nothing has been done to examine whether the effects of age diversity on team processes and other organizational variables persist over time. Evidence suggests surface-level diversity (e.g., age, gender, and race) loses its effect on team interactions over time (Harrison et al., 2002). However, this particular study did not singularly examine age diversity and was limited in its examination of team processes (i.e., it only examined social integration and task performance). Future research could explore the longitudinal effect of age diversity within teams on the various team processes covered in this chapter, which would also help clarify the relationship between age and team performance.

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Chapter 17

Difficult Adjustments: Older Workers and the Contemporary Labor Market



Maria Heidkamp and Carl Van Horn

17.1 Introduction

According to the Bureau of Labor Statistics (BLS), the number of Americans in the labor force over the age of 55 is projected to grow from 35.7 million in 2016 to 42.1 million in 2026, at which point older workers will represent a quarter of the workforce. The labor force participation rate for older workers is projected to increase, especially for those over age 65, while rates for younger and prime age workers are expected to be stagnant.

Many Americans are living longer and healthier lives and are choosing to work for a mix of economic and personal reasons. A recent Transamerica Retirement Survey found that 5 in 10 currently employed Baby Boomers want to work past the age of 65 (Collinson, 2017). Older workers report that working provides them with a sense of purpose; research has also found links between working and improved physical and mental health, financial security, and overall quality of life for older workers (Special Committee on Aging, United States Senate, 2017). Many others do not have adequate retirement savings and need to continue to work for financial reasons.

For older workers, wanting or intending to work is not a guarantee that jobs will be available for them, particularly for those seeking full-time jobs with benefits. Many aspiring older job seekers face tremendous challenges in the labor market—including age discrimination and outdated job search, technology, and workplace skills—contributing to the significantly higher rates of long-term unemployment for older (55+) job seekers compared to prime age (16–54) ones. In February 2018, the long-term unemployment rate for job seekers age 55+ was 27.2%, compared to 19.9% for prime age workers (16–54). Older workers from vulnerable populations,

M. Heidkamp · C. Van Horn (✉)

John J. Heldrich Center for Workforce Development, Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey, New Brunswick, NJ, USA
e-mail: heidkamp@rutgers.edu; vanhorn@rutgers.edu

including those who are low income/low skilled, or those with health conditions or disabilities, may face additional challenges.

Many older workers transition to part-time work, defined by BLS as working less than 35 h per week. Some do so voluntarily, choosing to work less than 35 h per week because they are supplementing their household income, want more leisure time, or need time to take care of family obligations. Others are defined by BLS as involuntary part-timers—individuals who indicated they would prefer to work full time but were working part time because of an economic reason, such as their hours were cut back or they were unable to find full-time jobs. In 2017, 7.5 million older (55+) workers were part time, and 27.8 million were full time (BLS, 2018). According to AARP (2017), the number of 55+ part-time workers more than doubled from 3.4 million in 1986 to 7.4 million in 2017; 3.5 million of those were age 65+.

17.2 Older Part-Time Workers: Benefits and Challenges

In March and April 2015, the Heldrich Center conducted a national survey on the experiences of part-time workers in the United States. Among those survey respondents age 50 and older (hereafter 50+) workers who are part time on a voluntary basis, about 8 in 10 (83%) have very different experiences from those who are involuntarily part time (18%).

17.2.1 *Reasons for Part-Time Work*

When asked whether they work part time because they need to, want to, or both, 4 in 10 50+ workers (40%) indicate that they are working part time because they want to, 3 in 10 say they are working part time because they need to (28%), and a similar number say both statements are good descriptions of their employment situation (32%).

Not surprisingly, voluntary and involuntary older part-timers express different reasons for why they are working less than 35 h per week, as shown in Fig. 17.1. The vast majority of involuntary 50+ part-timers (88%) report that poor business conditions are the reason they are working part time; over two thirds say they have been unable to find a full-time position (69%). Close to a quarter of involuntary part-timers (22%) attribute their status to family obligations. By contrast, voluntary 50+ part-timers point to different reasons for their part-time status, including a preference to work part time (81%), retirement from a full-time job (50%), and family responsibilities (44%).

Most 50+ part-timers (70%) have one job, but 3 in 10 (31%) say they have more than one part-time job, a figure that is slightly higher for involuntary part-timers (38%). In terms of how many hours a week they work, voluntary part-timers work

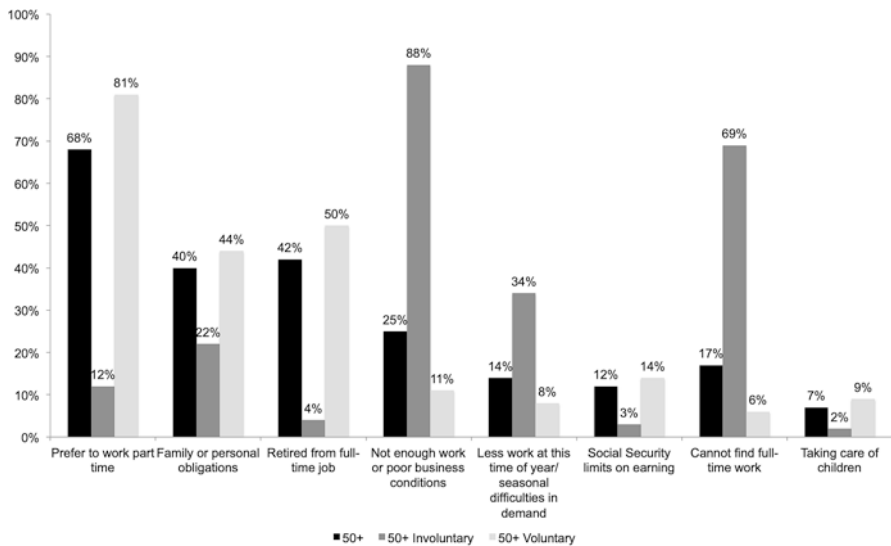


Fig. 17.1 Why part-time work? Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

for an average of 20 h per week, and involuntary part-timers note they work 25 or more hours per week.

17.2.2 50+ Part-Timers and Benefits

Whether they work full time or part time, older workers often say they prefer jobs that include benefits, especially health care for those who are too young to qualify for Medicare. Few older part-time workers actually receive benefits, however, and for those who do, the most common benefit is safety training, which is offered to 4 in 10 workers. Roughly a quarter of older part-timers say they have access to 401(k) retirement accounts; only 21% receive coverage for health care (see Fig. 17.2). This percentage drops for involuntary part-timers, who are the least likely to say they receive any benefits, with only 12% reporting that they get paid sick days and 9% saying they have pension plans.

When asked what one benefit they would most like to receive, roughly 3 in 10 (36% of 50+ involuntary part-timers and 26% of voluntary part-timers) select health care. Three in 10 part-time older workers would also like paid vacation days, followed by 15% for 401(k) plans and 14% for pensions. Only 3% of older part-time workers select safety training as their highest priority benefit (see Table 17.1).

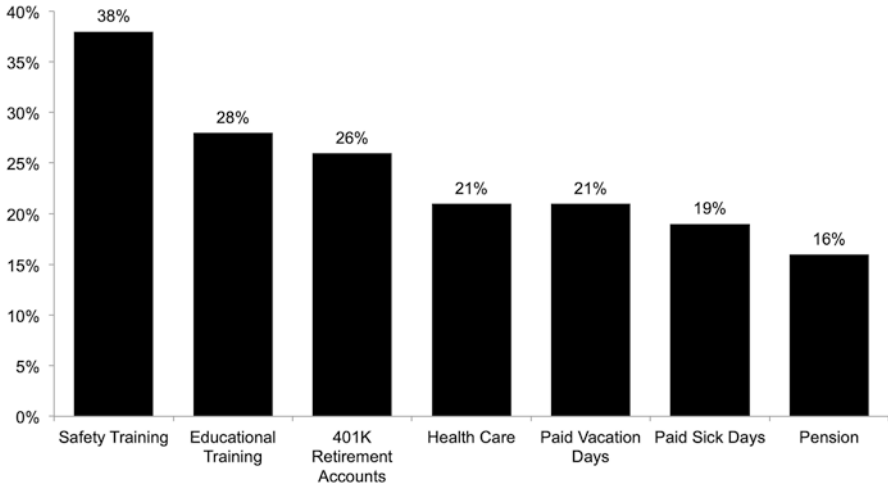


Fig. 17.2 Age 50+ part-timers and benefits. Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

Table 17.1 What one benefit would you most like to get?

	50+ (%)	50+ involuntary (%)	50+ voluntary (%)
Paid vacation	28	19	30
Health care	28	36	26
401K	15	15	15
Pension	14	13	15
Paid sick time	7	9	6
Education	6	3	6
Safety training	3	5	2

Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

17.2.3 Working Alongside Full-Time Workers

Most 50+ part-timers work in firms where there are also full-time employees. However, in cases where full- and part-time workers perform the same tasks, 4 in 10 older part-timers say that full-timers are doing the same job they are doing but the full-timers get paid more (see Fig. 17.3). Older involuntary part-timers who work among full-time workers say they are more likely to have to adjust their schedules and handle unwanted assignments; they are also more likely to report that they are treated with less respect than older voluntary part-timers. Older involuntary workers report that they are more likely to be forced to work on holidays or weekends than voluntary part-timers (see Table 17.2).

Fig. 17.3 Do full-time workers doing the same job as part-timers make more, the same, or less than part-time workers?
 Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

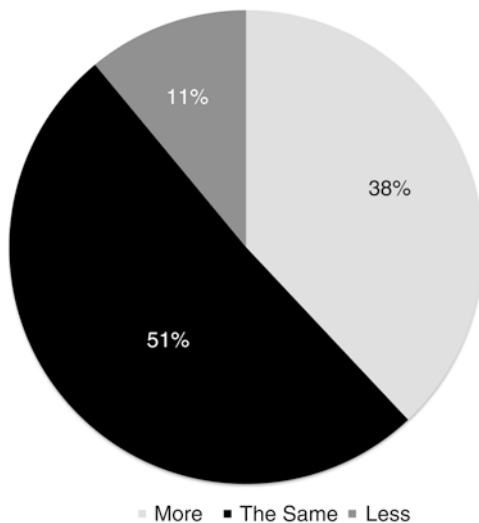


Table 17.2 Compared to full-time workers at your job, have any of the following happened to you?

	50+ (%)	50+ involuntary (%)	50+ voluntary (%)
More likely to be forced to work on weekend and holidays	16	30	13
Given less favorable work schedules	15	29	12
Treated with less respect by management/owner	13	27	10
Given less desirable job assignments	12	28	9
Treated less well by co-workers	8	17	7
Fewer breaks or downtime	7	18	5

Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

17.2.4 Job Satisfaction

Nearly half of older voluntary part-time workers (49%) say they are very satisfied with their jobs, and another 31% are somewhat satisfied. Involuntary part-timers are much less satisfied with their situation, with only 17% saying they are very satisfied, and 35% saying they are somewhat satisfied (see Fig. 17.4). Workers who are age 65 or older report being the most satisfied, with over half (57%) describing themselves as very satisfied.

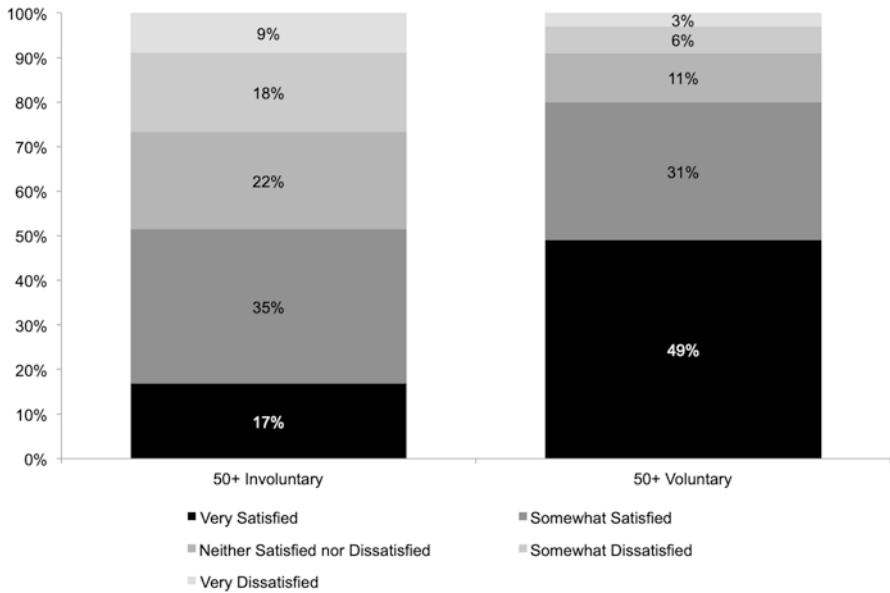


Fig. 17.4 Job satisfaction for older part-time workers. Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

17.2.5 Advantages and Disadvantages of Part-Time Work

Part-time work offers some advantages in terms of schedule flexibility and time for family or non-work activities. On the whole, however, the advantages of part-time work are more likely to be enjoyed by those who are voluntarily part time. For example, less than half (46%) of involuntary part-time older workers report being able to set their own schedules, but nearly three quarters of voluntary part-timers (71%) say they are able to do this. Older involuntary part-timers are also less likely to agree that spending time with family and friends and enjoying leisure time are advantages they enjoy, compared to over two thirds of voluntary part-timers.

There are important differences between voluntary and involuntary older part-timers regarding the disadvantages of part-time work. Almost three quarters (71%) of involuntary part-timers agree with the statement that having a part-time job makes it difficult to plan for the future, compared to one quarter (24%) of voluntary part-timers (see Table 17.3). A similar pattern is seen regarding the statement that saving for retirement is harder as a part-time worker, agreed to by three quarters (75%) of involuntary older part-timers but less than one third (32%) of voluntary part-time workers.

Table 17.3 Disadvantages of part-time work (percent who say they agree “a lot” or “some”)

	50+ (%)	50+ involuntary (%)	50+ voluntary (%)
It makes it difficult to save for retirement	40	75	32
You earn less money that you need to support your family/get by	34	72	25
It makes it hard to plan for the future	33	71	24
It makes it difficult to pay bills or runs up credit card debt	27	57	21
It makes it hard to schedule work and family obligations on a daily or weekly basis	22	47	17
It may threaten your ability to qualify for unemployment insurance	20	40	15
It makes it harder to look for a full-time job	16	47	10
You worry about being laid off	15	42	10

Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

17.2.6 *Part-Timers' Financial Situations*

Older workers often have greater financial obligations than younger workers, including paying their mortgages, assisting children who may be in college, and trying to plan for retirement. When asked about their financial well-being, many older part-time workers report that they are in mostly good (41%) or only fair (35%) shape; just over 1 in 10 say they are in excellent (13%) or poor (12%) financial shape (see Fig. 17.5). However, there are distinct differences between how older voluntary and involuntary part-timers rate their financial health. Four out of five (79%) involuntary part-time workers say they are in only fair or poor financial shape, compared to 39% of their voluntary part-time counterparts. Two thirds (62%) of involuntary part-time workers report facing economic hardship in their households, more than three times the rate for voluntary part-time workers (19%). A third of 50+ involuntary part-time workers report times in the past year when they could not afford food for themselves or their families (32%) or some sort of health care or medication (37%).

To try to cope with their unfortunate financial situation, involuntary older part-timers report they have done one or more of the items listed in Table 17.4, including taking on more credit card debt (37%), selling personal items (35%), borrowing money from family or friends other than adult children (26%), and taking a job for which they are overqualified (25%). Not surprisingly, a third of the involuntary older part-time workers report stress in their personal relationships resulting from their financial circumstances.

Relatively few older part-timers request assistance from government or non-profit organizations for help dealing with their financial difficulties. Among older

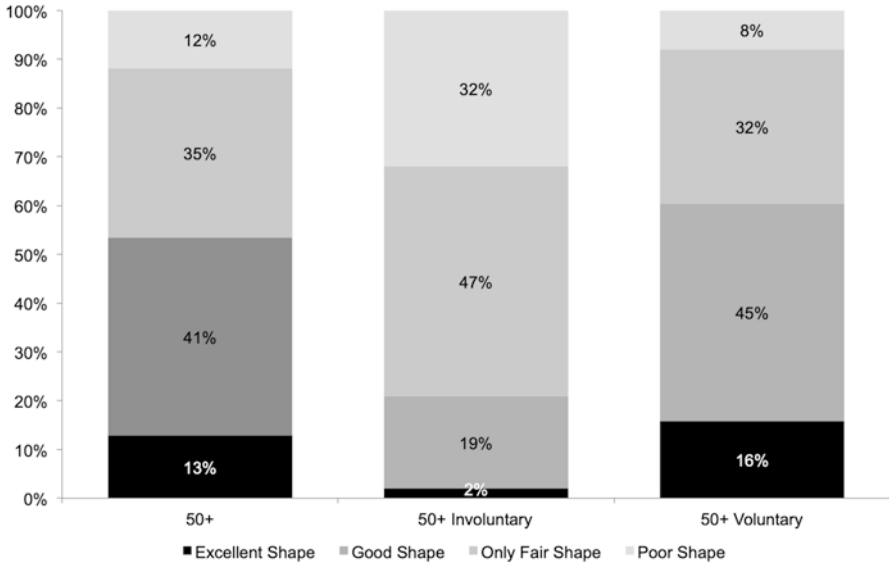


Fig. 17.5 Part-timers' personal financial situation. Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

Table 17.4 Which of the following have you done?

	50+ (%)	50+ involuntary (%)	50+ voluntary (%)	18-34	35-49	50-64	65+
Sold some of your possessions to make ends meet	13	35	9	19	16	18	5
Moved in with family or friends to save money	3	5	2	13	7	4	1
Borrowed money from family or friends, other than adult children	10	26	7	28	21	13	6
Missed a mortgage or rent payment	6	15	4	8	6	8	3
Taken a job you did not like	10	23	7	19	13	10	10
Taken a job below your education or experience levels	9	25	6	15	10	10	8
Experienced stress in family relationships or close friendships	15	32	11	28	25	18	9
Increased credit card debt	19	37	15	27	24	22	14
No financial burden	64	29	71	42	53	59	72

Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

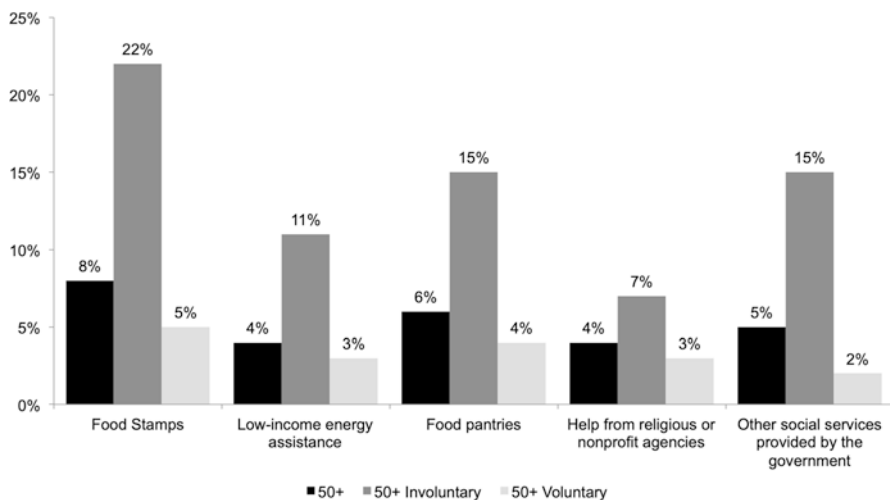


Fig. 17.6 Measures taken during past 2 years to make ends meet. Source: Starace, J., Van Horn, C., & Zukin, C. (2015). *The joys and disappointments of older part-time workers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University

involuntary part-timers, 2 in 10 (22%) have turned to food stamps for help feeding themselves and their families; 15% have visited a food pantry (see Fig. 17.6).

17.3 Long-Term Unemployed Older Workers

As the Heldrich Center's Work Trends survey data reveal, many older workers are satisfied with their choice to work part time and are enjoying the flexibility and advantages part-time work offers. In early 2018, however, roughly one in five (18%) older part-time workers nationally between the ages of 50 and 64 were involuntary part-timers, a significantly greater proportion than in the 65–74 age group (5%) or 75+ age group (2%; Schramm, 2018a). For these older involuntary part-timers of all ages who would prefer full-time jobs but cannot find them, the Heldrich Center's survey finds that part-time work often leaves them struggling financially and without benefits they need such as health care, sick time, and retirement plans.

It has been over a decade since the Great Recession began in December 2007, and at first glance, in March 2018, overall unemployment was 4.1%. However, in that same month, according to BLS, over 5.1 million Americans who are among those categorized as employed are involuntary part-timers. The recession and the years of slow recovery also left behind a historically high percentage of job seekers who became long-term unemployed, including more than half of all older job seekers at the peak in 2010. In the years since, older workers have consistently confronted higher rates of long-term unemployment than their prime age counterparts;

in early 2018, the long-term unemployment rate for older workers was 27.2%, compared to 19.9% for prime age workers (Schramm, 2018b).

In 2014, the Heldrich Center surveyed long-term unemployed Americans and found that the vast majority of workers who lost their jobs during and after the recession received no government assistance outside of unemployment insurance. Only 9% of those who were long-term unemployed reported receiving help from a government agency when seeking a new job, and only 4% said they were enrolled in a training program that was government funded (Van Horn, Zukin, & Kopicki, 2014).

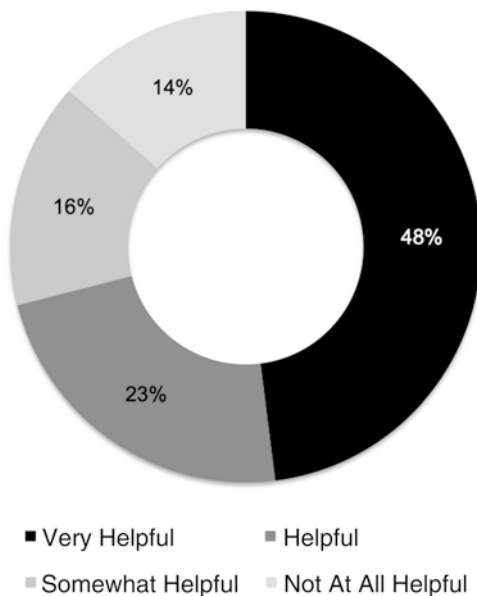
In late 2015, knowing that New Jersey had one of the highest rates of long-term unemployment in the nation, that half of the state's long-term unemployed individuals were over the age of 45, and that the public workforce system offered few services targeted to their needs, the Heldrich Center launched a privately funded 5-year research demonstration pilot project to deliver and assess strategies for assisting this group of workers. The goal of this initiative, known as the New Start Career Network (NSCN), is to help older (45+), long-term unemployed New Jerseyans return to work in full- or part-time jobs. Those enrolled in the program receive, free of charge, access to personalized career services, including web-based resources and in-person and virtual career coaching. NSCN provides information about the labor market and job search guidance through its website (www.newstartcareernetwork.org) and through frequent interactive webinars.

In order to provide individualized support, NSCN utilizes over 250 trained volunteers who serve as career coaches who meet in person or via the internet or telephone with job seekers, either individually or in small groups. To help job seekers access other resources, NSCN cultivated partnerships with a broad range of organizations including mental health professionals, community colleges, libraries, and nonprofits such as the United Way. NSCN helps job seekers connect to employers through members-only job fairs and other initiatives. As of March 2018, over 3400 job seekers have enrolled in the NSCN program.

17.4 Findings from the NSCN Member Survey

In the first phase of an ongoing evaluation of NSCN, Heldrich Center researchers conducted: an online survey of NSCN members completed by 455 job seekers in March 2017, a focus group with NSCN job seekers who had received coaching, and preliminary quantitative analysis of job seeker outcomes through the third quarter of 2017 for participants who joined in the program's first year. Based on data from the interim evaluation, the majority of NSCN members are satisfied with the assistance they are receiving—86% said they would refer a friend to NSCN. However, most NSCN members continue to face many challenges. Of those who reported they would not recommend the program, most commented that the program did not help them personally, or that they were looking for something else. Some also

Fig. 17.7 How have you found working with a coach? Source: Member survey 2017 preliminary highlights



commented that the website did not clearly explain the services and resources being offered, or that the job postings did not match their interests.

Most members reported that the coaching was helpful (see Fig. 17.7), and appreciated receiving personalized support, feedback, and accountability as well as help with navigating job search resources. Among those who had participated in group coaching, those who found it helpful reported that it provided support and motivation, and that they enjoyed the ability to share resources with their group. Members who worked with a coach commented that:

- “[My coach] is an outstanding career coach who possessed the correct skill set and experience to help me navigate through the job search maze. [My coach] helped me to lead a more organized and practical approach in my job search. [My coach’s] help with résumé writing and interview skills were top notch. His valued suggestions, guidance, and time were greatly appreciated.”
- “Wonderful ally to support you during difficult job search.”
- “[My coach] has been exceptional. [I] could not have progressed this far without her insight.”
- “My coach was very thorough and helped me to get myself together. My coach was patient and understanding and helped me to move forward from being stuck. I gained more confidence in the process.”
- “Wonderful to have someone to talk to that helped me uncover strengths, thoughts, ideas.”

