CHAPTER

13 Maintaining Work Ability to Support and Retain Older Workers

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Introduction

The retention of older workers is a topic that at some point will be relevant to nearly every person working today. Given the advances in modern medicine and the aging populations of many countries, organizations and society will need to identify effective methods for accommodating these societal changes. In this chapter, we discuss the implications of an aging workforce for individuals, organizations, and society and the importance of supporting and retaining older workers. We then discuss the construct of work ability (WA), an important predictor of exit from the workforce (von Bonsdorff, Seitsamo, Ilmarinen, von Bonsdorff, & Taina, 2012), including current conceptual and methodological questions regarding WA. We couch our discussion of older worker retention in the promotion and maintenance of WA within the work design, and specifically, the Job Demands-Resources (JD-R) frameworks. Throughout this discussion, we identify specific antecedents that either promote or diminish WA. We conclude by discussing directions for future research and providing practical recommendations to help maintain and improve WA, thereby improving older worker retention.

Work Ability Construct

The concept of WA was developed in response to the need to better understand how to help employees continue to work in a healthy and productive manner throughout the lifespan. Developed in the 1980s by researchers at the Finnish Institute of Occupational Health, *work ability* refers to an employee's perception of their physical and mental capacity to perform their work (Ilmarinen, 2007, 2009; Tuomi et al., 1997) and thus the balance between an employee's resources and the demands of their job (Ilmarinen, 2009). When an employee's resources (e.g., energies, cognitive, or physical capabilities) consistently fall short of those required to meet their job demands, their WA decreases (Weigl, Müller, Hornung, Zacher, & Angerer, 2013). Given this interplay between job demands and personal capabilities, researchers investigating WA must consider the characteristics of the worker, as well as the nature of the job, specific job tasks, and the work environment (Mäkitalo & Palonen, 1994).

Importance and Impact of Supporting and Retaining Workers Later in Life

As noted, industrialized nations worldwide are experiencing an aging population, and this trend is expected to continue into the coming decades (National Institutes of Health, 2011; Toossi, 2005). Interestingly, some evidence is building suggesting that on average, people are aging at a slower rate (Vaupel, 2010) meaning that people may have the ability to meet their work demands later in life. The convergence of these two trends along with economic factors is leading to an increasingly aging and more age-diverse workforce (Toossi, 2012). In the following section, we shift our attention to identifying the impact of these trends on individuals, organizations, and society.

IMPACT ON INDIVIDUALS

Given the expected aging workforce trends, individuals may choose to continue working for financial, social, or other individual reasons, but will need to find ways to continue meeting the physical and psychological demands of their work. Fortunately, there is a strong support that individuals can benefit from

working later in life financially (Butrica, 2011), physically, and psychologically as we discuss in the following sections (Kulik, Ryan, Harper, & George, 2014; Rohwedder & Willis, 2010; Zhan, Wang, Liu, & Shultz, 2009).

Financial benefits

The most obvious and practical individual outcome of working for a longer period of time is that it allows a person to earn more money. Not only does the employee continue to earn money, but at the same time, they can also avoid drawing on their monetary retirement resources. In fact, research suggests that labor force participation at older ages is associated with increased financial security in retirement (Butrica, 2011). In addition, individuals may even be able to reduce the impact of medical costs on their personal finances by staying enrolled in their employer's medical insurance plan.

Physical and psychological health benefits

In addition to financial benefits, individuals who work longer may also experience physical health benefits. For example, Zhan et al. (2009) found that people who engaged in bridge employment (i.e., full, part-time, or self-employment prior to permanent retirement) had fewer diseases and functional limitations (physical and cognitive) compared to retired individuals. Similarly, Rohwedder and Willis (2010) found that those who retired in their early 60s have diminished cognitive ability compared to who retire at or after expected retirement age. Together, these findings support the idea that there can also be cognitive benefits to continuing to work.