For those who had not yet worked with a career coach, most reported not being aware of the service, or did not think a coach would provide any information that they did not already know.

The majority of NSCN job seekers who completed the 2017 survey reported high levels of satisfaction with the program. When asked why they would recommend this program, most members' responses included references to resources the program provides such as coaching and job listings, with some members adding that the program was a welcome addition to the toolbox. Other members said they would recommend this program because it is tailored to the unique needs of older workers. Some NSCN member comments follow:

- "It provides an arm of motivation and support for unemployed persons as well as links to a broad source of potential employment."
- "When you become unemployed, navigating the landscape can be overwhelming and the most educated person can become paralyzed by all of the information that may come your way. It also helps to have a support network to keep you focused as well as keep you in a positive light."
- "There are no other sources for this type of service."
- "After being out of work for an extended period of time, the NSCN program may give some people hope to continue their job search, instead of giving up."
- "That was so helpful to me and gave me strength. After being there I did realize that many people were looking for work and their stories helped me cope."
- "I would recommend this program because people who are unemployed for a long time need all of the resources available in this program. Especially those who are 50 and older and are discriminated against because of their age and not utilized given their skillsets and experience. It is emotionally debilitating to be unemployed for over seven months, interviewing constantly with no job offers."
- "NSCN offers programs and opportunities that are not available anywhere else and they are focused on the more 'experienced' job seekers—people like myself who have not had to do a job search in many years."
- "There are so many advantages to this website that all the unemployed can benefit from, but foremost, I think the personal attention of the coaches and others at webinars is a real morale booster. It also much improves your job seeking skills."

17.4.1 Employment Status

Based on the survey completed in March 2017 by 455 NSCN members who had joined the program at some point after its October 2017 launch, the majority of respondents (58%) identified as unemployed at the time they completed the survey and indicated that they were looking for full-time work; 4% were unemployed and looking for part-time work. The remaining 38% of members reported that they were working in some capacity: 10% were employed full time; 6% were employed full time in temporary positions; 4% were self-employed; 4% were employed as voluntary part-timers; and 14% were employed as involuntary part-timers seeking full-time work.

Younger NSCN job seekers—those in the 45–54 age range—reported the highest employment levels, with 43% employed at the time of the survey. Those in the middle age range, 55–62 years old, reported the lowest employment rate, with 34% employed; 39% of those 63+ were employed.

Of those who were working, 75% reported they are earning less than their previous job. Half (51%) of NSCN member survey respondents described their current employment as temporary. Further, only a quarter (26%) of employed NSCN members said they are receiving a salary, while two thirds (62%) said they are paid by the hour, and the remaining 12% are either self-employed or paid on commission.

17.4.2 Unemployment Insurance Wage Record Data

In an effort to further assess the labor market experiences of NSCN members, Heldrich Center researchers examined the experiences of an early cohort of NSCN participants, who joined between October 2015 and September 2016, as to their pre- and post-participation employment and earnings. Researchers used state administrative records to collect the basic demographics of NSCN members. Measures of employment and earnings for this chapter are based on New Jersey state unemployment insurance wage records, which include quarterly earnings information for all in-state employees in “covered employment,” that is, jobs for which employers make regular quarterly payroll deductions to cover unemployment insurance. Importantly, unemployment insurance wage records do not include some forms of self-employment, agricultural, military, and federal government jobs.¹

Heldrich Center researchers’ analysis yielded the following observations: Most NSCN members are back to work but not quite “back on their feet.” Within the first 12 months after joining NSCN, 73% of participants found a job, but only 17% were earning as much or more than they did in the 5 years before joining the program.²

It is too early to determine whether coached participants fared better than those who did not receive coaching. Follow-up data are only available for the first 160 coached members. Among this early cohort, who joined NSCN between October 2015 and September 2016, coached participants were just as likely to find jobs as non-coached participants.

Coached or not, most participants had not recovered earnings as high as their previous highest quarterly earnings in the 5 years prior to joining the program. Nevertheless, as shown in Fig. 17.8, the proportion of coached sample members

¹The authors of this chapter are grateful to the New Jersey Department of Labor and Workforce Development for providing these data.

²Measures of employment and earnings for this chapter are based on New Jersey state unemployment insurance wage records, which include quarterly earnings information for all in-state employees in “covered employment,” that is, jobs for which employers make regular quarterly payroll deductions to cover unemployment insurance. Importantly, unemployment insurance wage records do not include some forms of self-employment, agricultural, military, and federal government jobs.

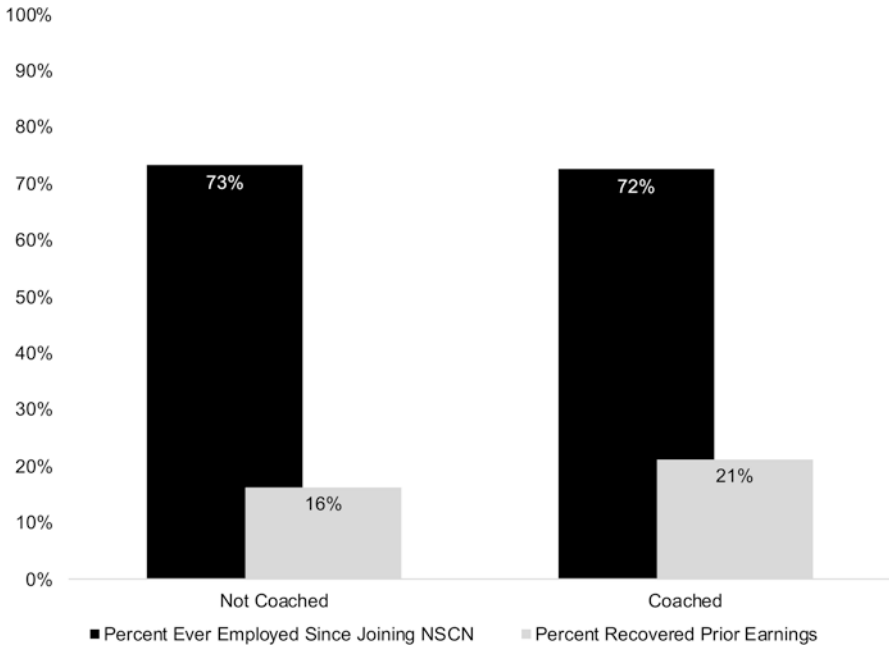


Fig. 17.8 NSCN participants' post-program employment and earnings. Source: NSCN participant reported information at enrollment and New Jersey unemployment insurance quarterly wage administrative records

who recovered their highest earnings (21%) was a little higher than that of the non-coached group (16%).

Participants with low earnings prior to joining NSCN gained the most. By far, the strongest predictor of how much participants earned after joining NSCN was how much they earned before. This finding does not mean that the highest earners are faring the best. Participants who joined with relatively low recent earnings made the greatest gains, while those who joined after losing well-paying jobs are still striving to recover lost earnings.

In the first year, NSCN seems to have served three fairly different groups:

- Low pre-NSCN earners: Earning \leq \$10,400 in any of the 20 quarters (5 years) before joining NSCN
- Moderate pre-NSCN earners: Earning between \$10,400 and \$17,545 in any of the 20 quarters (5 years) before joining NSCN
- High pre-NSCN earners: Earning over \$17,545 in any of the 20 quarters (5 years) before joining NSCN

The low pre-NSCN earners achieved the greatest relative gains in employment and earnings (see Fig. 17.9).

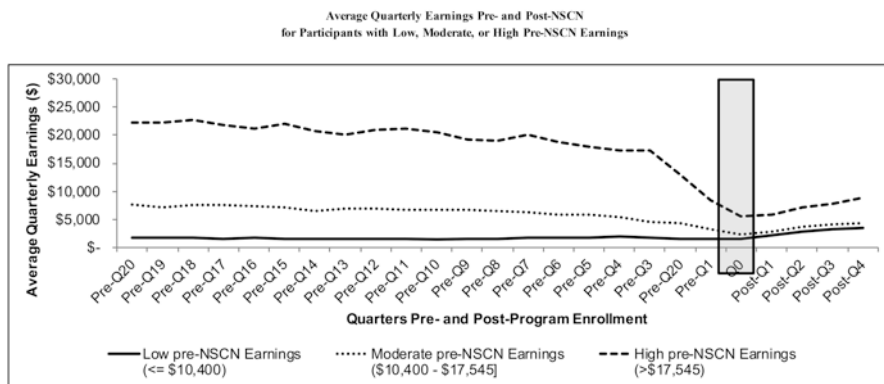


Fig. 17.9 Average quarterly earnings pre- and post-NSCN based on pre-NSCN earnings. Source: NSCN participant reported information at enrollment and New Jersey unemployment insurance quarterly wage administrative records

17.5 Conclusions and Recommendations

For many older workers in transition between unemployment, work, and retirement, the contemporary post-Great Recession labor market means they must make very difficult adjustments. Many who lost jobs in recent years are battling the combined effects of age discrimination and the stigma of long-term unemployment. The longer they are unemployed, the less likely they are to find a new job. Many of the unemployed are in search of “the holy grail”—a full-time job with benefits at a salary comparable to their previous earnings. Instead they find a contemporary job search process and opportunities drastically different from the last time they looked for work. They often are ill equipped to use social media, technology, and networking, and they may often lack specific skills that are in demand. They have limited access to reemployment supports from the nation’s under-resourced public workforce system. The growing reliance on alternative work arrangements, including temporary, contract, gig, freelance, and project-based assignments, is less appealing to older workers who seek stable jobs. Similar to what the Heldrich Center survey found for involuntary part-time workers, these alternative work arrangements often leave workers underemployed and without access to desired workplace benefits such as health care, sick or family leave, and retirement accounts.

17.5.1 Strategies to Help Older Job Seekers

Based on the Heldrich Center’s research on older part-time workers and on lessons learned from the New Start Career Network, several policy remedies could ease the difficult adjustments for older workers.

Early intervention—helping older job seekers connect to job search assistance as quickly as possible—would potentially reduce the likelihood of these job seekers joining the ranks of the long-term unemployed. Unemployment insurance should be transformed into a reemployment insurance system that encourages job seekers to meet in person or virtually with a career coach who can help them develop a plan as soon as they file for benefits. Access to high-quality career coaching should be combined with access to robust technology tools and user-friendly software programs and mobile apps that are available 24/7 to help job seekers navigate careers, complete online applications, prepare for interviews, complete training modules (including basic computer and digital literacy), and pursue both job leads and alternative work opportunities.

Older workers should have access to low-cost or free e-learning and digital literacy, portable credentials, lifelong learning, and credit for prior and experiential learning. Those interested in pursuing education and training to help them find or keep a job need access to independent advice about the potential return on investment (Van Horn, Krepicio, & Heidkamp, 2015). In addition to education and training support, older job seekers, especially those who are long-term unemployed, may need access to resources for mental health counseling and financial advising.

Policy makers, advocacy groups, and employer associations should raise awareness of older and long-term unemployed workers as a source of talent to be considered alongside other diversity and inclusion initiatives. Employers should also be encouraged to explore alternative hiring strategies that may be less likely to discriminate against older and long-term unemployed job seekers.

17.5.2 Policies to Help Older Part-Time and Gig Workers

Given the rising number of older Americans who want and need to continue working, and the reality that many of them may end up in part-time or alternative work, federal and state policy makers should expand nascent efforts to develop portable benefits for part-time and gig workers for health care, retirement, family and caregiver leave, and unemployment insurance. In addition, employers should be required to allow part-time workers to participate in 401(k)s, and older workers should be allowed to borrow penalty-free against 401(k)s for education and training expenses. Hourly workers of all ages would benefit from raising the minimum wage. Raising the earnings limit that people receiving Social Security benefits can earn before being taxed would also help older workers.

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Chapter 18

Beyond the Livelong Workday: Is There a New Face of Retirement?



Jacquelyn B. James, Nancy Morrow-Howell, Ernest Gonzales,
Christina Matz-Costa, and Anna Riddle-Wilder

18.1 Introduction

With the ongoing nature of the longevity revolution, many in the baby boom cohort are asking who they are going to be, how are they going to live, and what are they going to do in the years that are ahead for many of them (Moen & Altobelli, 2007; Rubin, 2007). Although the term “livelong” is much more commonly seen in poems and song than in prose, its most common usage carries a very specific negative connotation, typically referring to a period of time that may feel too long or too tiring—a minced oath, if you will. Thus, it might be considered an apt metaphor to describe how some baby boomers may be thinking about work and/or retirement in this era of longevity—with optimism for the future tempered by a sense of skepticism. Thus, the purpose of this chapter is to address the following questions: Is the baby boom generation feeling saddled with or energized by the task of rewriting history? Are they reinventing themselves or continuing on the same path? Are they finding

J. B. James (✉)

Center on Aging and Work, Boston College, Chestnut Hill, MA, USA

e-mail: jacquelyn.james@bc.edu; Jamesjc@bc.edu

N. Morrow-Howell

Brown School of Social Work, Washington University, St. Louis, MO, USA

e-mail: morrow-howell@wustl.edu

E. Gonzales

New York University, New York, NY, USA

e-mail: geg2000@nyu.edu

C. Matz-Costa

Boston College, Chestnut Hill, MA, USA

e-mail: matzch@bc.edu

A. Riddle-Wilder

School of Social Work, Boston College, Chestnut Hill, MA, USA

e-mail: Riddlewi@bc.edu

personal fulfillment or looking forward to the prospect of getting off the treadmill? Are they moving beyond their reputation as the “me generation,” and transcending self-interest? Is there really a new face of retirement?

While we know that the image of retirement is changing in some ways—especially if we look to popular press such as *The New Retirement* (Cullinane & Fitzgerald, 2007); *Encore Career Handbook* (Alboher, 2013); *Retire Inspired* (Hogan, 2016); *Boomer Reinvention* (Tarnoff, 2017), and many others—significant tensions around work/productivity and leisure in later life remain. A recent study by Colby and colleagues found that retirement is still often seen as a time “to take care of myself, to relax, and make time for me” (Colby, Bundick, Hirsh, Morton, & Remington, 2017). An analysis by the Bureau of Labor Statistics (2015) reveals that after sleeping, the second most common activity for individuals’ ages 65–74 is leisure and sports. While the idea of leisure itself is changing, Depp, Schkade, Thompson, and Jeste (2010) found that older adults watch three times more TV than any other age group and seem to enjoy it less than their younger counterparts (see also Nimrod & Kleiber, 2007). Thus, it is unclear the extent to which the baby boom cohort will change the image of retirement.

Some years ago, James and Wink (2007), in an edited book, *The Crown of Life: Dynamics of the Early Postretirement Period*, suggested that there is a new stage of life in the early post-retirement years. Laslett referred to this new stage as a “new face of retirement” based on his (1991) notion of the Third Age, or as defined in James and Wink (2007), those between the ages of 65 and 79 who are no longer actively involved in childrearing or paid work. Although there are many names for this new life stage, for the purposes of the current chapter, we will also refer to it as the Third Age. In fact, Moen (2003a, 2003b) has actually suggested changing the name of retirement to the Third Age. The James and Wink (2007) book was based on multiple longitudinal studies examining comparisons between those younger than 65 and those older than 79 as well as examining changes over time for those 65–79 years of age (who, at the time of publication of the book, were older than the baby boom cohort).

Summarizing broadly across all the chapters in the volume, Wink and James (2007) reported that among members of this older cohort, there were reports overall of declines in health and in cognitive functioning across the years from ages 65–79, although none of the declines were precipitous or created limitations in terms of the kinds of activities these Third Agers enjoyed, including continued employment, other productive engagements, and leisure activities. There were, however, differences by race and gender, with both women and Black Americans reporting poorer financial circumstances, and Black Americans and other ethnic groups reporting poorer health (Sorensen, 2007).

Indeed, Black American members of this cohort, in particular, were said to have “lower income, education, and job status than others and were less likely to have the pension plans or savings needed for a smooth transition into retirement” (Brown, Jackson, & Faison, 2007, p. 39). In many respects, there were two faces of the Third Age: that of the healthy, White and educated, and that of the poor, unhealthy, and those with lower educational attainment. James and Wink (2007) also noted that in the USA, the availability of Social Security benefits had made the financial circumstances of this group of Third Age adults much better than they had

been for cohorts that aged without such government assistance. That is, without Social Security many more Third Age individuals would live in poverty. Indeed, less than 10% of men and just over 10% of women fell into the poor or very poor category (Sorensen, 2007).¹

Laslett viewed the Third Age as a time for self-realization and personal fulfillment, when the “apogee of personal life” (Laslett, 1991, p. 4) can be achieved—the time to pursue long-held dreams postponed during the long (and in his view arduous) working years. He referred to this time as “the crown of life” (Laslett, 1991, p. 78), a phrase that was used for the title of the aforementioned book (James & Wink, 2007). In the final chapter, the authors wondered what the path to personal fulfillment would look like for members of the soon-to-be retirement-eligible baby boom cohort. They noted the anti-aging bias of the successful aging paradigm, the fear of aging, and the extensive market of anti-aging products and procedures. Furthermore, they questioned the extent to which personal fulfillment would be possible in the current context of aging with the general acceptance of the idea of aging as a process to avoid. Thus, in the current chapter, we return to some of these questions as the baby boom cohort has arrived at retirement eligibility.

It is often said that the baby boom cohort has changed every institution that it has confronted across the life course, from hospitals during the boom years, to schools that had to expand to accommodate them, to different ideas about marriage, family, and work (Achenbaum, 2012; Hughes & O’Rand, 2004). It is also suggested that in one way or another this cohort will change the face of retirement. As a cohort, the baby boom is widely considered to be more interested in growth and development than in satisfaction and security in contrast to the cohorts that preceded them (Lesthaeghe, 2014). They are also still seen as “the me generation” (Hughes & O’Rand, 2004). Since the front row of this age group is well into the conventional retirement years, we pose the following questions: how much are they changing the work and retirement scene? Is theirs just a new retirement with more years added? Or are they actively creating a retirement very different from the cohort that preceded them? We review current conceptual and empirical literature in consideration of these questions.

Before we begin, a few caveats are necessary. Answering these questions with empirical data is challenging in that the front row of the baby boom cohort is just 72 as of this writing, still in early years of retirement. Since published findings lag in relation to the current context, some questions posed here are particularly hard to answer with available data. Moreover, some studies of older adults do not separate the older cohort from the younger baby boom cohort. Where possible, we have limited findings to baby boomers who are 65+, but at times we have drawn from literature that includes both baby boomers and the preceding cohort. Finally, and importantly, there was great heterogeneity within

¹ More recent analyses conducted by the Kaiser Foundation (2016) suggest that 10% of adults aged 65+ are poor, but they also identified significant differences among Blacks (19%) and Hispanics (18%) when compared to Whites (8%). When a “supplemental poverty measure” was applied, these rates increased significantly to 14% for the entire adult population aged 65+; 12% for Whites, 23% for Blacks, and 28% for Hispanics.

the baby boom cohort in terms of social class and opportunity structures—a point that is too often ignored—and these gaps between the healthy and well educated and the poor and uneducated have only widened over this cohort's entry into their so-called retirement years. Where possible we have tried to address some of these differences while continuing to focus on the majority—and on age norms that mask an array of individual differences. With these caveats in mind, we explore what we can determine at this point about the extent to which the baby boom cohort is indeed changing the face of retirement. To set the stage, we review some important questions. First is the question of the durability of the longevity revolution.

18.2 The Longevity Revolution

By most accounts, the longevity revolution will continue for some time although not indefinitely, and perhaps not as rapidly as during the last century (Olshansky, Goldman, & Rowe, 2015). One recent report from the Centers for Disease Control and Prevention reflects a decrease in life expectancy for two consecutive years, mostly due to accidental deaths of young men who overdose (Kochanek, Murphy, Xu, & Arias, 2017). Other studies have found that typically younger, white, single, or divorced individuals with less education are at greater risk of opioid-related deaths (Khazan, 2017; Vice Chairman's Staff of the Joint Economic Committee, 2017). Still, across the developed world, life expectancy has risen at historically unprecedented rates in the past 60 years. According to the Centers for Disease Control (2014), from 1950 to 2014 the average life expectancy at age 65 in the United States increased from 13.9 (i.e., to almost 79) to 19.3 (i.e., to age 84). Increasing numbers of older adults are faced with perhaps 15, 20, or 30 years of healthy life spans beyond the typical retirement age of 65. On average in Europe, increases in life expectancy at birth are growing by 3 years every decade (Benyon, 2010). Thus, living to old age is becoming a normative expectation. Life expectancy at birth, again, varies by race, ethnicity, and sex: women live longer than men, and Hispanics have higher life expectancy at birth than Whites or Blacks (i.e., the Hispanic Epidemiological Paradox; Centers for Disease Control and Prevention, 2014; Scommegna, 2013).

According to Czaja (Chap. 1 of this volume), by 2050 there will be almost double the number of individuals aged 65+ in the USA than there were in 2012; one report predicts there will be 83.7 million older Americans in 2050, a drastic increase from the 43.1 million in 2012 (Ortman, Velkoff, & Hogan, 2014). Additionally, the percentage of Americans younger than 64 is expected to decrease between 2012 and 2050 while the percentages of people at every age group older than 65 are expected to increase. The percentage of the oldest-old, individuals ages 85 and up, is expected to jump from 1.9% of the total US population to 4.5% by 2050. Indeed, there are currently 72,000 centenarians, a number that is expected to increase eight-fold by 2050 (Steppler, 2016).

18.3 How the Current Third Agers Compare to Previous Cohorts

18.3.1 Health

Another truism that has been repeated often is that the current cohort of older adults is healthier than previous cohorts at the same age. The real picture, however, is a little more complex. Rates of smoking have decreased, leading to decreased rates of bronchitis and emphysema in older adults. There also appear to be decreases in rates of heart disease and stroke (Crimmins, 2015) and even dementia (Langa et al., 2017). Such gains have to do with improved medical knowledge and treatments along with increased recognition of the hazards of smoking, and social policy that includes housing subsidies, employment opportunities, and income supplementation for low-income adults (Osypuk, Joshi, Geronimo, & Acevedo-Garcia, 2014). There is, however, some evidence that the previous cohort was healthier in some respects.

For example, a population-based study using data from the National Health and Nutrition Examination survey (NHANES) that tests differences between the baby boom cohort and its predecessor shows that rates of hypertension, diabetes, and obesity are higher in the baby boom cohort than in the preceding one (King, Matheson, Chirina, Shankar, & Broman-Fulks, 2013). Freedman, Schoeni, Martin, and Cornman (2007) report higher rates of arthritis among baby boomers while Li-Kortotky (2012) reports greater hearing loss among the baby boom cohort. Importantly, King et al. (2013) found that the baby boom cohort is overall less physically active than its predecessor; indeed “more than half of the baby boomers reported no regular physical activity (52.2% vs. 17.4%)” (p. 385) along with higher levels of “moderate drinking” than did previous cohorts.

Declining health trends are even more pronounced among Black Americans, even among those with higher educational attainment (Brown et al., 2007) and among White Americans with lower educational achievement (Olshansky et al., 2015). Rhodes (2015) points out that a number of populations still lack access to medical care and/or are living in poor life circumstances. So, again, there is unevenness in the extent of health and wellness within the baby boom cohort, and it is unclear whether this cohort is actually healthier than its predecessor.

That said, most of the conditions that are on the rise make life more difficult, but are not debilitating in the way that strokes and emphysema were for the prior cohort. Thus, even though the baby boom cohort is technically not actually “healthier,” significant proportions are more likely to be able to carry on with most activities including work, caregiving, volunteering, and leisure. It also appears that they are doing so, a point to which we will return.

18.3.2 Education and Wealth

The baby boom cohort is indeed the highest-educated cohort in the history of the United States. According to Hughes and O’Rand (2004), high school graduation is nearly universal among men and women of this cohort, a significant change from previous cohorts. They also have higher levels of college participation and completion than their predecessors, although college completion is not the norm. Less than one third of the baby boom cohort has a baccalaureate degree. According to 2012–2016 5-year estimates from the American Community Survey, only 25% of Americans ages 65+ have a bachelor’s degree or higher (Bauman, 2016).

Perhaps owing to their extensive education, the baby boom cohort has a higher standard of living, defined as total net worth, than did previous cohorts (Hughes & O’Rand, 2004). They will probably be better off financially (i.e., have greater net worth) than their parents (Keister & Deeb-Sossa, 2001), but they have not saved money in the same ways that their parents did and have accumulated more debt (Hughes & O’Rand, 2004). So, the extent to which they are prepared for retirement is unclear, and again uneven. The “averages” in standard of living reported by Hughes and O’Rand conceal high levels of economic inequality, levels higher than those in the cohorts immediately preceding them. These inequalities reflect “the accumulation of education, work, and family histories” (p. 26). Moreover, the Great Recession of 2008 has affected both the work histories and the retirement savings of this cohort. Pfeffer, Danziger, and Schoeni (2013) reported that households headed by adults ages 55–64 between 2007 and 2011 experienced a decline in median wealth of about \$72,000 (see also Cahill & Quinn in Chap. 7 of this volume). Such declines have accelerated already changing retirement patterns, a point to which we will now turn.

18.4 The Latest on Retirement Age

As we know (see Chap. 7), the trend toward early retirement ended in the early 1980s and has continued (Cahill, Giandrea, & Quinn, 2015). As we have reported elsewhere (James, Pitt-Catsouphes, Coplon, & Cohen, 2013), the labor force participation rates of today’s older adults is one of the most visible changes in the experience of aging in America. Toossi (2017) for example reported that in 2000, the labor force participation rate of adults over the age of 55 was about 32%; in 2017 it was over 40%, a number that is expected to increase (Bureau of Labor Statistics, 2017). One study reports that individuals in their 70s and 80s are the fastest growing segment of the workforce, and among current 65- to 74-year-olds, 32% will be in the workforce by 2022 (Miller, 2015). According to research by the Pew Research Center, “the steady increase in the share of working older Americans contrasts with the adult population as a whole, whose employment-population ratio fell sharply during the Great Recession and has yet to recover to pre-slump levels” (DeSilver, 2016, p. 2). Importantly, the Pew Study also shows that more of the employed older adults are working full-time.

Expectations about work are changing too. According to a 2017 Transamerica Survey, 66% of baby boomers (employed full- or part-time) expect to either work past age 65 (51%) or do not plan to retire (15%), an expectation regarding retirement that is shared by younger cohorts as well. Thus, it is clear that this cohort is changing the face of retirement with respect to work both now and in the years to come.

Some of these changes have to do with the reduction in the number of older adults working in physically challenging jobs (Bucknor & Baker, 2016). Lengthening the employment years also appears to be a response to changes from defined benefit plans to defined contribution plans, the decline in retiree health coverages, and in the increase in Social Security's full retirement age. According to the EBRI Retirement Confidence Survey (Greenwald, Copeland, & VanDerhei, 2017), some also report "wanting money to buy extras (67%), needing money to make ends meet (42%), a decrease in the value of their savings or investments (23%), or keeping health insurance or other benefits (13%)" (p. 20).

This same report reveals that "almost all retirees who say they worked for pay in retirement in the 2017 Retirement Confidence Survey give a positive reason for doing so, saying they did so because they wanted to stay active and involved (90%) or enjoyed working (82%)" (p. 20). Smyer and Pitt-Catsouphes (2007) found that older adults appreciate the structure for the "livelong day" that continued work provides, the continued identification with their work, the social connections that people enjoy at work, not to mention the self-esteem that is conveyed by a job well done.

So, the baby boom cohort is indeed rewriting history, at least with respect to work. There is some evidence that those who continue to work past the years of retirement eligibility are better off psychologically although it may be that the healthy are the ones continuing work (James & Spiro, 2007). There are, however, problems with fully embracing the working longer agenda.

18.5 The Reality of the Possibility of Working Longer

The EBRI (Greenwald et al., 2017) report mentioned above also adds that although two thirds of older workers report they expect they will be able to work at least partially in retirement, only 27% report they have actually been able to do so. Unfortunately, workers with chronic illnesses or with family members of chronic illnesses are often forced into retirement due to health and caregiving issues (Rad, Rashidian, Arab, & Souri, 2017). Approximately one third of Black Americans work past the age of 70 to maintain income and economic security (Sorensen, 2007). Jobs disappear in organizational restructures (see, for example, Chen & Ma, 2010). By age 75, most people are no longer working (Kerzner, 2015). Murphy, Johnson, and Mermin (2007) suggest labor market discrimination, family caregiving, and job dissatisfaction may explain differences in retirement expectations between Whites, African Americans, and Hispanics.

And even though employers are starting to recognize the changing context of aging and work, relatively few companies offer flexible schedules, the ability to

shift from full- to part-time, or the possibility of switching to a less demanding position. In a recent Transamerica Survey (Collinson, 2017), 41% of employers expect that their older employees will want to continue working past traditional retirement ages and recognize that many of their employees envision a flexible or phased transition into retirement. However, there is little evidence programs are in place to support them. These are just a few of the ways that social structures can thwart the ambitions of those members of the baby boom cohort and the advocates who write the self-help books mentioned above who might be desirous of social change (Riley & Riley, 1994, 2000).

18.6 Life Satisfaction in Retirement

There are many cross-sectional studies suggesting that life satisfaction and other indicators of well-being increase with age (e.g., Carstensen, Isaacowitz, & Charles, 1999; Fingerman, 2002). And indeed, it appears that positive affect does increase while negative affect decreases in later life (Charles, Reynolds, & Gatz, 2001). Change over time in life satisfaction is less clear and findings are mixed.

To start with, there are very few longitudinal studies from the US population that examine life satisfaction from young adulthood to old age. One study that does have that information is a study of World War II and Korean War veterans, a male cohort that preceded the baby boom cohort. Using these data, Mroczek and Spiro (2005) revealed that life satisfaction, as measured by an 11-item life satisfaction inventory (Liang, 1984), was low in early and midlife, at which time it steadily increased up to age 65–70, at which time it started to decrease. Panel data from two nationally representative samples of adults ages 16–88 between 1999 and 2001 from two different European studies reveal a similar pattern (Baird, Lucas, & Donnellan, 2010). These authors found overall that life satisfaction, as measured by a single item (“How satisfied are you with your life overall?”), peaked in midlife and started to decline among older adults in their mid-70s (a little later, perhaps owing to cohort differences, meaning that the positive trend toward greater life satisfaction with age continues longer for the leading edge of the baby boom).

There are of course individual differences in the arc of change and many other factors that influence life satisfaction over time (Deaton, 2007). Not everyone changes at the same rate and as Mroczek and Spiro (2005) note, “...some do not change at all” (p. 199). These authors also say that life satisfaction is higher among extraverts and lower among those with greater neuroticism. Similarly, life satisfaction among older adults appears to increase in concert with increases in generative concern, Erik Erikson’s (1968) notion of adults who have a focus on guiding the next generation (see, for example, McAdams, de St. Aubin, & Logan, 1993). Thus, the role of personality in later life adjustment and satisfaction cannot be overstated (see also Wink & James, 2007).

18.7 The Relationship between Leisure and Life Satisfaction

Leisure is and always has been an important aspect of daily living, whether casual (“a short-lived, pleasurable activity”) or serious (motivated goal pursuit or “work-like character”) (Stebbins, 1997, p. 17). Expanded leisure is indeed the sine qua non of the retirement years, also known as the “time affluent” years according to a nationally representative Merrill Lynch study (2016). Laslett’s (1991) concept of the Third Age was based on the premise that, depending on what one did with greater freedom from work and family responsibilities, the Third Age could be the crown of life, the best time of life. Although there is debate about whether quantity or quality of leisure is more important for increased life satisfaction, surely, the fit between people’s expectations about retirement and ability to take pleasure in leisure activities are important factors in determining optimal involvement (Lloyd & Auld, 2002). Heo, Lee, Kim, and Chun (2012), for example, found that retirees were happier and had higher degrees of subjective well-being if they were engaged in leisure activities that were social in nature (see also, Csikszentmihalyi, 1997).

In some ways the experience of expanded leisure depends upon how it came about. Siguaw, Sheng, and Simpson (2017), for example, found that voluntary retirement or the feeling of control one has over retirement decisions is what ultimately predicts happiness in retirees (see also Calvo, Haverstick, & Sass, 2009; Heckhausen & Wrosch, 2016). Additionally, Zenger and Stobel-Richter (2011) found that repeated unemployment in participants’ working lives predict lower reported satisfaction with life post-retirement. In previous work, we have found that well-being depends upon the level of psychological engagement with the activity—that it might be better to be uninvolved than it is to be involved but unengaged (Matz-Costa, Besen, James, & Pitt-Catsouphe, 2012).

Therefore, it is not surprising to find that expanded leisure works to improve life satisfaction for many but not all baby boomers. To wit, a nationally representative study of adults ages 50–92, roughly 70% of whom were members of the baby boom cohort, revealed that expanded leisure e.g., no longer working for pay is correlated with happiness, a sense of freedom, positive relationships, a focus on fun, and satisfaction with daily routines, while also finding that some respondents report negative relationships or feelings of isolation, boredom, stress, and a sense of being directionless (Colby et al., 2017). Similarly, Topa, Jiménez, Valero, and Ovejero (2017) found that perceived losses that accompany retirement (such as self-esteem and social skills) have a greater impact on subjective well-being than perceived gains. These authors suggest that a feeling of “deterioration” of stability, status, privilege, and personal resources can negatively impact one’s health in retirement—again, all of which may be mitigated by social support and as we have argued, what they are doing with their time in retirement (James, Matz-Costa, & Smyer, 2016). James et al. (2016) suggested that while expanded leisure is still very much a sought-after and pleasant bonus during the added years of life, a reliance on leisure and social relationships alone might be likened to an over-reliance on Social Security for one’s income—necessary but not sufficient for many aspects of well-being in later life (James et al., 2016).

In general, though, levels of satisfaction in retirement are high; retirees seem to enjoy the experience of fewer negative emotions and more positive feelings toward self and others. They also tend to enjoy becoming less achievement-oriented and scheduled, and thus freer (Helson & Cate, 2007; Lynch, 2016). Vaillant and DiRago (2007) point out the value of knowing well how to “play,” which they say gives people an opportunity to “maintain self-esteem while giving up self-importance” (p. 241). Finally, it must be said that retirement is a major life transition and usually requires a period of adjustment to the newfound freedom (Nimrod & Kleiber, 2007). Perhaps the baby boom cohort is in the early stages of this adjustment.

18.8 How Third Agers Spend Their Time

A survey examining time use conducted by the Bureau of Labor Statistics (2016) reveals how current retirees are spending their “livelong days.” First, they show comparisons of time use for retirement-eligible adults who are continuing work compared with those who are not working. Not surprisingly, employed individuals age 65 and over spend fewer hours in leisure activities compared to retirees. The retired group spends more time reading, socializing, relaxing, and thinking, and over 4½ h a day watching TV. The retirees also work around their homes, eat, read for pleasure, shop, relax, and volunteer for others outside of their home more than the average employed person.

Recent studies have identified patterns of activities among older adults. Although not focused only on those who have retired, these studies reveal that activities can be considered simultaneously to reveal the extent and nature of engagement among those entering the Third Age. In a nationally representative sample of Americans over the age of 55 (average age 69 years), five patterns of activities were identified from 36 unique activities including leisure, instrumental, social, physical, and personal activities (Morrow-Howell et al., 2014). The older people in the sample fell into high activity, medium activity, low activity, working, and physically active profiles. Individuals in the high activity group were less likely to be employed, but engaged in all other activities, and were described by the authors as representing the “active aging” vision. The low activity group engaged more minimally in all of the activities and included the most vulnerable adults in terms of health and socioeconomic status. Individuals in the working group were high on employment and computer use, but low on most other activities. The researchers suggest that this group needs to be followed over time to understand how patterns shift when people retire. This study and others document that higher levels of activity engagement are associated with more positive health outcomes. Two different studies have demonstrated that the nature of engagement in activity patterns is more important than the activities themselves (Chen, Putnam, Lee, & Morrow-Howell, 2018; Matz-Costa, Carr, McNamara, & James, 2016). That is, the extent to which activity is physically, socially, cognitively, and emotionally engaging is more important in understand-

ing health outcomes than the activity itself. Activities that required more use of the body and mind and involved social interaction and benefit to others produce better physical and emotional health. Altogether, this line of research highlights the importance of how older people use their time in the Third Age and offers insights into interventions that might improve quality of life. For example, programs should be designed not just to achieve activity per se but to achieve quality engagement across physical, cognitive, and social domains.

18.8.1 Life Changes

Are Third Agers reinventing themselves? A Google search for this question yielded 153,000 results with most articles in the news and popular press suggesting that baby boomers are—or at least are trying—to reinvent themselves. Indeed, the Boston Globe featured a front-page story the day after Christmas in 2017 featuring examples of baby boomers making dramatic life changes (Weisman, 2017). Of course, long ago Atchley (1999) suggested that most people adapted to retirement very well by using well-honed adaptive strategies from the past. Similarly, Diehl and Berg (2007) found little evidence of change in Third Age individuals' involvement of personal interests (such as reading, artistic activities, political involvement) or social activities (such as spending time with others, going to parties or church functions). These respondents may have increased the amount of time they spent in these activities, but there was little change in the types of activities in which they were involved. Further evidence of continuity is the fact that the best predictor of being a volunteer during retirement is having volunteered during the working life (Moen & Altobelli, 2007; Mutchler, Burr, & Caro, 2003).

Thus, although the newspapers are filled with stories of older adult discontinuities, the evidence points more directly to continuity. Few and rare are the reinventions; even the Boston Globe article mentioned above referred to their exemplars as “outliers.” But that does not mean that the baby boom cohort is not changing the landscape of retirement activities.

Notably, volunteer rates have been rising, especially among adults over the age of 60 (Goss, 1999). Goss speculated that this increase might be due not only to increased recruitment efforts, but also to a shift in older adults' perceptions of retirement away from a time of relaxation toward a time of activity and adventure. Using data from the 1995 and 2003 Midlife in the United States Panel Study (MIDUS), Einolf compared volunteer rates between two older cohorts alongside the baby boom cohort over the past 20 years. He revealed that each cohort reported increases in rates of volunteering. He also used past predictors of volunteering to predict the future of the baby boom cohort and found that boomers are likely to volunteer an average of 0.6 h per month more than the preceding cohort. And even if they do not actually increase hours of volunteering, given their current levels of volunteering and their sheer number, Einolf suggests that there will be considerably more volunteers in the coming years. Similarly, Moen (2003a, 2003b) is among others who

have speculated that the tide really is turning and that the perception of retirement as a permanent vacation is changing. If so, retirees may see volunteering and other so-called productive activities as more rewarding (and fun) than leisure.

The baby boom cohort is sometimes considered the “me generation.” See, for example:

One of the most pervasive characterizations of the boomers is that they are individualistic to the point of self-absorption. For example, baby boomers are viewed as self-indulgent consumers who have accumulated high levels of debt instead of prudently saving for retirement. Boomers are also described as obsessed with health and youth; they refuse to grow old gracefully, but will rely on products such as Botox, Viagra, and the latest herbal remedies to stave off biological aging. (Hughes & O’Rand, 2004, p. 6)

On the other hand, Freedman (1999) has characterized boomers by their high levels of education and social activism, especially during their college years, to argue that they will be more socially conscious in later life than previous cohorts. As we have mentioned, however, the business of characterizing a whole generation with such either-or labels is problematic from many standpoints, especially given the heterogeneity within the baby boom cohort.

That said, we noted that this cohort (on average) is already volunteering at greater rates than previous cohorts. They currently give the largest share of donations to charities, surpassing every other age group (Rover, 2013). They are also intensely involved with their own children and grandchildren (Fingerman, Pillemer, Silverstein, & Sutor, 2012). Pruchno (2012) asserts “The relationships that baby boomers have with their parents and their siblings is unprecedented” (p. 151). The length and intensity of all these relationships sometimes requires that they allocate scarce resources to both parents and children—all while juggling work, family, and other social commitments (Guberman, Lavoie, Blein, & Olazabal, 2012).

So, while some narcissism exists in every cohort, it is likely that the “me generation” reputation moniker for such a large swath of the population may be undeserved. Younger cohorts of today (Gen Y) have also been named the “me generation” (e.g., Twenge & Campbell, 2008) so we might wonder if this is a life stage moniker that was used to describe the baby boom during their young adult years that has stuck unnecessarily. The implications of such stereotypes are that the contributions of the baby boom cohort go unnoticed to some extent.

18.9 Meaning and Purpose

Most of the self-help books mentioned above suggest that what is really important in later life or in the “new face of retirement” is to find meaning and purpose. Erikson (1968) long ago suggested that the challenge of mid- to later life was balancing the need to leave a legacy, provide for the next generation, against the inclination to stagnate over time. Similarly, drawing upon Maslow’s hierarchy of needs, James et al. (2016) suggested that retirement “security” per se is not just about have

enough money for the retirement years, but about feeling useful and getting engaged in psychologically meaningful activities. James et al. (2016) defined meaning as the “need to belong, to continue to be a contributing member of society...to stay engaged, contribute to society, and feel a sense of belonging in later life” (p. 334). Baumeister (1991) suggested that a meaningful life is one that has purpose or some level of significance. On the basis of these and other definitions, Heintzelman and King (2014) suggest that “meaning provides us with the sense that our lives matter, that they make sense, and that they are more than the sum of our seconds, days, and years” (p. 562).

From what we and others have said about the importance of finding meaning and purpose in later life, one would think that it is a rare and hard-to-get phenomenon. Yet, a recent analysis of multiple datasets by Heintzelman and King (2014) found that most Americans report extremely high levels of meaningfulness in their lives; depending on the study, over 90% of respondents say their life is meaningful, and over 80% say they have enough purpose. In one set of analyses that included only older adult samples, the data indicated that for all of the variables, on average, the responses were above the midpoint of the indices. These findings held true even for those who were facing difficult challenges such as physical illness or disabilities. Given such high levels of self-reported meaningfulness, we ask: toward what end? To what extent are older cohorts finding purpose in personal and self-gratifying ways as opposed to ways that contribute to the greater good?

In a nationally representative sample of over 1000 adults ages 50–92, most of whom were members of the baby boom cohort, Colby et al. (2017) examined purpose beyond the self, which they defined as “significant, ongoing commitment to and regular, active work toward goals that are meaningful to the self and also aim to contribute beyond the self” (slide 4). They found that only 31% of the sample manifested this type of purpose. Interestingly, neither income nor educational attainment nor health status were related to this purpose. However, results suggested that women in general, and African Americans in particular, were more likely to have this sense of purpose. Additionally, purpose was associated with life satisfaction, wisdom, gratitude, and empathy. Compared to those who saw retirement as a time for “me” and a time to relax (as noted above), those who manifested purpose beyond the self said that retirement is a time “to have an impact on an issue in the world that I care about.” These individuals articulated that it is “a time to reflect, be mindful, and nurture compassion for broader humanity,” “a time to use my skills and experience to help others,” “a time to spend more time with my family.” Interestingly, this same group also endorsed having found the time for themselves, time to do fun things, time to keep working, etc. Thus, the authors conclude that a sense of purpose does not exclude the experience of retirement as a time for leisure and enjoying life; there seems to be time for both. Indeed, in forthcoming papers we will argue that the nature, the quality, and the quantity of any later life activity are important factors in well-being and other outcomes.

18.10 A New Face of Retirement

In short, baby boomers are indeed rewriting history to some extent. They do appear to be changing the face of retirement in that they are working longer, seeking more part-time and step-down types of arrangements, and transitioning to different types of jobs later in life; but these trends started developing in the 1950s, as pointed out by Laslett (1991) and Sorensen (2007). Many of the changes in retirement patterns and trends stem from increased longevity, but also health, shifts in the economy, and changes to pension systems. The fact that so many people are asking questions about how to spend their retirement years—beyond the usual added leisure and travel—may be relatively new and an additional signal that the face of retirement is changing. Most retirees are not reinventing themselves but are using well-honed skills of the past adapted to the retirement years and to structure their days (Nimrod & Kleiber, 2007). Rising retirement ages and longer working lives is definitely a continuing trend. However it is also important to note that life satisfaction is high among retirees who report great meaning and purpose in their lives. This underscores the importance of providing opportunities for more older adults to have such experiences.

18.11 Recommendations for the Next Decade

There may be still too much “passing the time away,” watching TV and other less meaningful or purposeful activities. We have argued that there are many barriers to being fully and meaningfully engaged, including outdated and age-segregated social institutions, along with deeply engrained ageism, and growing economic insecurity and health inequities (Morrow-Howell, Gonzales, James, Matz-Costa, & Putnam, 2018). Older people are presented with strong expectations for stepping back and more opportunities for leisure than they are with expectations and opportunities for ongoing vital involvement (Morrow-Howell, Hinterlong, & Sherraden, 2001). In 2014, the National Association of Social Workers launched the Grand Challenges Initiative for Social Work to promote social progress through social work research, teaching, and practice. *Advancing Long and Productive Lives* was selected as one of the 12 original grand challenges (Morrow-Howell et al., 2018). The challenge is to change work environments and employment policies to enable people to work longer if they need to or want to; to restructure educational institutions so that education occurs over the life course; to enable older adults to engage in volunteer and service work; and to support caregiving to facilitate involvement and reduce negative effects. To this end, we make these recommendations:

1. Expand efforts to provide information and resources to older adults who want to transition into or out of employment so that the Third Age can include meaningful engagement in line with the needs and preferences of the individual.

2. Create flexible and transitional employment arrangements through tax incentives and workplace policies.
3. Provide financial support to caregivers through the expansion of paid family and medical leave and legislative efforts such as the Family and Medical Insurance Leave Act and Social Security Caregiver Credit Act.
4. Increase civic service opportunities that would provide supplemental and alternative pathways for a stable life stage transition for individuals regardless of age.
5. Reduce the widespread discrimination and stereotyping about older adults to increase engagement and age-integration.
6. Test and scale up intergenerational programs that have the potential to alter health and economic trajectories of children, youth, and older adults.

18.12 Conclusion

The face of retirement is indeed changing. Structural factors—population aging, the shifting social contract of work and retirement, personal preferences and needs, advanced science, medicine and health—are shaping productive and nonproductive activities in later life. Baby boomers embody these changes; that is, they give a face to the public and private policies that are driving these structural changes. Baby boomers are contributing to these changes, although in many respects they are accelerating changes that began with previous cohorts in response to economic and other cultural shifts. The sheer size of this cohort changes the image of retirement in many respects. The extent to which the baby boom cohort will further change the face of retirement remains to be seen. We do know that, while there is great heterogeneity within this cohort, on average they are retiring later and working longer (Cahill et al., 2015). Some of them work differently by cutting hours or responsibilities or by phasing into retirement (Sweet, Pitt-Catsoupes, & James, 2016). There are advocacy groups of all types working with this cohort to help them find their way in the new era of extended lives and opportunities for work and other activities (e.g., AARP's Life Reimagined Program; Encore.org, Discovering What's Next), to name just a few. These groups still reach a very small minority of retirement-eligible adults. In our view, there is much work to be done to potentiate the considerable talents and skills of the 75 million baby boomers and the cohorts after them toward a brighter future for them and for all of society.

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Chapter 19

The Stickiness of Quality Work: Exploring Relationships Between the Quality of Employment and the Intent to Leave/ Intent to Retire



Tay McNamara and Marcie Pitt-Catsouphes

19.1 Introduction

Just after the turn of the century, when the “leading edge” of the baby boomers approached the age of 65, there was an increase in the public attention devoted to the work and retirement intentions of older adults. In part, this focal shift reflected concerns about the unprecedented numbers of older adults who were about to become eligible for public supports including Medicare and Social Security. In addition, some experts voiced worries about the economic fragility of older Americans who might struggle to support their households with the conventional “three-legged stool” set of strategies: savings/investments, Social Security, and private pensions. And, employers in some industry sectors expressed anxiety about possible labor market shortages if large numbers of older adults retired and if there were not sufficient numbers of qualified “replacement” employees (that is, early career workforce entrants) in sight. In response, researchers such as Munnell and Sass (2008) began to take a serious look at the options and benefits associated with voluntary extension of the labor force participation among older adults (see also OECD, 2018). While the arguments for working longer are multi-faceted, there was growing recognition that older adults who were able and wanted to work past the normative retirement age (62–65 years) could benefit from the financial rewards offered by employment (both income and possible access to continued employer-sponsored benefits).

T. McNamara (✉)

Center on Aging & Work, School of Social Work, Boston College, Chestnut Hill, MA, USA

e-mail: mcnamatd@bc.edu; tay.mcnamara@bc.edu

M. Pitt-Catsouphes

Boston College School of Social Work, Chestnut Hill, MA, USA

e-mail: pittcats@bc.edu

Some scholars and advocates have raised words of caution about new norms for the extension of the work lives of older adults. They point out that: (a) some older adults (including those who have worked in jobs that were physically demanding) might not be able to continue to work in their career occupations; (b) the declining health of some older adults can make it difficult for them to continue to work; (c) older adults who left the workforce early (whether as a result of voluntary early retirement or involuntary unemployment) often find it extremely difficult to change course and re-enter the workforce, in part due to age discrimination; and (d) the structure of many jobs and work environments do not seem to align well with the needs, priorities, and preferences of many older adults. This latter point stresses that while it might be possible for older adults to retain or find “some” job, the jobs that older adults are able to secure might not reflect the type of work arrangement that promotes their social, emotional, and physical health—in addition to their financial health. In this chapter, we present an argument with supporting evidence that job quality affects older adults’ intentions with regard to the transitions to retirement.