Beyond cognitive benefits, researchers have found that those who choose to remain employed have better mental health (lower depression and negative mental states) compared to those who retire (Zhan et al., 2009). Furthermore, those currently working report fewer psychological symptoms compared to retirees even after accounting for physical health (Bossé, Aldwin, Levenson, & Ekerdt, 1987). Work, and an individual's profession, can also represent a source of one's self-identity, and potentially one's self-esteem (Kulik et al., 2014). Moreover, from a lifespan perspective, older workers who extend their working life may have more opportunities to meet their increasing generativity motive (i.e., the need to pass on knowledge and experience; Kanfer & Ackerman, 2004) resulting in greater career and life satisfaction. Finally, based on Socioemotional Selectivity Theory (SEST; Carstensen, 1991),

aging workers that extend their work life can facilitate the drive for emotional fulfillment that increases as we age through building and maintaining work relationships resulting in greater well-being.

IMPACT ON ORGANIZATIONS

The aging population and workforce also has specific implications for organizations. First, organizations are concerned about the impending retirement of a large group of workers, which may result in a gap between the number of retiring workers and the supply of available skilled talent. For example, the nursing profession is expected to face dramatic shortages in available workers within the next decade (Buerhaus, Auerbach, & Staiger, 2009), and healthcare organizations will need to develop strategies for dealing with this challenge. Extending the working lives of their older employees by maintaining their physical and functional ability to work is one potential solution to this skills shortage.

Second, organizations are concerned with the mass retirement of workers resulting in the loss of the tacit knowledge (i.e., institutional knowledge, experience) that these workers have accumulated (Burmeister & Deller, 2016). The loss of this knowledge and experience may make it difficult to sustain a competitive advantage and lead to significant costs associated with training and educating these new workers. While the retention of institutionalized knowledge is in itself valuable, this knowledge also places older workers in the unique position of being able to train and mentor younger workers using their great depth of knowledge and experience. Interestingly, older workers tend to have greater rates of organizational citizenship behaviors (OCBs), also referred to as "helping behaviors" compared to younger workers (Ng & Feldman, 2008). These behaviors can benefit the organization's bottom line directly, but this also eludes to the idea that older workers may be able to transfer some of their institutionalized knowledge to younger, less experienced workers through these informal helping behaviors.

IMPACT ON SOCIETY

From a societal perspective, an aging population means that important policy decisions (e.g., retirement age and benefit levels) about the allocation of resources for retirement and healthcare

programs need to be made. Ultimately, these fiscal decisions may result in reductions of funding for government programs, or require increased revenue, potentially through higher tax rates, or the retention of older workers who continue to contribute tax revenue. In making these decisions, societies will need to enact policies that consider both the well-being and quality of life of their aging citizens and their ability to meet occupational demands.

While the changing demographics represent policy concerns, there are also direct societal benefits to employees continuing to work such as increased income and subsequent spending, which benefits the economy (Butrica, 2011). Furthermore, greater workforce participation benefits government systems, such as social security and disability insurance, which are less burdened when more workers are employed and contributing to the systems rather than drawing from them (Juhn & Potter, 2006). These societal benefits may ultimately culminate in increased national wealth, as noted in the opening section of this chapter (Clark & Urwin, 2008).

Taken together, the potential individual, organizational, and societal benefits of fostering the improvement and maintenance of WA make these efforts a worthwhile endeavor. The aging workforce trend is forcing a dramatic shift in perspective from incenting older workers to retire and exit the workforce to identifying and developing strategies focused on extending people's working lives. This successful extension of the working life is at the core of the WA concept.

Work Ability: History, Background, and Measurement

WA has been measured in a variety of ways; however, the Work Ability Index (WAI), designed by the researchers at the Finnish Institute of Occupational Health is the most common (Ilmarinen et al., 1991a, 1991b; Tuomi et al., 1997). The current WAI consists of seven self-report questions: a comparison of the respondent's current WA with their lifetime best; WA with respect to the demands of their job; number of diagnosed diseases; a subjective estimation of current work impairment; sick leave during the past year; projection of WA two years from now; and perceived mental resources (Ilmarinen, 2007).