19.2 Literature Review

In this section of the chapter, we first consider ways that older adults might anticipate their “future selves,” using some of the key tenets of temporal self-appraisal theory. Survey data about employees’ expectations and behaviors with regard to the timing of their retirement are presented. We then consider the findings of research that has identified factors associated with the timing of retirement. At the end of this section, we summarize selected frameworks related to the construct of quality employment.

19.2.1 *Our Future Selves*

The concept of “intent to retire” focuses on ways that employees (particularly older adults) envision their “future selves” with regard to work. Temporal self-appraisal theory (e.g., Ross & Wilson, 2002) focuses attention on the ways that individuals place their self-assessments in the context of time, typically in ways that support positive self-appraisals in the present. Strahan and Wilson (2006) stress that the time context used for self-appraisal can include both “past selves” and “future selves.”

As noted by Peetz and Wilson (2008), the comparisons (and the appraisals) of “present selves” and “future selves” can be associated with goal-oriented behaviors. Hershfield (2011) discusses how perspectives of “future selves” are helpful to understand behaviors such as savings for retirement and possibly other decisions related to retirement transitions. This perspective of temporal self-appraisal theory

establishes a possible connection between older adults' experiences today (including both work and non-work experiences), their expectations about ways that the possible continuation of their worker role might affect their self-appraisals, and plans they are making for retirement decisions that will take place in the future (either in the proximal or distant future).

In 2016, the Gallup organization polled US workers about their expectations for the timing of their future retirements (Saad, 2016). The survey found that the average age of expected retirement was 66, with 23% expecting to retire before 62; 38% between 62 and 67; and 31% after 68; and with 8% unsure. In 1995, the average expected age of retirement was just 60 years (Saad, 2016).

Despite the anticipated associations between perceptions of our "future selves" and behaviors, studies have found that there is often a gap between the anticipated age of retirement and actual age of retirement, possibly reflecting life events that occur and resultant decision-making adjustments. The Employment Benefit Research Institute (Greenwald, Copeland, & VanDerhei, 2017) found that employees are "... more likely to say they expect to retire at age 70 or older... [than who actually do retire at 70 or older]. Nearly 4 in 10 (38%) of workers expect to retire at 70 or beyond, while only 4% of retirees report this was the case." The authors conclude that:

This difference between workers' expected retirement age and retirees' actual age of retirement suggests that a considerable gap exists between workers' expectations and retirees' experience. One reason for the gap between workers' expectations and retirees' experience is that many Americans find themselves retiring unexpectedly. (Greenwald et al., 2017, pp. 19–20)

19.2.2 Predictors of Retirement-Related Decisions

As suggested by perspectives of human and social ecology, we would expect that factors at the individual, family, organizational, and societal levels would affect the timing of retirement. Factors at all of these levels can either encourage or "force" people to sustain their current work-life patterns or they can encourage (or "force") people to make changes (either at home or at work), possibly including a transition into retirement (see Beehr, Glazer, Nielson, & Farmer, 2000). For the purposes of this chapter, we highlight five sets of factors that have been linked with retirement decisions.

Health Status A number of studies conducted in countries around the world have linked health declines with early retirement (e.g., Solem et al., 2016). Research with older adults in Denmark found a significant relationship between receiving a diagnosis of a medical condition and the timing of retirement (Gupta & Larsen, 2010). Olesen, Butterworth, and Rodgers (2012) found that poor physical health and poor mental health are associated with early retirement. One cross-national study found that the association between poor health and early retirement is stronger in the USA than in Australia (Sargent-Cox, Anstey, Kendig, & Skladzien, 2012).

Earnings, Household Income, and Wealth As anticipated, studies have found relationships between wealth and retirement as well as employees' access to health insurance and the timing of retirement (see Rogowski & Karoly, 2000). In the absence of employer-sponsored health insurance that extends into retirement, the threshold for Medicare eligibility tends to discourage voluntary retirement prior to that age. Congdon-Hohman (2015) reports that employees planning for retirement may also factor in their spouses' eligibility for Medicare. Mermin, Johnson, and Murphy (2007) indicate that lack of access to employer-sponsored retiree health benefits is one factor that can increase the likelihood of extending labor force attachment.

Employment Status of Spouse While there is some evidence that partners, husbands, and wives might make at least some of their retirement-related decisions as couples, a coordinated timing of retirement may be complicated for dual-earner couples if they are eligible for their public or private pensions at different times (for example, if there is an age difference between the two earners; see Johnson, 2004; O'Rand & Farkas, 2002).

Family Responsibilities and Personal Interests Although the nature of family responsibilities typically changes over the life course, the interactions of work and family roles have been well documented. Older adults might find that responsibilities associated with caring for grandchildren, adult children (for example, those who have disabilities or those who need financial assistance from their parents), spouses, and elderly parents have an impact on retirement decisions (see discussion in De Preter, Van Looy, Mortelmans, & Denaeghel, 2013). Lumsdaine and Vermeer (2015) report that the birth of a new grandchild increases the likelihood of retirement (although they do not report relationships between responsibilities for caregiving to those grandchildren and retirement behaviors). Szinovacz, DeViney, and Davey (2001) examine the impact of family relationships and report that intergenerational financial transfers (that is, financial contributions to children) as well as having children residing in the household were associated with lower likelihoods of retirement. Lilly, LaPorte, and Coyte (2007) report that older employees with significant eldercare responsibilities are likely to withdraw from the labor force compared to their colleagues.

Economic Trends and Industry Norms Research findings are mixed with the extent to which older adults may think about their "future selves" in the context of the "future economy." Some scholars have examined whether people who anticipate turbulent economic times ahead might become more risk averse and, therefore, report that they intend to work longer than they might otherwise have done (see Dudel & Mikko, 2017). However, Coile and Levine's historical analysis (2006) did not find evidence of this relationship, in part due to the small percentage of older adults having significant stock investments. While the effect of the macro economy might seem relatively small (see Gustman, Steinmeier, & Tabataba, 2012), McFall (2011) found relationships among wealth loss from 2008 to 2009 (the "Great

Recession”), optimism or pessimism about future economic trends and anticipated dates of retirement, with an average increase of 2.5 months in older adults (at least 40 years of age) expected retirement dates.

There may be norms and practices that develop within specific industry sectors within occupational groups and at certain workplaces. For example, De Preter, Mortelmans, and Van Looy (2012), analyzing data from the European Survey of Health, Ageing and Retirement in Europe, reported that older workers in the industrial and financial sectors retire earlier than those in the service sector.

19.2.3 *Quality of Employment*

Scholars have devoted significant attention to the relationships between factors at the so-called “micro levels” (for example, employees’ demographic information, family and household characteristics, etc.) and the “macro-levels” (including relevant public policy and economic trends and episodes). However, in light of current trends of older adults extending their labor force participation, additional attention needs to be focused on the relationships between employees’ work experiences and their intent to retire.

In the human resource management (HRM) literature, there is a stream of inquiry that examines the effect of employer-sponsored policies and programs on employees’ attitudes toward work, their productivity, and their overall well-being (see Edgar, Geare, Halhjem, Reese, & Thoresen, 2015). As we have discussed in other publications (e.g., Pitt-Catsouphes & McNamara, *in press*), scholars have articulated a number of different frameworks and theories to explain these relationships, paying particular attention to the dynamic interactions among employees’ abilities, interests, and competencies; job demands; and the range of resources that employees might access to respond to expectations at work and possible stress (see Demeroutik, Bakker, Nacheiner, & Schaufeli, 2001; Ilmarinen, 2009b; Karasek & Theorell, 1990).

The 2017 Guidelines for Measuring the Quality of Work Environment published by the OECD organizes 17 characteristics of the work environment into six clusters: (a) the physical and social environment (physical risk factors, physical demands, intimidation or discrimination at the workplace, social support at work); (b) job tasks (work intensity, emotional demands, task discretion or autonomy); (c) organizational characteristics (organizational participation and workplace voice, good managerial practices, task clarity, and performance feedback); (d) worktime arrangements (unsocial work schedule, flexibility of work hours); (e) job prospects (perceptions of job insecurity, training and learning opportunities, opportunity for career advancement); and (f) intrinsic aspects (opportunities for self-realization, intrinsic rewards). Warr (1994) proposes a framework of job quality that highlights job characteristics that help to explain variation in job satisfaction, including: autonomy and personal control, opportunities to use one’s skills, physical safety, task

variety, respect and status associated with the significance of work tasks, competitive compensation and benefits, the supportiveness of one's supervisor, clear communications about job expectations and performance, and a positive social environment at the workplace. Based on information gathered from workers age 40 and older in Australia, Oakman and Wells (2016) report that job satisfaction is negatively associated with the intended time of retirement.

Smyer, Besen, and Pitt-Catsouphes and Smyer and Pitt-Catsouphes (Smyer, Besen, & Pitt-Catsouphes, 2009; Smyer & Pitt-Catsouphes, 2007) highlight the financial and non-financial reasons associated with older adults' intentions to extend their work lives. It is possible to consider that the presence of these factors, such as work environments that structure positive social interactions, creates a "stickiness" that might foster the postponement of retirement or intended retirement (rather than a "slipperiness" toward a more precipitous retirement).

The Sloan Center on Aging & Work at Boston College adapts existing models of the quality of employment, focusing on those aspects of the work experience that employers have the capacity to strengthen if they want to improve employee well-being as well as employee performance: (1) promotion of constructive relationships at the workplace; (2) fair, attractive, and competitive compensation and benefits; (3) culture of respect, inclusion, and equity; (4) opportunities for training, learning, development, and advancement; (5) workplace flexibility, autonomy, and control; (6) provisions for employment securities and predictability; (7) opportunities for meaningful work; and (8) wellness, health, and safety protections at the workplace (Pitt-Catsouphes, McNamara, & Sweet, 2015; see also <http://www.bc.edu/research/agingandwork/about/qualityEmploy.html>). In previous studies, we have found that survey respondents—including those age 50 and older—are likely to report that each of these dimensions of the quality of employment are "moderately/very important" to them (Pitt-Catsouphes et al., 2015).

Constructive Work Relationships Over the past decade, there has been increasing awareness about the importance of social health. For people who have had full-time career jobs, workplace relationships can contribute to the size (and in some cases strength) of their social networks. The loss of social relationships can become a particular concern for older employees who worry about social isolation after they retire, especially if a significant proportion of their social relationships (at least their satisfying relationships) are workplace-based. Social isolation and extreme loneliness have been identified by some public health specialists as risk factors for both mental health and physical health (see Valtorta, Kanaan, Gilbody, Ronzi, & Hanratty, 2016). Having a supportive boss and having very good friends at work are associated with the level of job satisfaction of employees age 50 and older (Maestas, Mullen, Powell, von Wachter, & Wenger, 2017).

Fair, Attractive, and Competitive Compensation and Benefits Compensation and benefits represent the most tangible aspect of the employer–employee contract. Research conducted by Pitt-Catsouphes et al. (2015) found a statistically significant compared to the percentage of older men (87.6%) who report that this aspect of the

quality of employment is important to them compared to the men (79.5%). Data from the 2015 American Working Conditions Survey indicates that more than 80% employees (of all ages) say it is important to them to have a job that enables them to provide financial support to their families. Employees age 50 and older are more likely than their younger counterparts to indicate that pension and retirement benefits are important to them (Maestas et al., 2017).

Culture of Respect, Inclusion, and Equity Work roles can be a fundamental aspect of a sense of identity. Findings reported by Silver and Williams (2016) suggested that at least some career-centric older adults might postpone the transition to retirement.

Diversity experts have long noted that perceptions of respect, inclusion, and organizational fairness are associated with the level of employee engagement and job satisfaction (Pitts, 2009). Many of the assumptions and concepts about respect, inclusion, and dignity that have been used to understand the work experiences of employees in specific protected groups (for example, people from underrepresented racial and ethnic groups, women, people with disabilities) can also help provide insights about older employees who work in age-diverse teams. Pitt-Catsoupes et al. (2015) found that the male respondents age 50+ to one survey were significantly less likely to report that the culture of respect, inclusion, and equity was “moderately or very important” to them (69.5%) compared to their female counterparts (83.6%).

Opportunities for Training, Learning, Development, and Advancement Human resource management (HRM) experts recognize that quality training programs that strengthen employees’ job-relevant competencies and skills offer benefits both to the employees and to the organization. Researchers have found relationships between employees’ access to training and career development opportunities and levels of job satisfaction (see Grawitch, Gottschalk, & Munz, 2006).

Survey data indicate that younger employees are more likely than their older counterparts to report that training and development are “very important” to them (e.g., Maestas et al., 2017). Discussing the findings of one study, Pitt-Catsoupes et al. (2015) report a gender difference in the importance that older workers attributed to training and development. Women age 50+ (80.9%) were more likely than their male counterparts (71.5%) to indicate that training, development, and advancement were moderately or very important to them. Importantly, the ability to acquire skills was a significant predictor of job satisfaction among workers age 50 and older in the 2015 American Working Conditions Survey. Unfortunately, this study also found that older employees are somewhat *less* likely to report that they have jobs that allow them to learn “new things” than are younger employees (Maestas et al., 2017).

Workplace Flexibility, Autonomy, and Control There are several ways to consider how jobs and work tasks are structured. The Center on Aging & Work focuses on two aspects of this quality of employment: (a) flexible work policies that include options available to employees and their supervisors for the scheduling of work time

and choices about the place of work; and (b) the predictability of when and how much an employee is expected to work and the extent to which employees have input into those decisions.

The term “workplace flexibility” often refers to formal and informal work arrangements that allow employees and their supervisors some discretion in work structures including: *when* an employee works (that is, their work schedules which could be standard or non-standard hours that are either “fixed” or could vary under some specified circumstances); *where* an employee works (for example, at a satellite location or working remotely from home); and *how much* an employee works (for example, reduced-hours or part-time work; Hill et al., 2008). This aspect of the quality of employment aligns with the job demands, control, and resources models of job characteristics (see Karasek & Thorell, 1988). Maestas et al. at RAND found that less than one in five (17.3%) of employees age 50+ report that they can determine their own work hours (Maestas et al., 2017, p. 24). Pitt-Catsouphes et al. (2015) report a positive relationship between older workers’ reports of work engagement and their satisfaction with their access to workplace flexibility, autonomy, and control.

The term “worktime predictabilities” focuses our attention on the extent to which employees can anticipate (and make plans for) upcoming work schedules and the total number of work hours in a specified period (such as during a work week or work month). Hourly wage workers—particularly those with family caregiving responsibilities—can find it extremely stressful if work schedules change from week to week, often with little or no notice. In addition, expectations for working extra hours can introduce physical fatigue. Furthermore, employees who are assigned fewer hours expected can result in financial stress. Lambert, Halely-Locke, and Henley have contributed significantly to this body of knowledge (Lambert, Halely-Locke, & Henley, 2012).

Provisions for Employment Security and Predictability Over the course of their work careers, many baby boomers found that their employers changed the narrative about the implied employer–employee contract, replacing notions of job security with ideas about employment security. The idea of job security suggests that employees are likely to continue to have a job with their current employer for the long term (but not necessarily the same job) unless there is a serious breach of contract (for example, consistently poor performance) or unless the company moves, is purchased, or is dissolved. In contrast, employment security is typically understood to be a goal for employees who are expected to seek opportunities to develop portable competencies and skills that could help them secure employment at different organizations if they leave their current employer (voluntarily or not).

Several recent historical events (including the emergence of the gig economy and contingent work arrangements, technological innovations that reduce demand for some types of labor due to increased efficiencies, and the globalization of certain sectors of the economy that are associated with off-shoring of labor) have re-focused researchers’ attention on the importance of employment security. The meaning and

significance of job security can be quite different for older workers than younger workers. In part, this is related to theories that connect age to perceptions of “time left” (e.g., Carstensen, 2006). In the context of work and the timing of retirement, reflections about “time left” is less on expected life span than on career sustainability. While some younger workers might anticipate that they have both time and resilience to transition to new jobs (whether they are unemployed by choice or involuntarily), older workers might worry about ageism that could constrain opportunities for moving to a new situation. Pitt-Catsouphes et al. (2015) found that satisfaction with an employer’s provisions for employment security and predictability was related to older workers’ reported levels of engagement.

Opportunities for Meaningful Work The construct of meaningful work has been defined in different ways. Some scholars have focused on person-job fit and evaluated the extent to which job assignments offer employees opportunities to leverage their experience, skills, and competencies. This perspective associates “meaningfulness” to the contributions that employees can make to overarching organizational goals. Other researchers connect the construct of meaningfulness to personal values and intrinsic rewards or to a greater social purpose that may extend beyond meeting profit objectives of the bottom line (see discussion in Lavine, 2012, pp. 54–55). Several researchers have begun to examine the phenomenon of “encore work” among older adults who pursue social-purpose work (paid or unpaid) during late career or retirement (see Moen, 2016; Pitt-Catsouphes, McNamara, James, & Halvorsen, 2017).

The 2015 American Working Conditions Survey (Maestas et al., 2017) found approximately one fourth of all employees felt it was “very important” that their job was “morally, socially, personally, or spiritually significant” (p. 50). Furthermore, older adults are more likely to report that their work provides them with a “feeling of doing useful work,” with a higher percentage of workers age 50 and older stating this (71.1%) compared to those under the age of 35 (56.2%) or between 35 and 49 (59.1%). Research has found a relationship between perceived meaningfulness of work and job satisfaction among employees 50 and older (Maestas et al., 2017) as well as relationships with the level of older workers’ work engagement (Pitt-Catsouphes et al., 2015).

Wellness, Health, and Safety Protections at the Workplace Wellness at the workplace can be of particular concern to employees who are exposed to risky and stressful work situations, as well as those who have health conditions or are at risk for declining health. Ilmarinen (2009a, 2009b) and his colleagues have developed the concept of “workability” as one way to think about the physical demands (as well as emotional and cognitive demands) associated with specific jobs at particular workplaces. From this perspective, it is possible to consider how changes in the job or the work environment might reduce the pressure on some older employees to retire. Oakman and Wells (2016) report that employees with lower levels of self-reported workability are more likely to report that they intend to retire earlier.

One of every five (19.8%) employees age 50 and older state that it is important to them that their jobs are not physically demanding (compared to 14.7% of those under 50; Maestas et al., 2017). A study conducted by the Center on Aging & Work at Boston College found that while approximately three fourths of women age 50+ indicated that wellness, health, and safety protections were important to them, only 59.6% of men in that age group agreed (Pitt-Catsouphes et al., 2015).

19.3 Research Questions

For the study discussed in this chapter, we focused on two research questions:

- Which aspects of quality of employment are associated with variation in employees' intent to retire?
- To what extent does employees' reported well-being moderate the relationship between their assessments of the quality of employment and their intent to retire (ages 50+ only)?

19.4 Methods

From 2012 to 2013, the Sloan Center on Aging & Work conducted a randomized intervention project, The Time and Place Management Study, at a large healthcare organization ("ModMed"). The overall study entailed a randomized control trial of the management of time and place at the workplace. The partner organization (which we named "ModMed") was motivated to participate in the intervention study due to its commitment to quality employment and its desire to be recognized (internally and externally) as a "good place to work."

Large national and international surveys can provide important insights about emerging trends as well as new understandings about the employees' experiences. However, they are not typically designed to gather information at the organizational level about the workplace environment. Studies such as the Time and Place Management Study, which we discuss in this chapter, offer opportunities to gather information from a large number of employees within a single firm. This approach helps to "keep the organizational context" more or less constant (see discussion in Kowalski & Loretto, 2017).

19.4.1 Sample

For this study, we used a subsample of data from the baseline survey (September–October 2012) and the wave 3 survey (March–April 2013) from the Time and Place Management Study to explore the relationships between the eight dimensions of the

quality of employment and employees' intent to stay or intent to retire. To be included in the sample, respondents needed to: (a) have participated in the baseline survey ($n = 3950$); (b) as employees rather than managers ($n = 3545$); (c) at ages 22 to 65 ($n = 2824$); (d) have provided follow-up data at wave 3 (the subsequent employee survey; $n = 1818$); (e) have had valid data on the intent to retire/leave variables at follow-up ($n = 1607$); and (f) have valid data on predictors at baseline ($n = 1606$).

The respondents worked for a large healthcare organization; recognizing the gendered nature of many healthcare occupations, we were not surprised that the respondents were overwhelmingly female (84%). One third (36.4%) of the respondents were ages 50–65.

19.4.2 Measures

Dependent Variable The dependent variable focused on intent to stay with the current employer and asked employees, “How long do you think you will continue to work for [name of employer]?” The response options included: 5 years or less (I will probably leave before I retire); more than 5 years (but I will probably leave before I retire); until I retire; indefinitely—I do not plan to retire.

A second question, included in the descriptive statistics, focused on employees' expectations for their work situations 5 years in the future, “Thinking ahead 5 years, what do you expect your work situation to be?” The response options included: working at my current job for [current employer]; working at a new full-time job for [current employer]; working at a new part-time job for [current employer]; working at a new full-time job with another organization; working a new part-time job with another organization; working as a temporary worker hired for projects; self-employed/independent contractor or consultant; retired; full-time homemaker; out of the labor force for another reason.

Predictors To measure satisfaction with quality of employment, we used a series of Likert-type items that asked respondents to rate “How satisfied are you with the following at [your place of work]?” using a response scale from 1 “Very dissatisfied” to 6 “Very satisfied.” Items included covered eight dimensions of quality of employment:

- Promotion of constructive relationships at the workplace (1 item): satisfaction with “Clear and effective promotion of constructive relationships.”
- Fair, attractive, and competitive compensation and benefits (2 items): satisfaction with “Your compensation” and “Benefits that have monetary value such as retirement benefits, paid time off, paid sick days or medical leave, and health insurance.”
- Culture of respect, inclusion, and equity (1 item): satisfaction with “Clear and effective promotion of respect, inclusion, and diversity.”

- Opportunities for development, learning, and advancement (1 item): satisfaction with “Opportunities for learning and development.”
- Wellness, health, and safety protections workplace (1 item): satisfaction with “Health and wellness resources.”
- Flexibility, autonomy, and control (1 item): satisfaction with “Provision of flexible work options that can adjust when and where work is performed.”
- Provisions for employment security and predictabilities (2 items): satisfaction with “Your job security” and “Clear and effective information in respect to employment security.”
- Opportunities for meaningful work (1 item): satisfaction with “Opportunities to engage in meaningful work.”

Moderators and Controls For our multivariate analyses, we controlled for age, gender, care responsibilities (i.e., whether reported responsibilities for child under 19 years), elder care responsibilities, and the job type (i.e., whether the respondent provided direct health care as a job responsibility). Furthermore, since the intervention for the overall Time and Place Management study was implemented between baseline and wave 3, we controlled for the intervention.

In light of previous findings that quality of employment was associated with employee well-being (Pitt-Catsouphes & McNamara, [in press](#)), we explored whether measures of well-being might moderate relationships between employees’ perceptions of the quality of employment and intent to stay or intent to retire. The composite measure of well-being focused on two of the dimensions of well-being: physical and psychological wellness (see discussion in Danna & Griffin, 1999). For each dimension, we asked respondents “How would you rate your [physical/mental] health these days, on a scale from 0 ‘Worst possible health’ to 10 ‘Best possible health.’”

19.4.3 Analyses

We conducted univariate analyses to gain insights about our sample and bivariate analyses to assess the relationships among the eight dimensions of the quality of employment. First, we used regression analyses to determine the extent to which the quality of employment variables explained variance in employees’ reports of their intent to stay and intent to retire. We then ran a separate regression analysis to examine these relationships among those employees age 50 and older.

19.5 Findings

Descriptive Statistics As shown in Table 19.1, respondents under the age of 50 were more likely to indicate that they would be in their current job or in a new full-time job at the same organization in 5 years, compared to those 50–65 years. About

Table 19.1 Thinking ahead 5 years, what do you expect your situation will be?

	22–49 (<i>n</i> = 1021)	50–65 (<i>n</i> = 585)	Total (<i>N</i> = 1606)
<i>Intends to stay</i>			
Working at my current job at [organization] ^a	44.1	56.9	48.8
Working at a new full-time job at [organization] ^a	31.7	12.5	24.7
Working at a new part-time job at [organization]	3.9	3.8	3.9
<i>Intends to leave</i>			
Working at a new full-time job with another organization ^a	12.6	3.9	9.5
Working at a new part-time job with another organization ^a	2.2	0.7	1.6
Working as a temporary worker hired for projects	0.0	0.2	0.1
Self-employed/independent contractor or consultant	1.1	1.0	1.1
Operating my own business ^a	1.6	0.2	1.1
<i>Retired</i>			
Retired ^a	0.2	20.2	7.5
<i>Omitted</i>			
Out of the labor force for another reason	0.9	0.7	0.8
Full-time homemaker ^a	1.8	0.0	1.1

^aAge groups are significantly different at $p < .05$ or less, as determined by a chi-square test

one fifth (20.2%) of the respondents between 50 and 65 years of age anticipated that they would retire in the next 5 years.

Table 19.2 shows frequencies of respondents who were satisfied with quality of employment. Overall, most respondents were moderately or very satisfied with each aspect of quality of employment. They were most likely to be moderately or very satisfied with job security (82.4%), opportunities to engage in meaningful work (81.4%), and health and wellness (79.0%), and least likely to be satisfied with compensation (57.0%) and flexible work options (59.2%).

Generally, when differences in satisfaction were significant between age groups, older workers were slightly more likely to be satisfied. For instance, 71.2% of workers ages 50–65 were satisfied with clear and effective promotion of constructive relationships compared to 67.6% of those ages 22–49. Differences between older and younger workers were more pronounced for compensation and benefits that had monetary value. Overall, 70.9% of older workers were moderately or very satisfied with benefits, compared to 61.0% of younger workers. Job security was the only dimension for which younger workers were slightly but significantly more likely to be satisfied than older workers. Differences in satisfaction with learning and development and flexible work options were not significant.

Table 19.2 Quality of employment (*N* = 1606^a)

	Age group	Very dissatisfied	Moderately dissatisfied	Somewhat dissatisfied	Somewhat satisfied	Moderately satisfied	Very satisfied	Moderately + very satisfied
Clear and effective promotion of constructive relationships ^b	22–49	2.7	5.1	7.8	16.9	32.3	35.2	67.6
	50–65	3.4	5.0	5.7	14.7	28.2	43.0	71.2
	Total	2.9	5.0	7.0	16.1	30.9	38.0	68.9
Compensation ^b	22–49	5.8	8.3	12.9	20.3	32.6	20.1	52.8
	50–65	5.9	6.6	6.7	16.2	29.9	34.7	64.6
	Total	5.8	7.6	10.6	18.9	31.6	25.4	57.0
Benefits that have monetary value ^b	22–49	2.6	5.3	10.5	20.7	29.0	32.0	61.0
	50–65	2.6	3.8	7.2	15.5	31.0	39.9	70.9
	Total	2.6	4.8	9.3	18.8	29.7	34.9	64.6
Clear and effective promotion of respect, inclusion, and diversity ^b	22–49	3.1	4.7	7.3	15.5	30.1	39.3	69.4
	50–65	4.5	4.5	5.2	13.6	25.5	46.9	72.4
	Total	3.6	4.6	6.5	14.8	28.4	42.0	70.5
Opportunities for learning and development	22–49	2.9	4.8	8.9	22.4	29.9	31.0	61.0
	50–65	3.5	4.5	7.9	19.0	28.2	37.0	65.1
	Total	3.1	4.7	8.6	21.2	29.3	33.2	62.5
Provision of flexible work options that can adjust when and where work is performed	22–49	4.3	5.9	10.0	22.8	26.7	30.3	57.0
	50–65	3.6	5.8	8.8	18.7	26.4	36.8	63.2
	Total	4.0	5.8	9.6	21.3	26.6	32.7	59.2
Your job security ^b	22–49	1.1	2.4	3.1	10.3	26.1	57.0	83.1
	50–65	2.4	3.1	2.8	10.5	22.9	58.4	81.2
	Total	1.6	2.6	3.0	10.4	24.9	57.5	82.4
Clear and effective information in respect to employment security ^b	22–49	2.2	3.7	8.0	17.4	34.0	34.7	68.6
	50–65	3.3	3.0	6.3	18.0	27.6	41.9	69.5
	Total	2.6	3.4	7.4	17.6	31.6	37.3	68.9

(continued)

Table 19.2 (continued)

	Age group	Very dissatisfied	Moderately dissatisfied	Somewhat dissatisfied	Somewhat satisfied	Moderately satisfied	Very satisfied	Moderately + very satisfied
Opportunities to engage in meaningful work ^b	22–49	1.1	2.1	4.1	12.9	28.5	51.3	79.8
	50–65	1.3	2.1	2.9	9.5	21.1	63.2	84.3
	Total	1.2	2.1	3.6	11.7	25.8	55.6	81.4
Health and wellness resources ^b	22–49	1.0	1.3	2.7	17.3	29.4	48.4	77.8
	50–65	1.2	1.8	3.4	12.6	24.4	56.6	81.0
	Total	1.1	1.5	2.9	15.6	27.6	51.3	79.0

^aBivariate statistics are based on unimputed data. Sample sizes for each variable range from 1472 to 1600

^bAge groups are significantly different at $p < .05$ or less, as determined by a chi-square test

Table 19.3 Multinomial logistic regression predicting intent to stay/retire (ages 22–65)

	5 years or less	More than 5 years	Indefinitely
Your job security	-0.040	0.008	0.322 ^a
Your compensation	-0.173 ^a	-0.110	-0.216 ^a
Benefits that have monetary value	-0.096	-0.102	0.107
Opportunities for learning and development	-0.072	-0.003	0.209
Health and wellness resources	0.096	0.141	0.059
Opportunities to engage in meaningful work	-0.228 ^a	-0.206 ^a	-0.204
Clear and effective information in respect to employment security	-0.216 ^a	-0.001	-0.168
Provision of flexible work options that can adjust when and where work is performed	-0.050	0.001	-0.086
Clear and effective promotion of respect, inclusion, and diversity	0.062	-0.108	0.062
Clear and effective promotion of constructive relationships	-0.057	-0.023	-0.100

Note: Reference is “Until I retire.” All dimensions of quality of employment are standardized. Controls included but not shown to conserve space are: job type, age in years, whether female, whether children under 19, and whether eldercare responsibilities

^a $p < .05$

The physical and mental scores (not shown) could range from 1 (worst possible health) to 10 (best possible/perfect health). Overall, the scores were skewed to the positive in this sample. Nearly 8 of every 10 employees had physical health scores of “7” or higher. Interestingly, in this sample, compared to their younger counterparts, higher percentages of those age 50–65 had relatively high physical health scores (that is, scores of “8” or “9”). The differences by the two age groups in the distribution of the physical health scores were statistically significant. As with the physical health self-assessments, the mental health scores for this sample skewed toward the positive, with over half (54.6%) reporting scores of “9” or “10.”

Multivariate Models In a set of multinomial logistic regression analyses predicting intent to retire, we addressed two separate questions:

1. Which aspects of quality of employment are associated with variation in employees’ intent to retire?
2. To what extent does employees’ reported well-being moderate the relationship between their assessments of the quality of employment and their intent to retire (ages 50+ only)?

Table 19.3 shows the results of a multinomial logistic regression predicting intent to retire, including all controls except well-being and including all aspects of quality of employment (standardized) together. Compared to “until I retire,” employees who were less satisfied with compensation ($b = -0.17$, $p < .001$), opportunities to engage in meaningful work ($b = -0.23$, $p < .05$), and clear and effective information in respect to employment security ($b = -0.22$, $p < .05$) were more likely to expect

Table 19.4 Multinomial logistic regression predicting intent to retire (ages 50–65)

	5 years or less	More than 5 years	Indefinitely, I do not plan to retire	
Well-being	−0.105	0.136		0.220
Compensation and benefits	−0.442	−0.574	^a	−0.449 ^b
Well-being * compensation and benefits	0.287	0.495	^b	0.030
Opportunities for learning and development	−0.152	0.336		0.142
Well-being * opportunities for learning and development	−0.062	−0.261		0.027
Clear and effective promotion of respect, inclusion, and diversity	−0.308	−1.080	^a	0.118
Well-being * clear and effective promotion of respect, inclusion, and diversity	0.064	−0.218		0.092

Note: Reference is “Until I retire.” All dimensions of quality of employment are standardized. Controls included but not shown to conserve space are job type, age in years, whether female, whether children under 19, whether eldercare responsibilities, and additional quality of employment measures (shown in Table 19.3). Well-being is calculated as the mean of the physical and mental well-being scores. Compensation and benefits are calculated as the mean of the compensation score and benefits score. Additionally, all quality of employment measures and well-being are standardized to aid interpretation

^a $p < .05$

^b $p < .10$

to stay 5 years or less. Lower satisfaction with meaningful work was also associated with intent to stay more than 5 years, but not until retirement.

Table 19.4 shows a multinomial logistic regression including only respondents ages 50–65. This exploratory analysis included only interaction terms with well-being significant at $p < .05$ in preliminary models. We found that among older workers, well-being moderates the relationship between satisfaction with compensation and intent to turnover. At the mean of well-being, satisfaction with compensation is associated with a lower risk of intended turnover within 5 years (as opposed to remaining with the organization until retirement). At lower well-being (−1 standard deviation), the relationship between compensation and intended turnover within 5 years is more strongly negative. At higher well-being (+1 standard deviation), the relationship between compensation and intended turnover within 5 years is close to 0.

19.6 Conclusion

It has been complicated to conduct comprehensive research about older adults’ intent to retire, in part because the decision to transition into retirement reflects the interaction of a number of different factors at the individual, family, organizational, and societal levels. However, the findings of our exploratory study suggest that it is important that older adults—at least those who are able to remain in the labor force

and who want to do so—have opportunities to work at “quality” jobs that “fit” with needs and priorities. Quality jobs can reduce the numbers of older adults who slip into retirement even though they may have wanted to work longer. Our results suggest that this factor is particularly important for older adults who are vulnerable in terms of physical and mental well-being. For those with lower levels of well-being, compensation and benefits are more important in reducing turnover.

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Part V
Health and Wellness Issues

Chapter 20

The Intersection of Family Caregiving and Work: Labor Force Participation, Productivity, and Caregiver Well-Being



Richard Schulz

Nearly 18 million family caregivers—broadly defined as relatives, partners, friends, or neighbors—provide care and support to older adults because of limitations in their physical, mental, or cognitive functioning (Schulz & Eden, 2016). Millions more provide care and support to younger individuals with serious illnesses and disabilities. Family caregivers arrange and attend medical appointments, participate in routine and high-stakes treatment decisions, coordinate care and services, help with daily tasks such as dressing and bathing, manage medicines, obtain and oversee the use of medical equipment, and ensure that needs for food and shelter are met. Family members have always been the primary source of support and assistance to older parents, grandparents, and other family members during times of illness and when they can no longer function independently.

Middle-aged women at the peak of their earning power, many of whom are employed, provide the majority of care to older disabled relatives. The increasing labor force participation of women along with the increasing demand for care raises important questions about how effectively and at what cost the roles of caregiver and worker can be combined. The senior population in the USA is expected to grow to 70 million in 2035, with largest increases expected for the oldest old, who have the highest need for care. Female labor force participation in the USA increased from 34% in 1950 to 57% in 2016 and is only 11% lower than male labor force participant (Bureau of Labor Statistics, 2017). There is also an increasing need and preference of individuals to continue working after traditional retirement years. The rate of labor force participation among individuals aged 65 and older increased from 12% in 1996 to 19% in 2016 (Toossi & Torpey, 2017). The convergence of these factors in the decades ahead poses major challenges to our society's ability to provide adequate care for the aging baby boomers.

R. Schulz (✉)

Department of Psychiatry, University Center for Social and Urban Research,
University of Pittsburgh, Pittsburgh, PA, USA
e-mail: schulz@pitt.edu

In 2011, half of the estimated 18 million caregivers of older adults (8.7 million or 50.3%) in the United States worked either part or full time (Schulz & Eden, 2016). The effects of combining work and caregiving on caregivers, their disabled relatives, and business and industry have emerged as an important research topic in the last two decades. The goal of this chapter is to address key issues in the literature on caregiving and employment, including the reciprocal effects of work and caregiving, the extent to which work moderates the caregiving experience, and the economic impact of caregiving on caregivers and employers. Also discussed are recommendations for policy and research.

20.1 Labor Force Participation

How does family caregiving affect employment decisions? Theoretically, caregiving and work could be positively correlated, but there is little support for the idea that caregiving causes people to enter the work force or increase their working hours because both activities are time intensive and, therefore, compete with each other. A negative association between caregiving and work is supported by the competing demands perspective, which argues that time allocation is a zero-sum game where spending time on one task necessarily removes it from the other. Even so, a negative association between caregiving and work could be causally explained in two ways: (a) care is time consuming, making it difficult to combine with regular employment; as a result caregivers quit their jobs or reduce hours worked to provide care to the person in need; and (b) unemployed or part-time workers have more time available; as a result they are more likely to become caregivers.

The literature assessing the relationship between caregiving and work is extensive, but not conclusive (Bauer & Sousa-Poza, 2015; Lilly, Laporte, & Coyte, 2007; Van Houtven, Coe, & Skira, 2013). For example, Lilly et al. (2007) reviewed 34 studies on caregiving's effects on labor force participation published between 1986 and 2006 and found no convincing evidence that caregivers showed generally lower levels of employment. This could in part be due to selection factors such that individuals who are less attached to the labor force are more likely to take on the caregiving role (Michaud, Heitmueller, & Nazarov, 2010). When negative relationships between caregiving and work are found, they tend to be small, with caregivers having a 1–5.8% lower probability of employment (Bauer & Sousa-Poza, 2015). In contrast, cross-sectional targeted caregiver surveys report much higher employment impact. For example, the National Alliance for Caregiving (NAC) and AARP Public Policy Institute survey of caregivers reports that nearly 17% of caregivers left their jobs because they could not afford to hire paid help (Feinberg, 2016).

Caregiving can also affect retirement decisions. One study found that wives caring for husbands have retirement odds five times greater than non-caregiving wives, but find little evidence that men or women caring for parents or parents-in-law experience faster transitions to retirement (Dentinger & Clarkberg, 2002). However, they caution against overgeneralizing these results because of the biased sample of

women included in the study. A cross-sectional survey of Canadians also found an association between caregiving and retirement, indicating that higher intensity caregivers were two to three times more likely to be fully retired than non-caregivers. Van Houtven et al. (2013) also found that the probability of being retired was higher among US women, but only by 2.3–2.4 percentage points.

Overall, the effects of caregiving on labor force participation are small. When they do occur, they tend to be driven by the intensity and type of care required by the care recipient. High intensity personal care and/or being the primary caregiver are most likely to have a negative impact on labor force participation (Nguyen & Connelly, 2014).

20.2 Work Hours

Evidence linking caregiving to reduced work hours is more consistent, showing small but reliable negative effects. At the high end, Feinberg (2016) reports that 14% of caregivers reduce work hours, and 49% go in late, leave early, or take time off. These rates are highest among primary caregivers, who live with the care recipient, experience high burdens of care, and perform complex medical/nursing tasks. Studies based on large population-based sample report smaller effects. For example, in the National Study of Caregiving [NSOC] (2011), only 12% reported missing work to help the care recipient (see Fig. 20.1). Kotsadam (2011) finds that caregivers have 2–3% fewer working hours compared to non-caregivers. A similar effect is reported by Van Houtven et al. (2013), who find that caregivers providing at least 100 h of care over the previous 2 years work 3 h less per week than non-caregivers. Using data from the German Socio-Economic Panel Study from 2001 to 2011, Meng (2013) also reports small effects. Men providing in-home care reduced work hours by 48 min a week and women by 35 min a week. Lilly, Laporte, and Coyte (2010) find no overall effects on working hours; however, when they assess the effects of high intensity caregiving (15–20 h per week) a negative effect emerges.

20.3 Productivity and Wages

Caregiving can also interfere with work performance leading to fewer promotions, taking on less demanding jobs, or turning down promotions. All of these scenarios result in reduced wages. Feinberg (2016) reports that 7% of caregivers receive warnings about performance and/or attendance, which in turn could affect opportunities for promotion, and that 5% of caregivers report turning down promotions because of caregiving responsibilities. However, empirical evidence on direct wage effects in large population-based studies is inconclusive, with some studies finding that caregivers earn lower wages (Bittman, Hill, & Thomson, 2007; Heitmueller & Inglis, 2007) and others finding no or very small effects (Lilly et al., 2010; Van

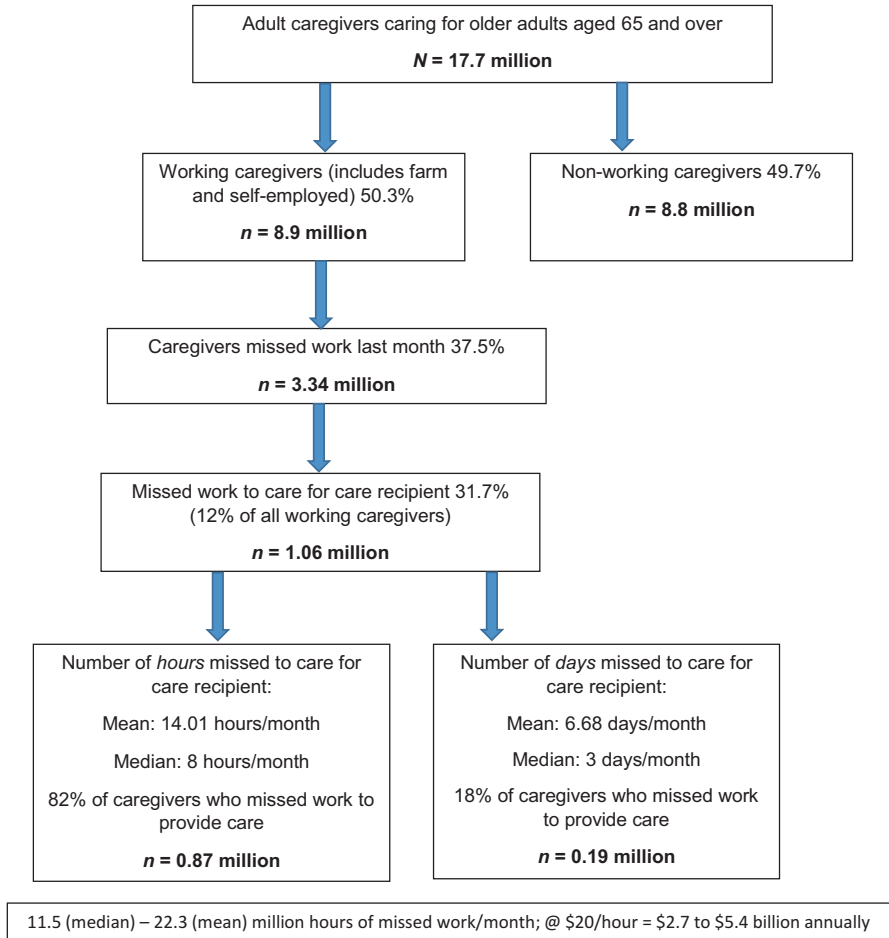


Fig. 20.1 Proportion and number of employed caregivers who missed work during last month to provide care to disabled older adult (NSOC, 2011)

Houtven et al., 2013). Carmichael and Charles (2003) find that wages for caregivers are 18% lower for male caregivers and 9% lower for female caregivers, but only for those who provide more than 10 h of care per week. Heitmueller and Inglis (2007) report wage reductions of 3% attributable to caregiving status in an English sample. In a large European survey of 120,000 individuals over the age of 50 (Survey of Health, Ageing and Retirement in Europe), no evidence was found for reduced wages (Bolin, Lindgren, & Lundborg, 2008). A similar result was reported by Lilly et al. (2007) for their Canadian sample.

The findings summarized above stand in sharp contrast to the frequently cited MetLife Study of Caregiving Costs to Working Caregivers (MetLife, 2011), which claims that the total estimated aggregate lost wages, pension, and Social Security

benefits of caregivers of parents is nearly \$3 trillion, and the cost impact of caregiving on the individual caregiver in terms of lost wages and Social Security benefits equals \$324,044 for women and \$283,716 for men. These findings are based on data from the Health and Retirement Survey and “other sources” including an earlier questionable MetLife 2011 report. Given the lack of peer review and lack of transparency regarding methods used to generate these findings, we must be skeptical about them.

20.4 Reconciling Differences in the Literature on Caregiving and Work

The effects of caregiving on entering and leaving the workforce, number of hours worked, and wages are mixed. This variability in outcomes can in part be explained by the study methodology (e.g., cross-sectional vs. longitudinal panel studies, sampling strategies, and analytic methods used), where data were collected, gender, residency status of the caregiver vis-à-vis the care recipient, and intensity of caregiving. Cross-sectional studies using targeted sampling strategies with univariate analyses tend to report larger negative effects across the board. Representative sample multivariate panel studies, which are better equipped to identify causal relations between caregiving and work-related outcomes, show smaller effects and sometimes no effects. That said, when subgroups of caregivers are examined, we do find consistent small to moderate negative effects across most studies for female caregivers who live with the care recipient and provide high intensity personal or medical/nursing care. These negative effects also vary by location such that countries with more extensive health and long-term care support systems (e.g., northern Europe) report fewer negative impacts than countries with lower levels of support (e.g., southern Europe).

20.5 Work, Caregiving, and Well-Being

The vast majority of the caregiving literature has focused on the nature of caregiving demands and their impact on caregiver burden and physical and mental health. This literature has documented significant psychiatric and physical morbidity among caregivers exposed to high levels of chronic caregiving stress. A subset of this literature has focused on positive and negative spillover of work into the domain of caregiving and job characteristics that moderate the relationship between caregiving demands and caregiver well-being (Neal & Hammer, 2007; Schulz & Eden, 2016; Stephens, Townsend, Martire, & Druley, 2001).

Two opposing models have been proposed to explain the effects of multiple roles on well-being outcomes. One perspective (scarcity hypothesis, depletion perspective,

role conflict theory) argues that multiple roles deplete limited energy and resources resulting in adverse health outcomes for individuals who are employed and provide care. The second perspective (expansion hypothesis, role enrichment hypothesis, positive spillover effects) asserts that benefits accrue to people who operate in multiple roles or domains because they increase opportunities for prestige, recognition, and financial reward, which in turn can bolster the individual's self-concept and well-being (Bainbridge, Cregan, & Kulik, 2006; Cannuscio et al., 2004; Neal & Hammer, 2007). The positive experiences within one role have the potential of spilling over to the other role or buffering the negative aspects of the other role.

Support for both perspectives can be found in research on caregiving and work. Consistent with the scarcity or role conflict hypotheses, several early studies showed that caregivers who combine family care with work responsibilities report higher levels of physical and emotional stress (Brody, 1985; Enright Jr & Friss, 1987; Meisenheimer, 1990; Neal, Chapman, Ingersoll-Dayton, & Emlen, 1993; Stueve & O'Donnell, 1989). In addition, a study of midlife women showed that, when considering their other roles (e.g., mother, wife, employee), the largest proportion of women (38%) identified the employee role as the one that conflicted most with caregiving (Stephens et al., 2001). In research focused specifically on role spillover, caregivers report that responsibilities at work frequently made them impatient or irritable when assisting a parent and also made it difficult to enjoy caregiving (Stephens, Franks, & Atienza, 1997). A more recent cross-sectional study of Canadian workers showed that caregivers reported higher levels of psychological distress than non-caregivers (Glavin & Peters, 2015). These effects were more pronounced among women than men.

On the other hand, Martire, Stephens, and Atienza (1997) found protective effects of full-time employment for women involved in parent care consistent with the expansion hypothesis. That is, higher caregiving stress was not associated with poorer physical health and emotional well-being for daughters who worked more than 35 h per week, and this finding was not due to less care provision by full-time workers. Similar results were reported in a recent population-based study of Norwegian caregivers (Hansen & Slagsvold, 2015) who found no relationship between well-being and employment status among men or women caregivers caring for a relative outside their home. Only in-home caregiving was related to lower levels of well-being among part-time workers. Skaff and Pearlin (1992) also found that caregivers who were involved in an outside work role experienced significantly less stress than caregivers who were not employed. The former reported greater self-worth, more personal satisfaction, and greater ability to combat fears of inadequacy. In their review of this literature, Martire and Stephens (2003) conclude that while parent care and employment often conflict with one another, occupying both roles can also be beneficial for the health of adult daughters. The positive effects of work on caregiver well-being may be due to respite or distraction from caregiving, or from higher pay and benefits associated with full-time work, which enables outsourcing of some tasks and social support from work colleagues. In addition, women with highly rewarding jobs may be buffered from the stress of caregiving, and their

successes at work may contribute to a more positive mood during caregiving tasks (Stephens et al., 1997; Stephens & Townsend, 1997).

The resolution of these disparate literatures likely rests with complex interactions involving the nature of the caregiving experience and the characteristics of the work role. For example, in the Whitehall II study of British civil service workers, Dich, Lange, Head, and Rod (2015) found that low levels of caregiving (<4 h per week) were associated with protective effects on physiological dysregulation while higher levels of caregiving had negative effects on physiological functioning. Job strain tended to amplify the negative effects of high burden caregiving. The effects of job strain and informal caregiving were also assessed in multiple prospective cohort samples from Europe (Mortensen et al., 2017). The authors found that both high job strain and informal caregiving were associated with a modestly higher risk of sickness absence, but only among women. Bainbridge et al. (2006) suggest that type of disability (mental vs. non-mental) may interact with hours of work to determine caregiver stress outcomes. They found that spending more time in a work role generally had no effect on caregiver stress outcomes. However, caregivers who were caring for a person with a mental disability experienced significantly fewer stress outcomes as they spent more hours engaged in outside work. Neal and Hammer (2007), Chesley and Moen (2006), as well as Fredriksen and Scharlach (1997) emphasize the importance of workplace characteristics as contributors to caregiving outcomes. Factors such as job classification, work demand, work control, workplace support, and work schedule flexibility have the potential of contributing to or alleviating caregiver stress. Unraveling causal relationships between work, caregiving, and caregiver distress will require ambitious studies that not only study the association among these factors but also longitudinally follow adults into and out of caregiving and work roles.