Finnish researchers began conducting studies with the WAI in 1981 using a sample of over 6,000 municipal employees, collecting data from these participants again in 1985, 1991, and 1997 (Ilmarinen et al., 1991a, 1991b; Ilmarinen, 2009). As they tracked the WA of these workers, the researchers found that the WA trajectory varied greatly among participants. WA declined with age for about 30% of participants, WA remained the same for about 60% of participants, and even improved for 10% over the course of the study (Tuomi et al., 1997). In many ways, these results were very promising, because they demonstrated that a variety of other (potentially controllable) factors affect employees' WA throughout the lifespan. For example, work demands, work organization, and workplace community, as well as individuals' health and lifestyle, explained a great deal of the variability in WA during aging (Tuomi, Huuhtanen, Nykyri, & Ilmarinen, 2001). Improvements in employees' work and tasks, as well as work environment and tools, led to improved WA over time. Conversely, poor work postures, hectic work environments, poor physical climate, tool failure, and substandard workrooms were identified as work demands that led to decreased WA.

Later studies identified that WA was a strong predictor of the employee disability status (von Bonsdorff et al., 2012) and early retirement intentions (von Bonsdorff, Huuhtanen, Tuomi, & Seitsamo, 2009). These findings are critical because they helped to identify (1) a useful measurement tool for predicting exit from the workforce and (2) factors that influence WA across the lifespan. Intervention research designed to maintain and improve WA has only taken hold in recent years and has focused on those already disabled or suffering from chronic health conditions (Kuoppala & Lamminpää 2008; Truxillo, Cadiz, & Hammer, 2015). Despite this recent increase in studies investigating WA, to date less research has been conducted on psychosocial interventions to improve WA (cf. Truxillo et al., 2015), an issue examined later in this chapter. Though this literature is limited, the extant research shows promise in providing guidance to employers regarding how best to support their workers throughout the lifespan (Pohjonen & Riikka, 2001; Sjögren, 2006).

Finally, it is important to note that although the WAI is the most common measure of WA, there has been a fair amount of debate over how to best measure WA, and other measures have proliferated. Ahlstrom, Grimby-Ekman, Hagberg, and Dellve (2010) found that using the first item of the WAI alone provides a similar pattern of results to the full WAI and concluded that it

is a reasonable measurement tool for WA (Ahlstrom et al., 2010). Weigl et al. (2013) later used a two-item measure focused on an individual's ability to meet the physical and psychological demands of their work (Weigl et al., 2013). More recently, McGonagle et al. (2014) developed a four-item measure of WA using the first item from the WAI, then asking an individual to rate their ability to meet the demands of their job in terms of their physical, mental, and interpersonal abilities (McGonagle et al., 2014). Interestingly, these recent measurement tools do not include the objective components of the WAI, such as the number of diagnosed diseases and sickness absences over the past year, which has led some researchers to adopt the term *perceived WA* (McGonagle, Fisher, Barnes-Farrell, & Grosch, 2015). This raises the important questions of how to best define, and measure the WA construct, two questions that deserve greater attention in the research.

Theoretical Models as Applied to Work Ability

Because it developed outside of the I/O psychology literature, researchers have only recently begun integrating the WA construct into the I/O literature. However, there are a number of I/O and organizational behavior (OB) theoretical frameworks, particularly those focused on job design, that can help further integrate the WA construct into the I/O and OB literature. These job design models developed over several decades, and they provide a rich theoretical framework to explain how characteristics of the job can influence WA and the retention of older workers. In this section, we provide a brief overview of the most prominent job design models, and then describe some initial theoretical integration of the job design and lifespan models of aging.