20.6 Employer-Based Programs for Caregivers

Industry interest in supporting family caregivers dates back to the early 1980s. One of the first companies to focus on working caregivers was the Travelers Insurance Companies, which surveyed its employees to learn about the extent, nature, and effects of their informal elder care responsibilities in the early 1980s. IBM conducted a similar survey in 1988 and again in 1993. The first documented elder care program was begun in 1986 by Hallmark Cards and included a resource center designed to link employees with services in the community. Other notable developments included the first public-private partnership between the New York City Department on Aging and Phillip Morris, American Express, and J.P. Morgan to provide workplace elder care referral services. In 1990, AT&T and two labor unions—the Communications Workers of America and the International Brotherhood of Electrical Workers—created the Family Care Development Fund and National Elder Care Referral Program (Neal & Hammer, 2007).

In the last decade, the landscape of workplace-based supports for employees with family responsibilities has changed dramatically. The diversity of available programs is vast, although their widespread availability is more limited. These programs can be organized into two broad categories: (a) *federal and state policies* supporting caregivers and (b) private *employer-initiated* benefits and services.

Examples of legislative policies include family leave, paid sick leave, and income tax credits. Employer-initiated programs include flexible work schedules, reduced work hours, where work is done (e.g., telecommuting), relocation, and management sensitivity (e.g., management training in work/life issues), educational seminars on caregiving or caregiving fairs, newsletters and guidebooks, case management, support groups, and wellness programs. Other direct service programs might include adult day-care centers or subsidies for elder care, and employee assistance in the form of stress management, crisis intervention, and bereavement counseling. Note that many of these programs are not specifically designed to support employee elder care and may be beneficial to all workers.

20.6.1 Federal and State Policies

Both federal- and state-based programs have enacted legislation in the last two decades to support family caregivers. At the federal level, the Family and Medical Leave Act (FMLA) was enacted in 1993. It allows workers to take up to 12 weeks of unpaid, job-protected leave to care for a worker's own health needs, to bond with a new child, or to care for a seriously ill family member (child, parent, or spouse). Fourteen states including the District of Columbia have extending FMLA coverage to other family relationships including domestic partners and parents-in-law, grandparents, grandchildren, and siblings. Six states have expanded eligibility to some workers in smaller firms (less than 50 employees).

Four states (California, New Jersey, New York, and Rhode Island) have expanded leave policies to include paid leave for family caregivers. These programs provide a modest level of support (e.g., 55% of usual pay up to \$1104/month in New York, \$795 in Rhode Island) for a period of 4–12 weeks. These programs are financed through an insurance model and are fully funded by worker payroll deductions. Because these programs are relatively new and have low public awareness or utilization, we know little about its impact on caregivers. To date, the costs of the program are low because utilization is low.

A few states (California, Connecticut, Massachusetts, Oregon, and Vermont) as well as several metropolitan areas have mandatory paid sick leave policies, which can benefit caregivers because they allow workers to take time off to care for ill family members. These programs are paid for by the employer but coverage is for a short period of time, typically a week. As a result of a Presidential Memorandum issued in 2015, federal workers have access to 6 weeks of paid sick leave to care for ill family members, including spouses and parents. An Executive Order later that

year expanded coverage, requiring federal contractors to offer their employees up to 7 days of paid sick leave annually.

Under some circumstances, caregivers can also take advantage of Child and Dependent Care credits. Employed caregivers can lower their taxes up to \$3000 to offset expenses incurred in paying for the care of a family member who lives with them.

Finally, Congress recently passed the Recognize, Assist, Include, Support and Engage (RAISE) Family Caregivers Act, which calls on the Department of Health and Human Services to develop a national strategy for family caregivers. This represents a small but important step toward developing national policy for caregivers. This law enacts one of the many policy recommendations made in the recent National Academies of Sciences, Engineering, and Medicine report, *Families Caring for an Aging America* (Schulz & Eden, 2016; see also Schulz & Czaja, 2018).

20.6.2 *Employer-Initiated Benefits and Services*

The National Study of Employers (NSE) provides the most comprehensive data on the practices, policies, programs, and benefits provided by US employers (Matos, Galinsky, & Bond, 2016). The NSE sample includes approximately 1000 employers with 50 or more employees. In 2014, 43% of companies provided information on elder care resources, 75% provided time off for employees to provide elder care without jeopardizing their jobs, and 41% provided dependent care allowance programs for elder care (Matos & Galinsky, 2014). Because the survey has been repeated five times beginning in 2005, it is possible to derive longitudinal trends in programs and policies. Evidence that employers are responding to the growing need for elder care assistance is seen in findings showing that from 2005 to 2016, resource and referral services increased from 29 to 42%, dependent care assistance plans increased from 24 to 38%, and access to respite care increased from 3 to 6%. Small employers (50–99 employees) are more likely than large employers (1000 or more employees) to offer flextime (36% vs. 17%) and time off during the work day for personal needs (51% vs. 33%). Employers cited retention as their main reason for providing employee and family assistance (e.g., flexible time, caregiving leaves, and dependent care). These findings may present an overly optimistic picture of workplace supports for caregivers because these policies do not necessarily apply to all employees within a company. For example, when asked to differentiate between policies available to “at least some” employees vs. “all or most employees” the differences can be large. Organizations report that 81% of “at least some” employees can take time off during the workday to attend to important family or personal needs without loss of pay, but only 52% of “all or most” employees can take advantage of this policy. Data on the utilization and impact of these services are scarce. We know virtually nothing about how these programs affect outcomes such as retention, work performance, job satisfaction, or caregiver burden and distress.

20.7 Impact of Caregiving on American Businesses

Data on the effects of caregiving on business and industry are scarce. The most frequently cited study on this topic is the MetLife Caregiving Cost Study (MetLife, 2006). This study combines data from the 1997 MetLife Study of Employer Costs for Working Caregivers with data from the 2004 National Alliance for Caregiving and AARP Study of U.S. Caregivers. Using caregiver prevalence estimates derived from the 2004 study, the authors generate cost estimates in multiple categories. The total costs to employers attributable to full-time employed caregivers are estimated to be \$33.6 billion annually. These costs are due primarily to absenteeism (\$5.1 billion), shifts from full- to part-time (\$4.8 billion), replacing employees (\$6.6 billion), and workday interruptions (\$6.3 billion). These cost estimates should be viewed cautiously as they are driven by caregiver prevalence estimates that may be inflated, and because of the many questionable assumptions made to generate them.

Other, more reliable data sources contradict the large impacts reported above. The American Productivity Audit (APA) is a telephone survey of a random sample of 28,902 US workers designed to quantify the impact of health conditions on work (Stewart, Ricci, Chee, & Morganstein, 2003). Lost productive time (LPT) was measured for personal and family health reasons and expressed in hours and dollars. Family health-related work absence accounted for 6% of the total of \$226 billion annually in health-related LPT costs (about \$13.5 billion annually). Most of the absence time occurs in women between 18 and 45 years of age, and based on self-reported information, a majority of this time was devoted to caring for a child, not a parent. Among those who lose time for a family health reason, the average LPT is 6.99 h per week. These results are in line with our own analysis of NSOC data where we found that 11.5 (median) to 22.3 (mean) million hours of work per month were missed by 1.06 million employed caregivers caring for older adults (see Fig. 20.1). Assuming a rate of \$20/h for time missed, the NSOC data suggest that the value of missed time from work ranges from \$2.7 to \$5.4 billion annually.

20.8 Conclusion

Research on caregiving and work has a rich tradition dating back more than two decades. Researchers in North America and Europe have addressed important questions regarding the impact of work on adopting the caregiving role and, conversely, the effects of caregiving on the work role. The evidence indicates causal effects in both directions: employment status affects who takes on the caregiving role, and the onset of caregiving affects hours worked and whether or not one stays employed. However, there is a major disconnect between data reported by advocacy groups such as AARP and the National Alliance for Caregiving and data from peer-reviewed studies based on large, representative samples when compared to studies carried out and funded by advocacy groups. Advocacy groups tend to report negative effects

that are larger by several orders of magnitude compared to peer-reviewed published data.

Because labor force participation for both men and women continues to change with more women entering the labor force and both men and women increasingly working post-retirement (see Chap. 1), it will be important to continue to monitor the relationship between caregiving and work in the future. In particular, we need to be concerned about the possibility that caregiving demands may undermine the ability of older workers to remain in the workforce during traditional post-retirement years.

The trend toward increasing labor force participation and longer work careers among all adults has the potential of eroding caregiving resources at the same time that the need or demand for care is increasing and the available resources for formal care are decreasing. This scenario has all the ingredients of a perfect storm with the potential of becoming a major crisis if we do not begin to plan for it now. One solution to this problem is to maximize our ability to combine work with caregiving. The research in this chapter provides numerous examples of how work can be compatible with and even complement the caregiving experience for those individuals who stay in the workforce (e.g., respite, pay and benefits, social support, rewarding careers). What is needed are workplace programs that support the caregiver at a level that allows them to remain in the workforce.

The traditional family model of husband as breadwinner and wife as homemaker is approaching extinction with nearly three quarters of women already in the labor force and the possibility that these rates will continue to increase in the future. For dually employed married couples, this means that effective elder care will require negotiation and strategic allocation of responsibilities based in part on the demands of work, although we can anticipate that women will continue to carry the larger burden of care provision. Understanding how couples negotiate care provision and developing optimal strategies for sharing the care should be part of our future research agenda in this area.

Another theme of this chapter concerns the economic costs of caregiving for both the individual and for business and industry. Although current data suggest that the number of individuals leaving the workforce to care for a parent or spouse is small, those who do leave incur high economic costs in the form of immediate losses in wages and benefits and long-term losses in retirement benefits. These effects are more pronounced among women of lower socio-economic status and are difficult to reverse once initiated. For businesses, the costs are measured in terms of lost productivity due to absenteeism, replacing workers who leave the workforce, and interruptions at work. Addressing these issues will require macro-level policy based on accurate assessments of projected cost and benefit. A first step in developing such policy will require an accurate count of the number of employed caregivers. One of the lessons of this chapter is that we do not know the prevalence of work and caregiving at the population level because of the varying definitions of caregiving used. As a result, estimating the cost of a program such as paid leave from work or subsidized day care for older relatives is precarious. Generating the data needed to address big policy questions should be a high priority and will require thoughtful

and consistent definitions of caregiving and large, representative, population-based samples that are followed longitudinally. Coming up with the right policy questions will require creativity and daring. For example, caregiving and work are inextricably linked to the availability and cost of formal health care and long-term support services (LTSS). Developing policy in any one domain will inevitably spill over to the other, suggesting that a proactive strategy that simultaneously considers all three domains is essential.

A third area for future study concerns the role of work and caregiving after the age of 65 or the post-retirement years. Research on work and caregiving appropriately focuses on working-age adults prior to retirement. However, with increasing numbers of older individuals needing or wishing to work after traditional retirement age, it is important that we gain a better understanding of how work and caregiving intersect for the older worker-caregiver. How prevalent is work and caregiving in late life? How do caregiving demands affect labor force participation in later life? What types of programs might ease the burden of care for the employed caregivers at different stages in the life course? How do economic factors affect labor force participation in late life in the context of caregiving?

Finally, we must not overlook the potential of existing and emerging technologies to play a role in work and caregiving (Jimenez, Schulz, Perdomo, Lee, & Czaja, 2017; Kelly, 2016; Schulz et al., 2015). Telemedicine technologies have already become an important adjunct to monitoring health and functioning of older persons residing in communities. For employed caregivers, technologies that enable greater latitude in where and when one works (e.g., teleworking) have the potential of easing the burden of care provision. Technology could also play an important role in minimizing work interruptions. A frequent concern among working caregivers is knowing whether or not a relative home alone is performing routine tasks during the day such as eating and taking medications at appropriate times. Monitoring these activities requires frequent phone calls and sometimes emergency visits home to check on the care recipient. Technology has the potential of providing systematic reminders to the care recipient about important tasks that need to be carried out, monitoring whether and how the tasks were completed, and communicating information to both the caregiver at work and the care recipient at home. Applications such as these could make the difference between remaining employed and becoming a full-time caregiver.

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Chapter 21

Decreasing Disability Rates in Older Workers: Some Newer Research Directions



Robert B. Wallace

21.1 Introduction: The Context of Older Worker Health and Disability

21.1.1 *Changes in Employment Rates of Older Workers*

The growing numbers of older workers in the United States can be attributed to many factors including increased longevity and healthspan and a general desire to work longer in order to enjoy the benefits of work such as an appreciation for work productivity and the incumbent social contact. Others may work longer for the benefits of income and health insurance (White, Burns, & Conlon, 2018). A longer worklife may also be enabled by greater protections from work-related illness and injury due to improved job safety and general health promotion over the years. The improved health of American workers may have further benefitted from the export of more hazardous domestic jobs in the latter half of the twentieth century to other countries (Castleman, 2016).

Along with general changes in the demographic distributions of American workers has been the evolution of the nature and types of work and occupations themselves, as discussed below in this chapter and in Chaps. 1, 2, 10, 16, and 17 of this volume. There have been changes in the nature, organizational structure, and locations of workplaces. These changes include the role of advancing technology and some improvements in the regulatory processes applied to workplaces, as well as new types of physiochemical, social, and other environmental exposures. There has also been the advent of on-the-job general health and safety programs, and increasing recognition of workplace social challenges and stressors such as violence,

R. B. Wallace (✉)

Departments of Epidemiology and Internal Medicine, Colleges of Public Health and Medicine, University of Iowa, Iowa City, IA, USA

e-mail: Robert-wallace@uiowa.edu

sexual harassment, and ageism. The health and safety of both older and younger workers may be challenged by the general home and community environment, and with evolving worker behavioral patterns that affect productivity, such as diet, exercise, and substance abuse. Even general community characteristics such as the transportation infrastructure may affect worker health in the sense of facilitating commuting to the job each day.

21.1.2 Evolution of the American Health System and Its Relevance to Worker Health

The evolution of the nature of workers and the workplace has created a broader change in American medical care and its relation to workers. Even though many young and middle-aged workers depend on employment-based health insurance, the adequacy of such insurance has been increasingly threatened. There is great diversity in access to employer-based insurance for various occupational categories. In certain, particularly low-wage occupations, lack of access to general health insurance can be as high as 37% (Boal, Li, & Sussell, 2018). Further, this lack of insurance has prevented access to various categories of preventive services, including some relevant to occupational health. While many American individuals and families receive their health insurance through their employers, the issue of whether there is sufficient incentive for employers to provide insurance that promotes optimal worker health and productivity is unresolved.

While many employer-based health insurance programs may cover newly occurring worker illnesses and conditions regardless of the causes of these illnesses, these programs often do not address long-term chronic illnesses and their incumbent disabilities, particularly if job loss occurs. Employers, particularly representing larger companies, are usually required through various mechanisms and regulations to provide safety and other environmental protections in order to optimally protect workers from job-related injuries and illnesses. But when these events occur, other insurance mechanisms may be required, such as private disability insurance, workers' compensation, and social security disability programs. However, these programs may be inadequate or unattainable, and sometimes Medicaid programs become the last resort. Some workers' insurance programs may require proof that the conditions were definitely caused by workplace exposures. While attribution of an individual's disease or disability to workplace exposures can be difficult to prove and is sometimes contested, the need to address the conditions and disabilities consequent to work exposures is apparent. Even if an insurance program provides payments, it may be truncated when a worker reaches a particular age.

In addition to workplace-specific programs that may protect workers from injury, disease, and disability, many companies have been more proactive in providing programs that promote employee general health and well-being—so-called employee assistance programs (EAPs). These programs tend to exist in larger companies or organizations, and are diverse in structure, goals, employee access, and relation to

standard health care and insurance programs (Merrick, Hodgkin, Horgan, & Quinn, 2015). They tend to focus on the personal and social problems of employees and to address social stresses both within the workplace and in the community. Some programs address worker health issues where standard insurance coverage is lacking, such as various dimensions of mental illness and health promotion. From both financial and health outcome perspectives, such programs can provide health benefits; however, the evaluation literature is scattered and covers diverse situations, in part because EAPs lack program uniformity. One of the important challenges in implementing EAPs is attracting employees into using them. Workers may fear additional personal health care costs, the possibility of discrimination, stigmatization among colleagues, and employer's invasion of privacy (Madison, 2016). Also, there are very few studies of these issues among older workers.

However, in addition to providing appropriate safety and environmental protection programs, modern worksites and relevant data thereon have been subjected to research activities to further address the prevention of injuries and diseases, using techniques from both the social and health sciences. Unfortunately, as research on worker health and disability becomes more intensive and rigorous, workers' personal and public health challenges are also growing and requiring even more attention. A related issue is that there is no easy definition as to who is an "older" worker, as many people retain work activities to advanced ages. For administrative and classification purposes, most older workers in research refer to persons 45–65 years of age as well as the smaller number of workers in their seventh, eighth, and ninth decades.

21.2 Five Modern Challenges to Health and Well-Being in the Workplace

This section of this chapter summarizes five of the modern health and social workplace problems that affect worker social and physical well-being. All have implications for older workers, but workers of all ages are likely affected. While an emphasis on both prevention and mitigation of these problems is the ultimate goal, deterring or halting these problems has generally not yet been achieved; thus, they remain research frontiers.

21.2.1 Older Workers and the Need for Enhanced Genetic Risk Assessment

Over the past 20 years, great technological improvements in genetic determinations in humans and other species have led to identifying genetic correlates of various diseases and conditions, some of which also may be potentially related to workplace

environmental exposures—so-called “gene–environment interactions.” While almost all human chronic illnesses have demonstrated genetic components, examples of illnesses that have important genetic components and can be exacerbated by environmental work exposures include: noise-related hearing loss (Cunningham & Tucci, 2017); the relation of job-related stress to insomnia (Huang et al., 2014); the relation of pesticide exposure to Parkinson’s disease (Narayan et al., 2015); and lung cancer occurrence related to coke-oven exposure. Genetic polymorphisms have also been linked to risk of injuries such as Achilles tendon and knee ligament tears (Kim et al., 2017) and lower back pain susceptibility and chronicity (Ramesh, D’Agata, Starkweather, & Young, 2018). Further, genetic testing has been proposed to help determine the safest and most effective approach to chronic pain management in injured workers (Meshkin, Lewis, Kantorovich, Anand, & Davila, 2015).

While genetic research is proceeding at a rapid rate, it may be somewhat surprising that workplace genetic investigations have lagged, and worker genetic screening programs are not in place. This can be explained by the complex ethical and legal issues centering at least in part on the U.S. Genetic Information Nondiscrimination Act (GINA) of 2008. This law is intended to prevent discrimination by employers and insurance companies on the basis of individual genetic characteristics. This is part of the larger issue of protecting all employee-related health information (Roberts, 2014; Rothstein, 1998). However, many kinds of genetic testing are freely available to the general public, obtainable without health or other permissions, leading to great challenges in maintaining genetic privacy. Also, there may be practical ethical situations where health professionals wish to protect their working patients from important workplace-related disabling conditions without releasing genetic or other related clinical information. The American College of Occupational and Environmental Medicine (ACOEM) has promulgated a position statement on workplace genetic screening that provides thoughtful approaches to this issue (Brandt-Rauf, Borak, & Deubner, 2015), such as providing mechanisms to protect genetic information from employers and insurers while allowing workers where feasible to enjoy the medical benefits of this information. But important challenges remain, even extending to protecting workers’ genetic findings obtained in research protocols. Since older workers may have special genetic and other biological sensitivities to workplace exposures, it is a particularly important problem for them.

21.2.2 Autism Spectrum Disorder and Cognitive Changes in Older Workers

Autism Spectrum Disorder (ASD), once thought to be uncommon, is now recognized as an important and common neuro-behavioral problem in children and is an important cause of intellectual disability. However, many young and middle-aged workers have had useful work lives if any of the component conditions of ASD have not been too severe. Indeed, many older workers may not have been recognized or diagnosed with ASD in infancy and childhood, having only mild to moderate

intellectual or behavioral deficits. Now there is the realization that ASD is a lifelong condition (Kats, Payne, Parlier, & Piven, 2013; Piven & Rabins, 2011), and attempts at developing a research agenda for older adults with ASD are being made (Mukaetova-Ladinska, Perry, Baron, & Povey, 2012; Piven & Rabins, 2011).

Recent clinical research studies are appearing, suggesting that rates of intellectual decline among individuals with high-functioning ASD may be greater in older age than among non-affected control subjects (Geurts & Vissers, 2012). This could have important implications for older workers. While there are many causes of cognitive change in older adults, such as psychiatric and medical conditions and their treatments as well as a broad range of slowly progressing age-related neuropsychiatric conditions leading to cognitive disability, there is a clear need for validated diagnostic criteria for ASD among older persons. This type of diagnostic information would facilitate a better understanding of, and the ability to manage behavioral and cognitive problems in the workplace and other social settings. It would also facilitate general clinical diagnosis and management, possibly leading to the screening of older populations for undetected ASD, and its clinical heterogeneity. This in turn could jeopardize employment of older workers with this condition, an analogous situation to genetic screening, as noted above. Also, more research is needed on other types of ASD-related comorbidity. For example, high rates of parkinsonism have been reported among older adults with ASD, suggesting a possible related cause for both physical and cognitive disability among these patients (Starkstein, Gellar, Parlier, Payne, & Piven, 2015). It is important to note that several work-related environmental exposures have been associated with cognitive impairment in addition to causes occurring congenitally or otherwise early in life, and these are also in need of further research evaluation.

21.2.3 Cannabis Use in the Workplace: Possible Relation to Work-Related Injuries, Illnesses, and Disability

Cannabis (marijuana) use rates are increasing in American adults, including older citizens (Kaskie, Ayyagari, Milavetz, Shane, & Arora, 2017), and have been documented in many population surveys over the past few decades. While all addictive drug use rates have complex social and biological origins, the policy issues surrounding cannabis have been important because many state jurisdictions have “legalized” or at least decriminalized its use and made it more available for self-directed casual use. However, state laws and policies may be in conflict with federal laws, an issue not yet resolved. The majority of states have legalized so-called “medical marijuana” including cannabis extracts, constituent chemicals, and synthetic derivatives. Because of the different forms of cannabis available, understanding the clinical, behavioral, and adverse effects of these forms has been challenging due to the frequent dearth of high-quality research studies. The health effects of smoked or ingested cannabis may be very different from the various synthetic cannabinoid compounds and extracts.

This situation has made dealing with cannabis in the workplace more difficult. For example, the workplace is subject to the Americans with Disabilities Act, and companies or organizations receiving federal funds for work tasks or research conduct must assure a “drug-free” work environment. This policy in turn has led to both pre-employment and on-the-job drug screening programs (including for cannabis), which has been suggested to have economic consequences such as the costs of identifying and retaining workers with various skill sets and specialized occupations.

With regard to workplace safety outcomes, a recent National Academies report concluded that evidence on whether cannabis use at the worksite yields increased injury rates was inadequate, although there was good evidence that acute cannabis use increases the risk of automobile crashes, a very important cause of worker disability. Protocols that study cannabis-related injuries and illnesses incur important challenges, including varied cooperation by workers, failure to distinguish between casual cannabis use versus the addictive “use disorder” (Hasin et al., 2015), concomitant use of other illicit drugs as well as tobacco and alcohol, the so-called “polydrug” issue, and the presence of comorbid psychiatric conditions and their treatments (Hasin et al., 2015). The ACOEM has provided guidance on this matter for occupational health professionals and employers (Phillips et al., 2015), discussing the pros and cons of workplace drug screening and related legal and ethical issues, attempting to reconcile this very difficult situation. Research in this area is critically needed, and high-quality, well-funded investigative programs must better understand the role of cannabis and other drugs in the genesis of work-related disability. This research should extend to older workers, who are reporting higher cannabis use rates along with younger age groups.

21.2.4 Social Stressors in the Workplace and Potential Disability Outcomes

Social stressors have likely been a part of workplace culture for centuries. In many ways, it is likely that stressors such as bullying and violence, racism, ageism (McNamara, Pitt-Catsouphes, Sarkisian, Besen, & Kidahashi, 2016), sexual harassment, and intolerance of LGBTQ individuals and those with disabilities are broadly an extension of larger problems in the community. However, these stressors and situations can at times be magnified in many work situations because of obligate and frequent social contact with unselected clients, customers, co-workers, managers, and the public in general. As a generalization, with the exception of the overt physical violence and other acute or crisis social situations, defining and identifying these stressors and their potential disability outcomes can be difficult, and determining the prevalence of such events is also challenging. There have been registries created in some countries to document stressors (Nielsen, Emberland, & Knardahl, 2018), but population studies are scarce. While such stressors are likely present to some extent in all work situations, it is of interest that there is a robust and growing literature on such stressors in health care settings (Merrill, 2017). There is also a

growing literature on potential workplace preventive interventions (Gillen, Sinclair, Kernohan, Begley, & Luyben, 2017), such as expressive writing experiments and education, respect and civility interventions. However, to date, only small or null effects have been reported.

Aside from the overt effects of physical violence, the outcomes of these stressors are not well identified. Absenteeism and job change have been described, as well as increasing complaints to employers. However, specific health outcomes are only beginning to be characterized. For example, exposure to workplace violence and bullying has been linked to the risk of Type 2 diabetes (Xu et al., 2018), and sexual harassment has been linked to depressive symptoms (Friborg et al., 2017), both common conditions among older persons. Of great interest, workplace bullying has also been found to be a predictor of disability-related retirement in a cohort of Norwegian employees (Nielsen et al., 2018). This study needs to be replicated in other settings, but it could serve as an important research model for exploring relevant health and social consequences of such exposures, including mediating and moderating characteristics of various work settings and a search for new and promising interventions.

21.2.5 The Availability of Paid Sick Leave, the Business Cycle, and Health Outcomes

There have been many analyses of fluctuations in the business cycle and consequent worker and general population health status. A recent analysis from the U.S. National Institute for Occupational Safety and Health analyzed these fluctuations over a 30-year period (Asfaw, Pana-Cryan, & Rosa, 2011) with respect to occupational injury rates among various American industries. As others have found, the more active and productive the economy is, the greater the risk of injuries. This finding was generally limited to mining, construction, and manufacturing, which are generally among higher risk industries and occupations, but no relationship was found for agriculture and trade. Perhaps this relation of industrial productivity to injury rates is not unexpected, but it can provide indicators to invoke increased worker vigilance and protection. The authors usefully suggest that during upward trends in the business cycle, as indicated by such measures as the gross domestic product, the industrial production index, and the unemployment rate, that “susceptible” industries should take extra precautions such as maximizing injury protection programs with regard to worker safety, particularly in those companies with aggressive production schedules. Unfortunately, this study was not able to evaluate the role of the business cycle in disabling injury rates (Asfaw et al., 2011).

In addition to economic phenomena and their resultant health consequences, studies have recently emerged concerning an important particular business practice: the provision of paid sick leave (PSL) and its relation to rates of various worker illnesses. For example, PSL has been correlated with a decreased incidence of influenza-like illnesses and their wage and productivity losses (Asfaw, Rosa, & Pana-Cryan, 2017),

improved measures of workplace behavioral health and less psychological distress (Stoddard-Dare, DeRigne, Collins, Quinn, & Fuller, 2018), decreased food-borne illness rates (Hsuan, Ryan-Ibarra, Deburgh, & Jacobson, 2017), decreased all-cause and cause-specific mortality (Kim, 2017), non-fatal occupational injuries (Asfaw, Pana-Cryan, & Rosa, 2012; DeRigne, Stoddard-Dare, Collins, & Quinn, 2017), and greater use of a variety of clinical preventive interventions (DeRigne et al., 2017). Such analytical associations must be evaluated carefully, because there may be very important confounding factors such as demographic characteristics, wage and salary differences, the type of industry and occupation (with consequent socioeconomic differences), the presence of EAPs at the worksite, and the provision of general health insurance. However, many of the studies attended to these factors. Providing interventions need further work, but PSL benefits appear to be a potentially important intervention where they are not already in place. This association also provides more evidence for the link between provision of good quality health insurance and improving health outcomes, a particularly important issue for older workers.

21.3 A Framework for Considering Productive Aging at Work

Among the strengths of the field gerontology and its positive contributions to the lives of older persons are the inclusion of multidisciplinary approaches and thematic domains. Given the special challenges for enhancing the lives and productivity of older workers, some of which are described above, investigators at the U.S. National Institute for Occupational Safety and Health have developed a framework for promoting productive aging among older workers (Schulte, Grosch, Scholl, & Tamers, 2018). This framework builds in part on important gerontological concepts, and it allows the ability to incorporate older worker health and well-being including physical, social, occupational, and economic approaches into the work lives of older individuals. The examples of workplace challenges above reflect the importance of this framework, which has four major elements, each described below.

21.3.1 A Lifespan Perspective

This element of the framework allows full inclusion of the biopsychosocial factors that mediate many dimensions of productivity in older age, emphasizing important environmental forces throughout the lifespan including the roles of occupational environmental exposures, beginning with conception. This perspective highlights (a) particular factors that promote cognitive and intellectual development, (b) the relation between one's general social existence both within and outside the working existence, and (c) the "working-life continuum."

21.3.2 A Comprehensive and Integrated Approach to Occupational Safety and Health

This perspective of the framework is particularly important because so much of one's adult life is spent conducting productive work. This approach emphasizes the utility of protecting workers, including older workers, from adverse work exposures that can cause injury and disease. The integration of general disease prevention and health promotion with protection from workplace exposures thus becomes an extremely salient goal, including the concept of "Total Worker Health[®]" (Schulte et al., 2018) and the application of EAPs, which can be an important bridge between worker health and general health.

21.3.3 An Emphasis on Positive Outcomes for Both Workers and Organizations

This is a central concept underlying the framework that unifies positive working-life goals, emphasizing the synergies between workers and their work enterprises, and solidifies the understanding that control of workplace hazards and the promotion of productivity and well-being are useful for all of those concerned. This aspect of the framework also recognizes the "fit" between individuals and workplace environments as necessary for promoting this well-being.

21.3.4 A Supportive Work Culture for Multigenerational Issues

This aspect of the framework recognizes that many workplaces support as many as five generations of cultural cohorts (Schulte et al., 2018). Thus, in order to succeed in promoting the goals noted in this framework, there must be a supportive work culture that respects the different learning styles, cultures, experiences, and values that belong to each cohort including cohorts of older workers in order to maximize the well-being of workers and their families and communities.

21.4 The Future of Work for Older Persons: A Brief Discussion of Implications

Predicting the future is always hazardous, which is true when predicting the nature of work and the workforce at all ages as the twenty-first century progresses. One important reason is that this evolution is not "natural" but rather depends on many diverse factors: social and political decisions in both the

government and private sectors; characteristics and cycling of global and local economies; the availability and sustainability of natural resources; planetary climate change; local and international conflicts; and particularly, general health including the social and occupational well-being of older working populations.

While the role of automation in changing the nature of work has been discussed since the beginning of the industrial revolution, the general dominance of technology is increasingly being recognized and considered, and it now argued that we are now in the Fourth Industrial Revolution (see Park, 2016), defined as “a fusion of technologies that are blurring the lines between the physical, digital and biological spheres” (p. 1). What has received substantial attention lately have been the roles of digital information technologies such as machine learning and artificial intelligence (AI) and their implications for the coming workforce (Brynjolfsson & Mitchell, 2017). These authors suggest that in the foreseeable future there will be substantial needs for human workers, who will not in general be replaced by these various technologies, but they will be changed by them. They discuss a variety of work tasks that are not necessarily suitable for machine learning or AI. They describe the classes of occupations where worker (human) ingenuity and creativity will be required. Importantly, they outline a series of economic contingencies that will in part determine whether advanced technology can actually be realized. However, as is characteristic of all economic activity, the effects of technologies on work will be geographically uneven. For example, it has been argued that small cities face a greater negative impact from automation, in part because large cities have a higher level of managerial and technical professions that are not as easily automatable (Frank, Sun, Cebrian, Youn, & Rahwan, 2018).

In a separate paper, Mitchell and Brynjolfsson (2017) also argue for the need to track how artificial intelligence and other information technologies are currently playing out in the workplace to help predict what will happen in the future. This surveillance will be important in determining how modern workplaces and occupations are classified and counted, identifying the appropriate training and retraining needs for both younger and older workers, and anticipating new clinical and public health threats to health and safety from increasingly complex “emerging” work settings. Mitigating these new threats as well as the many existing ones will continue to be a critical activity for many disciplines.

Yet, older workers in future generations will in some fundamental ways not change from the past: they will bring with them their skills and experiences acquired in their work lives that can be used to guide others, and will be required to continue to practice the best prevention and health promotion available in order to optimally sustain their health status as they age. They will have to continually learn and relearn in modern work practices in order to sustain their employment and productivity, and will necessarily be the research subjects who will determine previously unidentified adverse work exposures and outcomes from earlier times.

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Chapter 22

Designing Age-Friendly Workplaces: An Occupational Health Perspective



James W. Grosch and Juliann C. Scholl

You can't help getting older, but you don't have to get old.
—George Burns (1896–1996)

22.1 Introduction

A far-reaching demographic trend affecting the United States and many other countries is clear: the workforce will continue aging to unprecedented levels, with many workers remaining beyond a time when just recently they would have retired. This change in age structure is partly due to longer life expectancy, lower fertility rates, and expected changes in social and economic policy, and reflects remarkable advances in medicine, technology, and public health. However, important challenges remain, and one such challenge is how to design work to maximize the safety, health, well-being, and productivity of an aging workforce. In recent years, there has been an emphasis on how individuals and, in some cases, workers can be proactive when it comes to the aging process. Constructs such as “healthy aging” (Creagan, 2013), “successful aging” (Rowe & Kahn, 1997; Zacher, 2015), “active ageing” (WHO, 2002), and “productive aging” (e.g., Butler & Gleason, 1985; Schulte, Grosch, Scholl, & Tamers, 2018) have been advanced. Although these constructs may differ somewhat in their emphases and assumptions, they share an overriding belief that the adverse effects of growing older are not immutable, but can be delayed and managed if appropriate actions are taken.

The findings and conclusions of this chapter are those of the authors and do not necessarily represent the views of the National Institute for Occupational Safety and Health.

J. W. Grosch (✉) · J. C. Scholl
National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Cincinnati, OH, USA
e-mail: jkg9@cdc.gov; xhn3@cdc.gov

The focus of this chapter is on the work environment and the nature of work itself, and how both can be designed to maintain or enhance the health and productivity of workers throughout the working life (also see Chap. 8, this volume). Although the goal at the individual level is ultimately the same (e.g., successful aging), the locus of influence is considered to exist primarily in the workplace. This emphasis on the environmental context of aging has a rich history in gerontology and has contributed significantly to the improvement of the lives of older adults across a variety of settings (e.g., Wahl, Iwarsson, & Oswald, 2012).

This chapter begins with a brief discussion of the economic and social impact of occupational injuries and illnesses, and then examines the link between chronological age and selected occupational health outcomes. The goal is to provide an overview of the challenges and opportunities that come with an aging workforce. Next, four guiding principles of an occupational health perspective on aging are described to serve as a framework for intervention efforts. Finally, the concept of age-friendly environments is explored by reviewing two domains outside of the workplace (aging in place, age-friendly communities/cities), and then shifting the focus to practical issues that arise in designing age-friendly workplaces.

22.2 The Burden of Occupational Injuries and Illnesses

Although not easily measured, the economic and social consequences of occupational injury and illness are considerable. In one of the most comprehensive analyses to date in the USA, Leigh (2011) reported annual direct (medical) and indirect (lost productivity) costs of \$250 billion, with fatal and non-fatal work-related injuries accounting for \$192 billion, and fatal and non-fatal work-related illnesses accounting for \$58 billion. The total cost of \$250 billion exceeds the costs for cancer (\$219 billion), stroke (\$174 billion), and diabetes (\$63 billion).

Other approaches to quantifying burden have focused on a single type of health outcome in the workplace. Liberty Mutual, for example, annually releases a Workplace Safety Index identifying the top ten causes of disabling workplace injury and their direct costs to industry. According to the 2018 report, total direct costs of workplace injuries were \$58.5 billion, with the top three causes being overexertion, falls on same level, and falls to lower level (Liberty Mutual Insurance, 2018). Goh, Pfeffer, and Zenios (2016) analyzed mortality and health costs associated with workplace stress. Combining health and employment data from multiple sources, they estimated that workplace stress contributes to at least 120,000 deaths per year and results in health expenditures of between \$125 and \$190 billion a year, or 5–8% of national spending on health care. The biggest factor driving health costs was high work demands, followed by lack of insurance and work-family conflict.

Globally, according to the International Labor Organization, there are 2.3 million deaths each year due to work-related injuries (0.3 million) and work-related illnesses (2.0 million; Takala et al., 2014). Three of the biggest killers are work-related cancer (32%), work-related circulatory diseases (23%), and occupational accidents

(18%). Depending on the country, the costs of work-related injury and illness range between 1.8 and 6.0% of the GDP.

Despite these compelling cost estimates, occupational health experts argue that they significantly underestimate the true burden on society (e.g., Dembe, 2001; Schulte et al., 2017). For example, the Leigh (2011) analysis did not account for costs due to labor turnover and retraining, presenteeism (working while sick), reduced ability to succeed at work in the future, depression or diseases of the nervous system (e.g., dementia), loss of other employment opportunities, and under-reporting of injuries and illnesses. In addition, diminished worker health can have negative effects that extend beyond the workplace to affect the family (e.g., impaired relationships or increased risk of poverty), local community (e.g., inability to participate in civic life), and society (e.g., loss of human potential). Although a formidable task, there is a clear need to develop more comprehensive models for estimating burden. This need becomes accentuated when considering the impact of an aging workforce on the incidence of workplace injury and illness.

22.3 Aging and Changes in Occupational Safety and Health Outcomes

As the workforce ages, it is important to understand the changes in occupational safety and health that are likely to occur. A basic tenet of a life span perspective is that aging is associated with both losses and gains (Santrock, 2015). Although many of us are very much aware of the losses that come with age, the gains that occur may be less salient and perhaps even taken for granted. Table 22.1 presents a summary of selected outcomes that research suggests either worsen or improve with age.

This listing of variables is not exhaustive, but intended to provide a picture of the types of changes that occur with aging. Many of the variables that tend to worsen with age reflect the underlying decline in physiological functioning and increased vulnerability that accompany the normal aging process, although there is

Table 22.1 Selected occupational safety and health outcomes that tend to either worsen or improve with age^a

Outcomes that tend to <i>worsen</i> with age	Outcomes that tend to <i>improve</i> with age
Rate of fatal injuries	Overall rate of non-fatal injuries
Slips, trips, and falls	Job satisfaction
Musculoskeletal disorders in physically demanding jobs	Organizational citizenship behaviors
Return to work following injury/illness	Diversity of knowledge and experience
Chronic health conditions (including neurodegenerative diseases)	Presenteeism
Skills obsolescence	Counterproductive work behaviors
Tolerance of shiftwork schedules	Conscientiousness

^aBased on reviews conducted by: Grosch, Hecker, Scott, and Scholl (in press); National Research Council and the Institute of Medicine (2004); Ng and Feldman (2008); Yeomans (2011)

considerable individual variability as to when and how these changes take place. In the case of musculoskeletal disorders, age is a significant predictor when combined with a work environment high in physical demands (e.g., repeated lifting; Grosch & Pransky, 2009). In other words, workplace exposure needs to be considered in determining the relationship between age and musculoskeletal health. Skills obsolescence, or the degree to which a worker lacks new knowledge or skills, has also been linked to increasing age, although it is unclear whether it is age per se that matters, or other factors associated with age, such as a lack of training opportunities, a change in motivation, or the organizational culture's perspective regarding updating skills and the use of new technologies (Van Loo, De Grip, & De Steur, 2001).

In terms of improvements, a common thread appears to be the underlying change in crystallized intelligence (knowledge and skills acquired through experience) and emotional health that gradually improve with age. Growing older is associated with greater institutional and job-relevant knowledge as well as more positive attitudes and behaviors regarding work. These findings are consistent with those from the adult development literature examining changes in motivation, emotional regulation, values, and goals across the life span (e.g., Carstensen, Issacowitz, & Charles, 1999; Kanfer & Ackerman, 2004; Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011; Chap. 11, this volume). Another improvement in Table 22.1 is the overall decline in non-fatal injuries, although some sub-categories, such as slips, trips, and falls, tend to increase. This decline most likely reflects a number of factors including accumulated experience dealing with workplace hazards, increased cautiousness and awareness of the work environment, and reduced exposure to hazardous working conditions because of greater seniority and ability to select one's work activities.

Given the improvements and declines summarized in Table 22.1, it should come as no surprise that some work outcomes show little, if any, association with age. One notable example is job performance, which most studies find differs little between younger and older workers (Silverstein, 2008; Warr, 1994). An exception, however, may exist for jobs with extremely high physical or cognitive demands (Yeomans, 2011). Lower performance might also be found among older workers who internalize negative stereotypes of older adults (Levy, 2003, 2009; Stein, Blanchard-Fields, & Hertzog, 2002). Reasons for the lack of a consistent relationship include the fact that many jobs do not require individuals to perform at maximum physical or cognitive capacity, and the ability of older workers to employ strategies or practices that compensate for any losses occurring with age (Silverstein, 2008). Another workplace variable that fails to show a consistent relationship with age is absenteeism (Hackett, 1990; Yeomans, 2011).

In summary, the implications of aging for worker health and functioning are complex and do not necessarily follow from laboratory research. It should be noted that many of the studies conducted on aging and work rely on cross-sectional research designs in which data are collected from workers at a single point in time. This type of study, although much easier to conduct than following workers over several years, has been criticized for overestimating age-related changes (Hofer & Sliwinski, 2001). In addition, many of the relationships depicted in Table 22.1 are fairly modest

in magnitude and may be moderated by factors such as workplace accommodations, employee engagement, and the healthy worker effect (Pransky, Benjamin, Savageau, Curriuan, & Fletcher, 2005). It is also true that relationships with age do not always follow a simple linear pattern, but can be curvilinear, such as in some studies of workers' compensation claims that have found higher rates for middle-aged workers versus lower rates for younger and older workers (SHARP, 2007).

Figure 22.1 depicts three hypothetical trajectories of aging (optimal, normative, and unhealthy) that may occur across the working life. Each trajectory is presented for variables that tend to improve with age ("gains") and variables that tend to worsen ("losses"). Although in real-world settings age-related change is rarely this smooth and consistent, Fig. 22.1 illustrates the basic goal of an age-friendly workplace: to minimize the losses or declines that occur with aging and maximize the gains or improvements (optimal aging).

In the case of minimizing losses, an important outcome is to delay functional limitations, disability, and other serious health conditions so that they occur later in the working life, if at all. This "compression of morbidity" (Fries, 1980) means that workers will experience a longer period of time when they are healthy. The gap between unhealthy and normative aging in Fig. 22.1 reflects a combination of genetic factors and adverse workplace exposures and their accumulation over time. It may be difficult to modify genetic factors, but substantive improvements to the workplace can help shift the trajectory from unhealthy towards normative or even optimal aging. In the case of maximizing gains, the goal is to build upon improvements in areas such as job-related expertise and organizational citizenship behavior through, for example, training, lifelong learning, and mentoring programs so that workers can continue to achieve their full potential and to make important contributions to the organization as they grow older.

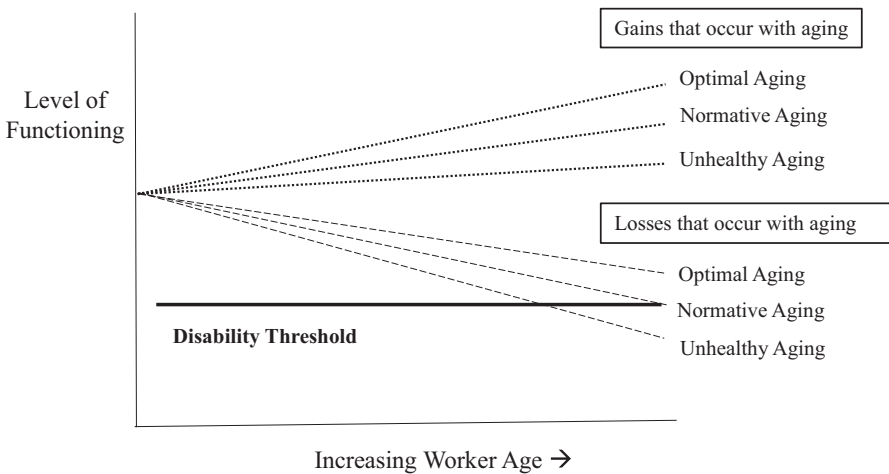


Fig. 22.1 Hierarchy of controls from the NIOSH *Total Worker Health*[®] perspective (NIOSH, 2016; figure available at: <https://www.cdc.gov/niosh/twh/letsgetstarted.html>)

22.4 An Occupational Health Perspective

Given the changes outlined above, and the goal of minimizing losses and maximizing gains, an occupational health prospective provides a general framework for designing age-friendly workplaces. Four guiding principles of this approach include (a) emphasis on primary prevention, (b) workplace safety as a foundation, (c) shared responsibility and benefits, and (d) a holistic, multi-level approach.

Emphasis on Primary Prevention A fundamental goal in occupational health is to stop the occurrence of an injury or illness before it ever happens. This can be accomplished by preventing exposure to occupational hazards (e.g., loud noise, harmful chemicals, and stressful working conditions) that lead to injury or illness, or taking steps such as educating workers or mandating safety and health practices that prevent the exposure from taking place. For an aging workforce, primary prevention becomes especially important since an injury or illness is more likely to be severe (or even fatal) and requires a longer recovery period (Mitchell, 1988).

The Hierarchy of Controls (NIOSH, 2016) provides a conceptual guide for determining effective and feasible solutions for controlling occupational hazards. The most effective strategy in the model is elimination or removal of the hazard followed, respectively, by substitution (replace hazard), engineering controls (isolate workers from hazard), administrative controls (change the way workers do their job), and the use of personal protective equipment. Recently, this model has been expanded by the NIOSH *Total Worker Health*[®] program to include other contributors to occupational health (NIOSH, 2016). Figure 22.2 presents this expanded model, along with brief examples for each level. Strategies are listed from top to bottom in order of their perceived effectiveness. This model emphasizes the impor-

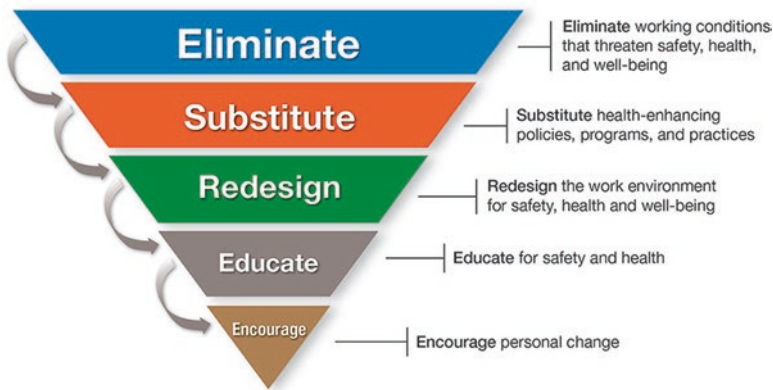


Fig. 22.2 Three hypothetical trajectories of aging in the workplace: optimal, normative, and unhealthy

tance of organizational-level interventions in advancing worker safety, health, and well-being. Although primary prevention is preferred, it should also be acknowledged that secondary (e.g., screening for injury/illness) or tertiary (e.g., preventing complications or worsening of existing health conditions) approaches may be necessary in some situations (Fig. 22.2).

Workplace Safety as a Foundation Given the range of strategies depicted in Fig. 22.2, a question often emerges as to where an organization should begin in designing an age-friendly workplace. In addition to an emphasis on primary prevention, ensuring a safe work environment provides an important foundation on which other programs or practices can build. In Maslow's hierarchy of needs, safety represents a basic human need, referred to as a "deficiency need," that must be met before other, higher-level "growth needs" such as belongingness and a sense of personal accomplishment can be realized (Maslow, 1962). In the workplace, safety covers many domains, including protection from chemical and biological agents, noise and lighting issues, vibration, radiation, temperature extremes, unsafe equipment and work area, and ergonomic hazards. In addition, psychosocial factors, which are relevant to virtually all occupations, play an important role and include workplace bullying, violence, harassment, discrimination, and a lack of organizational justice. When workers have concerns about their basic safety and security at work and these go unaddressed, other programs that address higher-level needs may not be effective.

Research on safety climate—defined as shared perceptions, attitudes, and beliefs about the importance of safety in the workplace—also illustrates the value of targeting safety-related issues. Studies across a wide range of industries have consistently found that a positive safety climate can be considered a "leading indicator" that predicts lower rates of workplace injury (Huang, Chen, & Grosch, 2010). Perhaps equally noteworthy, safety climate is also associated with a host of "quality of work life" measures, including trust in management, supervisor support, participation in decision-making, and job satisfaction (e.g., Grosch & Murphy, 2008). In other words, management commitment to safety communicates a certain level of concern and engagement that promotes a positive workplace culture overall and is likely to be reciprocated by workers.

Shared Responsibility and Benefits The general duty clause of the 1970 Occupational Safety and Health (OSH) Act requires that employers provide a workplace "free from recognized hazards that are causing or are likely to cause death or serious physical harm" (OSH Act of 1970, Section 5). This establishes a legal obligation for employers to proactively address recognized workplace hazards. At the same time, safety and health outcomes occur at the individual level, and a worker's behavior can sometimes contribute to those outcomes. For example, if appropriate safety equipment is available but not used by workers, its impact is likely to be minimal. Consequently, creating a healthy and productive work environment requires involvement by both employers and workers.

If responsibility is shared, so too should be the benefits. Although the interests of employers and workers often overlap, there can also be differences. With an aging workforce, employers may be most concerned with maintaining productivity, controlling health care costs, and reducing workers' compensation claims—all of which can be considered “organization-centered” outcomes. Workers may be more focused on the nature of their work activities and how they are treated by management or co-workers. As a result, “worker-centered” outcomes such as equitable treatment, opportunities to develop knowledge/skills, and a sense of making a meaningful contribution to the organization are likely to take priority. Increasingly, research on healthy work organizations has found that both types of outcomes are important and that a bi-directional relationship often exists between them (Harter, Schmidt, & Keyes, 2002; Wilson, Dejoy, Vandenbeg, Richardson, & McGrath, 2004). Therefore, measuring and improving both organization-centered and worker-centered outcomes are often considered necessary ingredients in establishing a culture of health within an organization.

A Holistic, Multi-level Approach Traditionally, occupational safety and health programs have focused on identifying and controlling hazards that adversely affect worker health. Although many advances in protecting worker health have been realized, this has sometimes led to a “siloeed” strategy in which hazards are addressed in isolation. As our understanding of worker health has developed to include dimensions such as job stress (e.g., Sauter & Murphy, 1995) and well-being (e.g., Schulte et al., 2015), it has become clear that the determinants of health are many and often exist at different levels, both inside and outside the workplace. In addition, risk factors in the workplace may contribute to health issues previously considered unrelated to work, such as obesity, cardiovascular disease, and depression. One example of a comprehensive, multi-level approach is the NIOSH *Total Worker Health*[®] (TWH) strategy, which advocates “policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being” (NIOSH, 2016, p. 1). TWH prioritizes a hazard-free work environment while also addressing other workplace systems, including those relevant to the control of psychosocial hazards and exposures, the organization of work, compensation and benefits, the built environment, and work–life management efforts.

Similarly, the impact of aging in real-world settings is complex and often described as a biopsychosocial process (Inui, 2003). Changes on one level (e.g., biological) can be affected by changes on another level (e.g., psychological or social). As a result, aging is best understood in the context in which it occurs, taking into account individual and workplace factors as well as those within broader society. An influential model of aging at work is the Work Ability model, which refers to an individual's capacity to continue working given work demands and available resources (Ilmarinen, 1999). This model, which has stimulated extensive international research, emphasizes the need to focus intervention efforts across four principal dimensions: physical working environment (e.g., ergonomics, reduction in prolonged physical exertion; see Chap. 10, this volume), individual health resources

(e.g., chronic disease management, health promotion), leadership and organization of work (e.g., workplace flexibility, job design), and professional development (e.g., training, lifelong learning; see Chap. 13, this volume).

Collectively, the above four principles provide a general strategy for designing age-friendly workplaces. This strategy is rooted in a traditional focus on preventing or managing exposure to potential health hazards, but is also informed by a broader view of worker health that includes a concern for well-being and related psychosocial factors at work including autonomy, work demands, and social support. The health of an aging workforce is determined by more than just the absence of hazards. It includes organizational features of the work itself and their potential to advance health (both physical and mental) in a positive direction.

22.5 Age-Friendly Environments

The goal of designing an age-friendly environment is not limited to the workplace. There are many contexts to which the term “age-friendly” has been applied (e.g., health care, businesses, parks, transportation systems, apartment buildings). Two areas receiving widespread attention, which may have implications for the workplace, are aging in place and age-friendly communities and cities.

22.5.1 *Aging in Place*

Although definitions differ slightly, aging in place refers to being able to continue living in one’s own home or neighborhood safely and independently regardless of age while adapting to changing needs and conditions (Morley, 2012). The growing popularity of programs that support aging in place is partly due to the large majority of older adults—in one survey, nearly 90% of adults over 65 years of age (AARP, 2011)—who prefer to stay in their current home and community as they age. When properly implemented, aging in place can result in cost savings for families, health care systems, and government, as well as health and emotional benefits, when compared to institutionalized care. The term “place” refers to more than just a physical location and is conceptualized to also include psychological (e.g., sense of belonging and attachment), social (e.g., connectedness with others), and cultural (e.g., values and beliefs) dimensions (Iecovich, 2014).

Although aging in place is concerned with where an individual resides, its emphasis on the pivotal role played by the environment is relevant to the workplace. The Competence-Environmental Press theory, which provides a framework for many aging-in-place interventions, focuses on how a person fits into his or her environment (or P-E fit; Lawton, 1986; Lawton & Nahemow, 1973). Equilibrium occurs when an individual’s competencies (or functional capacity) match the demands (physical, interpersonal, social) in the environment (or “environmental press”). If

the level of environmental press exceeds the level of an individual's competencies, P–E misfit occurs and leads to negative affect, maladaptive behavior, and ultimately poor health outcomes. As an individual ages and overall competencies gradually decline, the influence of the environment increases (Byrnes, Lichtenberg, & Lysack, 2006). If environmental press remains constant, then adverse outcomes can result. In contrast, an increase in individual competencies improves a person's ability to use environmental resources and achieve more positive outcomes.

This theoretical perspective has a number of implications for the workplace. The concept of person–environment fit is relevant to work and predicts that changes to both the environment and the individual can help maintain equilibrium and promote health and well-being. Since the environment plays an increasingly important role in functioning as workers age, this is clearly a target area for interventions. In the case of improving individual competencies, this should begin well before a worker is considered older, since maintaining (or improving) functional capacity and skill level benefits from a long-term approach. It has also been proposed that a person's environment can have a buoyancy effect, which is the inverse of environmental press (Glass & Balfour, 2003). In the case of aging, environmental buoying is often associated with environmental flexibility, resource availability, and social support. These characteristics affect person–environment fit and ultimately health and functional outcomes.

In terms of aging-in-place programs, there is an emphasis on providing a wide range of home- and community-based services that make it possible for older adults to maintain their quality of life and remain at home. In many cases, physical modifications to the home environment are needed, such as removing trip or fall hazards, providing adequate lighting, reducing level of clutter, smoothing floor surfaces, widening stairways, and installing walk-in tubs (AARP, 2000; Gitlin, 2003). Many of these changes use the principle of universal design, which involves creating products or environments so they can be accessed and used by all individuals to the greatest extent possible, without regard to age or disability. Some of the features of universal design include simple and intuitive use, minimizing physical effort, reducing any adverse consequences in the case of error, and accommodating a wide range of abilities and preferences (National Disability Authority, 2012). The use of in-home technology to help with daily tasks, provide memory support, monitor health, and help maintain social and family relationships can also play an important role in aging-in-place efforts (e.g., Mynatt, Melenhorst, Fisk, & Rogers, 2004).

Although these strategies may require further customization before being used in the workplace, they suggest an approach that can generate possible solutions for helping aging workers remain healthy and productive. In most aging-in-place efforts, there is a thorough attempt to understand the needs of older adults relative to the demands they face in their surrounding environments. Once these needs are identified (often through focus groups, interviews, and health assessments), proposed changes need not be complex or expensive. The strategy of many small changes across different domains (e.g., physical, psychological, social) can produce sustainable improvements in health and well-being. Also, the benefits of

aging-in-place programs are not necessarily limited to the older adults they are designed for, but can extend to many other groups as well.

22.5.2 Age-Friendly Communities/Cities

On a more macro-level, there is a rapidly growing interest in making communities and cities more age-friendly, due in part to population aging and increased urbanization. In contrast to traditional public policy that focuses on providing individually targeted support services for older adults such as Medicare, meals-on-wheels, and Social Security, age-friendly communities and cities emphasize modifying the broader physical and social environment as a means of advancing health and capacity to function (Greenfield, Oberlink, Scharlach, Neal, & Stafford, 2015). This focus is imperative because the infrastructure of many communities is simply not designed to deal with the changing needs of residents as they age. It is estimated that less than one half of the cities and towns in the United States have started to make the changes that an aging population will require (N4A, 2007).

In recent years, age-friendly initiatives have been introduced in a wide range of settings, both large and small, throughout the world (Fitzgerald & Caro, 2014; O’Hehir, 2014; Scharlach, 2012). Terminology varies slightly and includes descriptors such as “elder friendly,” “aging friendly,” “livable communities,” “naturally occurring retirement community,” “lifetime neighborhoods,” and “active aging community.” In many cases, the goals of these efforts overlap with that of aging in place in that there is a desire to design the environment so that older adults can remain and lead fulfilling lives in their current living arrangements. A review of the international literature noted that efforts to design age-friendly communities and cities can be categorized on two different continua (Lui, Everingham, Warburton, Cuthill, & Bartlett, 2009). The first continuum is the degree to which an age-friendly initiative focuses on physical infrastructure or services versus the quality of the social environment. The second is the degree to which an initiative is based on a centralized planning process (top-down) versus a more participatory approach (bottom-up), in which older adults are empowered to suggest and help plan changes in their environment.

One of the most large-scale initiatives is the World Health Organization’s (WHO) Global Age-Friendly Cities project that began in 2005. Based on focus groups conducted with almost 1500 older adults at least 60 years of age in 33 different countries, as well as focus groups with caregivers and service providers, WHO developed a detailed guide for cities to use in developing an age-friendly environment (Plouffe & Kalache, 2010; WHO, 2007). The WHO model focuses on the following eight core indicators: outdoor spaces and buildings, transportation, housing, social participation, respect and social inclusion, civic participation and employment, communication and information, and community support and health services. The first three indicators focus on the physical environment, the second three on the social

environment, and the final two on features that combine indicators that are both physical and social.

The WHO definition of an age-friendly city is “an inclusive and accessible community environment that optimizes opportunities for health, participation, and security for all people, in order that quality of life and dignity are ensured as people age” (WHO, 2015, p. 3). This model has led to practical tools such as an 84-item checklist for self-assessing a city’s core indicators, a database of age-friendly practices that have been implemented, and a global network of over 700 cities and communities in 39 countries that allows for an exchange of information, knowledge, and solutions regarding age-friendly environments.

In addition to the WHO Global Network, there are many other age-friendly community or city initiatives at local as well as national levels. For example, AARP has a livable communities program that includes dimensions that overlap with the WHO model but also adds walkability, shopping, and recreation and cultural activities (AARP, 2005). A Livability Index is available to assess a community setting (AARP, 2018) with the goal of identifying strategies for developing environments that advance successful aging. The AdvantAge Initiative is a community-building effort that focuses on four domains: maximizing independence, optimizing physical and mental health and well-being, social and civic engagement, and basic needs of safety and housing. This initiative provides information on a vast array of aging-related programs in the USA and other countries (AdvantAge Initiative, 2013).

In summary, both aging in place and age-friendly communities and cities demonstrate how changes to the physical and social environment can have a powerful influence on the health and functioning of older adults. Age-friendly environments help individuals meet basic needs, but also provide support for learning, growth, and maintaining social connectedness. These environments recognize the wide range of capacities of older people and respond flexibly to aging-related needs and preferences.

22.5.3 Age-Friendly Workplaces

In terms of aging, there are at least two important ways in which the workplace differs from the home and community/city settings. First, chronological age and the severity of health conditions and functional limitations tend to be higher for older adults in the general population trying to remain in their homes or in their communities or cities. In the workplace, if health impairments are severe enough, a worker is likely to seek a job elsewhere or leave the workforce altogether. This “survivor effect” means that workers are likely to be healthier and at a stage where modifications can be particularly helpful in preventing future health problems. Second, as mentioned earlier, the workplace environment extends beyond the physical setting to include the nature of the job. This refers to the structural arrangements of work such as number of hours worked per week; type of work shift; availability of health care and other benefits; training opportunities; and whether employment is full- or

part-time, permanent, or non-standard (e.g., independent contractor, on call). Work can also be viewed in terms of job characteristics, such as physical and cognitive demands, participation in decision-making, time pressure, skill variety, task significance, job security, flexibility, and supervisor or co-worker support. All of these features of work provide potential targets for age-friendly modifications.

Strategies for developing age-friendly workplaces come from a number of different sources. One of the more extensive efforts, supported by the European Foundation for the Improvement of Living and Working Conditions (Naegele & Walker, 2006; Walker, 1997), consisted of a wide-ranging series of case studies conducted with organizations in several different European Union (EU) member countries that had implemented “good practice in age management.” A good practice was defined as “employment conditions for older and ageing workers that provide an environment in which each individual can achieve their full potential without being disadvantaged by their age” (Taylor, 2006, p. 25). Table 22.2 presents a list of the eight dimensions of good practice that were identified in the project, along with information about the goal of each dimension, an example, and benefits reported by employers.

Of the eight categories, “flexible working time practices” is one that continues to receive growing attention, in part because of the range of practices (e.g., flexible schedules, flexplace, options for time off), and the appeal of flexibility to all workers regardless of age (Pitt-Catsoupes, Matz-Costa, & Besen, 2009). The dimension of “health protection, health promotion, and workplace design” comes closest to the NIOSH *Total Worker Health*[®] model in advocating strategies across different levels of the workplace (individual, physical environment, and work organization). “Comprehensive approaches” were observed, although they were more common in larger organizations and were generally not as widespread as individual approaches. The type of evaluation conducted of these eight practices varied considerably across EU member countries and organizations, and rarely included comparison groups, cost/benefit data, or long-term analysis of sustainability. In spite of these limitations, these case studies provide a rich source of examples on potential age-friendly practices.

Perhaps one of the best known case studies, conducted separately from the EU effort, took place at a BMW production line in Germany (Loch, Sting, Bauer, & Mauermann, 2010). Relying extensively on input from workers (whose average age was 47), more than 70 small changes were implemented including adjustable worktables, larger typeface on computer screens, orthopedic footwear, manual hoisting cranes, and wooden flooring. In addition, BMW established job rotation to better distribute physical demands, and they offered strength and stretching exercises to all workers. The total cost of these modifications was approximately \$50,000. BMW reported a 7% improvement in productivity to levels comparable to lines staffed by younger workers. Time off for sick leave decreased to below the company average and the defect rate fell to zero.

Another source of information on age-friendly practices are award programs sponsored by government, non-profit organizations, and professional associations that collect qualitative data similar to that in case studies. Recently, the European

Table 22.2 Eight dimensions of good practice in age management^a

Dimension	Goal	Example	Benefits reported by organizations
Recruitment	Provide older workers access to available jobs, reduce age discrimination	Training of interviewers, selection process not focused on age	Greater age diversity; raise general skill level of workforce
Training and lifelong learning	Ensure that all workers have training and learning opportunities	Customize efforts to motivate learners and provide support; linking training strategies to life course	Raise overall skill level; greater employability; willingness to take training later
Career development	Provide older workers with opportunities for progress; expand skills and knowledge	Provide advice and feedback regarding career progress and goals	Reduced physical strains and mental stress; worker skills are better utilized
Flexible working time practices	Give workers greater flexibility in their work hours and other aspects of employment	Adjustment of shift schedules; flexible working hours; job rotation	Improved health and motivation; better work–life balance; reduced absenteeism and sick days
Health protection, health promotion, and workplace design	Adjusting work processes and the organization of work to advance health and the capacity to work	Reducing safety risks (e.g., falls); improving ergonomic design; access to health promotion programs	Improved health status; greater job satisfaction; fewer injuries; decreased health-related costs; lower absenteeism
Redeploying older workers	Balance demands of workplace with capacity of workers	Replacing demanding work activities with less demanding ones	Maintenance or improvement of worker productivity; improved motivation; expertise retained
Employment exit and the transition to retirement	Provide options and greater control in leaving job or entering retirement	Flexible forms of retirement that allow for gradual reduction in hours	Facilitates succession planning; reinforces sense of fairness
Comprehensive approaches	Implement several age-friendly strategies at once	Combining age-specific ergonomic interventions with leadership training and mentoring programs	Greater lasting impact; more likely to result in a cultural change

^aBased on reports by Naegele and Walker (2006); Taylor (2006); Walker (1997)

Agency for Safety and Health at Work announced “good practice awards” in conjunction with their 2016–2017 Campaign on *Healthy Workplaces for All Ages* (European Agency for Safety and Health at Work, 2017). Selection criteria included interventions that reduce workplace risks in the context of an aging workforce, consultation with workers, a holistic approach, examples that demonstrate a real

improvement, and sustainability. A wide range of good practices were recognized, including better ergonomics to reduce musculoskeletal disorders, use of assistive devices to reduce physical demands, flexible working arrangements to improve work–life balance, and multiple health-based programs to improve work ability. In the United States, the Age Smart Awards program recognizes age-friendly workplace strategies utilized by employers in New York City (Finkelstein, Roher, & Owusu, 2013). Strategies identified as being particularly effective include: clear paths to advancement from within, cross-training and mentoring, workers having input into design of work stations, work hours and location that are flexible, and job structuring to fit the ability of workers.

On a more empirical level, the Work Ability model developed by Ilmarinen and colleagues (described earlier in this chapter) has generated a great deal of research and provides a useful conceptual approach for designing an age-friendly workplace. Many of the studies testing the model use the Work Ability Index (WAI), which consists of seven items that assess work demands and an individual's health status and resources. Scores on the WAI predict sickness absence, future disability, early exit from the workforce, as well as health and life quality after retirement (Feldt, Hyvönen, Mäkikangas, Kinnunen, & Kokko, 2009). A recent review and meta-analysis of 17 randomized control trials involving workplace interventions to improve work ability found a small positive effect, indicating that these interventions might improve work ability (Oakman, Neupane, Priper, Kinsman, & Nygård, 2018). However, the quality of the evidence was rated as only moderate, largely because compliance with the work ability intervention was low in some of the studies. Interestingly, multi-level interventions (individual and workplace) were fewer in number and did not seem to result in significant improvements in work ability, although the authors note the need for additional high quality studies and for taking into account the role of individual capabilities in evaluating an intervention's impact.

There are also workplace strategies not specifically labelled as age-friendly that may have benefits for an aging workforce. For example, there is strong empirical evidence that return to work (RTW) programs can decrease work disability duration and be cost-effective, especially for larger employers (e.g., Franche et al., 2005; McLaren, Reville, & Seabury, 2010). Since an older worker, once injured, is more likely to experience a severe injury and take longer before returning to work, these programs can play an important role following an injury or illness. RTW programs vary considerably, but practices such as providing workplace accommodations, using a trained RTW coordinator, and encouraging contact between health care providers and the workplace seem to be important (Franche et al., 2005). A related strategy is the prevention and management of different chronic health conditions such as arthritis, hypertension, and diabetes, all of which show an increase in prevalence with age. Although we know that lifestyle and workplace factors both play an important role in the development of chronic conditions, we are just beginning to study the types of workplace accommodations and other strategies that may be effective in improving quality of work life and employment outcomes (Gignac et al., 2018; Sorensen et al., 2011). Workplace health promotion programs are another example of a strategy that can yield positive results in terms of worker

health outcomes (e.g., Goldgruber & Ahrens, 2010). These programs work best when there is a supportive workplace culture (Kent, Goetzl, Roemer, Prasad, & Freundlich, 2016). It is not entirely clear whether the benefits of these programs vary by age.

22.6 Some Practical Guidelines for Designing Age-Friendly Workplaces

Earlier in this chapter, we described four general principles from an occupational health perspective for designing age-friendly workplaces. Findings from case studies, award programs, and empirical research provide additional guidance for successful implementation. Ten key factors advocated by different aging workplace experts (e.g., Naegele & Walker, 2006; SHRM, 2016; Taylor, 2006; Truxillo, Cadiz, & Hammer, 2015) include the following:

- *Including workers from all age groups.* Almost all efforts to design age-friendly environments, whether in the workplace or for the general population, should start by seeking input from the individuals who will be affected by the change. In the workplace, it is important to include not just older workers, but workers of all ages in identifying needs and suggesting possible solutions.
- *Conducting a thorough needs assessment.* The foundation of any age-friendly strategy should be a thorough understanding of both the workforce and the work environment. This includes: the changing age structure of the workforce, skills that are essential to the organization's mission, current or potential workplace hazards and risk factors, health and well-being issues affecting workers, and current organizational programs, policies, and practices that are relevant to an aging workforce. Data, both qualitative and quantitative, should be collected from as many sources as possible including worker surveys, organizational records, focus groups, and observation.
- *Ensuring management commitment.* An age-friendly program or practice is more likely to succeed if it has the active support of management. This support involves providing appropriate resources, communicating continuously about the program and its implementation, and being able to build acceptance of the program throughout the organization.
- *Focusing on aging workers—not just older workers.* There is strong evidence that programs to improve health and well-being are more effective when they are implemented early for workers, as opposed to waiting until an individual is considered older. Aging should be viewed as a continuous, lifelong process that all workers experience. Successful interventions are likely to have a positive impact on everyone who participates, not just those over a certain age (Crawford, Graveling, Cowie, Dixon, & MacCalman, 2009).
- *Choosing workplace design goals that are large enough to make an impact, but manageable enough to be accomplished.* Implementing a holistic or multi-level

design strategy can be a formidable task. The organizational change literature emphasizes the need to select feasible goals that generate support from both management and workers. Workplace programs can be implemented in gradual steps, or first as pilot program that allows for adjustments before being extended to other parts of the organization.

- *Understanding that many small changes can add up to have a big impact.* The BMW case study illustrates how many small scalable changes can collectively result in an effective strategy that improves worker health and productivity. The deciding factors seem to be how well the changes fit together as a coordinated strategy, and the degree to which they address the balance between work demands and individual resources.
- *Addressing multi-generational issues.* The changing age structure of the population has resulted in organizations that have as many as five generations working together. As a result, it may be important to tailor communication strategies and/or approaches in designing the work environment to meet different needs and preferences. The goal should be to foster a culture that respects and utilizes the unique skills, knowledge, and abilities of all age groups (Rudolph & Zacher, 2015). Such a culture also can encourage workers to manage age-related conflicts effectively and engage in mentoring and reverse mentoring to pass along valuable knowledge.
- *Implementing programs in a careful and flexible manner.* Research suggests that *how* a workplace program is implemented can be as important as *what* is implemented. A workplace program should be transparent and developed in sufficient detail to address how the program or intervention will work, who will be involved, barriers that may occur and how they can be overcome, expected timetable, and clear benchmarks for accessing progress. Implementation should be done in a flexible manner taking into account worker response and unexpected events. A model or theoretical perspective on aging (e.g., work ability) can also be useful in guiding the implementation process.
- *Conducting a comprehensive evaluation.* A systematic evaluation of a program can provide valuable information about what works and why. An evaluation should examine how the program was implemented (e.g., percent of eligible workers who participated, whether program met worker needs) and whether or not desired outcomes were achieved (e.g., reduction in musculoskeletal complaints, increased employee engagement). Conducting a cost–benefit analysis can also provide valuable data to help guide future efforts.
- *Adopting a long-term perspective that includes a concern for sustainability.* Many of the age-friendly practices described in this chapter require time to implement and may need to be adjusted based on feedback after they are introduced. Improvements in targeted safety and health outcomes can occur slowly. A long-term perspective encourages the development of workplace strategies that are more than a novelty and can continue to be relevant and effective over time and changing conditions.

22.7 Summary

In summary, there is a growing knowledge base of age-friendly strategies for the workplace. Much of this knowledge comes from case studies, often conducted in the EU, although some recent efforts have taken place in US companies (e.g., SHRM, 2016) and elsewhere. More in-depth case studies are needed across a wider range of countries that address aging-related concerns in specific industries and work settings (e.g., small business). In addition, regular surveillance through national and local surveys of programs used by employers to address the needs of an aging workforce is needed (e.g., Chap. 14, this volume), as well as a greater sharing of information regarding the details of those programs that work and those that do not work.

As in studies of aging in place and age-friendly communities and cities, policies and practices that benefit older individuals quite often have benefits for all individuals, regardless of age. Empirical studies of age-friendly strategies also exist and provide support for the effectiveness of these approaches. Holistic strategies targeting multiple levels of the organization are often recommended, but high quality research evaluating these approaches is limited, as are studies on some single-issue strategies such as the prevention and management of chronic health conditions. Additional research is clearly needed to identify strategies that work, and individual- and organizational-level factors that moderate effectiveness. At the same time, from the studies that have been conducted, we have developed better insight into the key steps organizations should take in their efforts to design an age-friendly workplace.

22.8 Going Forward

A survey of human resource professionals in the USA found that although 87% reported some level of awareness regarding aging workforce issues, only 36% were beginning to examine management practices and policies, and a mere 13% had actually proposed or implemented formal policies or programs to address these issues (SHRM, 2015). This gap between knowing and doing represents a major challenge for the future. In recent years, our knowledge of the subtleties of aging and its role in occupational health has grown substantially. Still developing is our ability to apply that knowledge to make practical and cost-effective improvements in the workplace.

In the decades ahead, the aging population will not only be getting larger, it will also be getting more diverse. In addition, the workplace itself will be changing as the impact of globalization, advances in technology, robotics, new forms of employment (e.g., gig work, use of independent contractors, mobile work), and new approaches to retirement (see Chap. 18, this volume) become more pervasive. These changes will pose new challenges and require an even greater understanding of the different ways a workplace can be designed to meet the needs of an aging workforce.

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