HACKMAN AND OLDHAM'S (1976) JOB CHARACTERISTICS MODEL

Hackman and Oldham's (1976) Job Characteristics Model, one of the first job design models introduced in the industrial and organizational psychology literature, argued that there are five core intrinsic job characteristics: autonomy, skill variety, task identity, task significance, and feedback from the job. These five core characteristics result in the critical psychological states of

meaningfulness, responsibility, and knowledge of results, which then lead to positive work outcomes including greater levels of job satisfaction, motivation, performance, and lower turnover (Humphrey, Nahrgang, & Morgeson, 2007).

MORGESON AND HUMPHREY'S (2006) WORK DESIGN MODEL

Morgeson and Humphrey's (2006) more recent work design model extends Hackman and Oldham's work to include 21 work characteristics categorized into motivational, social, and contextual characteristics. This extension is particularly useful because it provides greater breadth than the Hackman and Oldham model in terms of the job characteristics it incorporates, and it provides greater flexibility when investigating a variety of occupations where job tasks may vary significantly. In this model, motivational characteristics include task characteristics (i.e., autonomy, task variety, feedback from the job) and knowledge characteristics (i.e., job complexity, problem solving, and specialization). Social characteristics include social support, interdependence, interaction outside the organization, and feedback from others. Finally, Morgeson and Humphrey extended the Job Characteristics Model to include contextual characteristics such as ergonomics, physical demands, work conditions, and equipment use.

JOB DEMANDS-RESOURCES MODEL

The Job Demands-Resources Model (JD-R) is an expanded version of Karasek's (1979) Job Demands-Control model, which demonstrated that jobs high in demands (workload, time pressure) and low in control (decision latitude) are related to high strain and low job satisfaction. The JD-R extended beyond Karasek's model to posit that all working conditions, in every occupation, can be classified in one of two general categories: job demands and job resources (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, and Schaufeli, 2001). The original JD-R model was designed to predict dimensions of burnout, (Demerouti et al., 2001), however, more recently, Weigl et al. (2013) and McGonagle et al. (2014, 2015) demonstrated the utility of the JD-R model in identifying job demands and resources that affect WA. The JD-R framework lends itself to the study of WA particularly well in that WA is often characterized as a

balance between an employee's resources and their job demands (Ilmarinen, Gould, Jarvikoski, & Jarvisalo, 2008).

RECENT THEORETICAL INTEGRATION OF JOB DESIGN AND LIFESPAN DEVELOPMENT THEORY

Truxillo, Cadiz, and Rineer (2012a), Truxillo, Cadiz, Rineer, Zaniboni, and Fraccaroli (2012b) provide an initial foundation for how job design can serve as a potential intervention mechanism for supporting and retaining older workers, an issue at the heart of the WA concept. They argue that the lifespan development theory of selective optimization and compensation (SOC; Baltes & Baltes, 1990) provides mechanisms through which job design can positively influence older workers. Selective optimization and compensation theory (SOC; Baltes & Baltes, 1990) identifies three adaptive strategies people use to cope with age-related resource losses and to conserve resources to successfully age. *Selection* is the decision-making strategy about what goals to prioritize and pursue based on matching personal resources with demands. *Optimization* is the process of obtaining, improving, and coordinating the use of personal resources to meet the selected goals. *Compensation* is the attainment and application of alternative means or the utilization of external aids to substitute for age-related losses (Müller, Weigl, Heiden, Glaser, & Angerer, 2012). For example, Truxillo et al. (2012a) proposed that a motivational task characteristic such as autonomy might be more beneficial for older workers compared to younger workers because autonomy allows the older worker to implement selective optimization and compensations strategies to offset potential personal resources losses and exploit personal resource gains.

Methods for Supporting Older Workers by Promoting Work Ability

In the following sections, we draw on these job design frameworks and SOC theory to identify specific mechanisms that can detract from (demands), and promote (resources) an individual's WA. Though we identify specific mechanisms, the extant literature on psychosocial factors influencing WA is relatively limited. Thus, the demands and resources presented here are certainly not exhaustive, but do provide a useful starting point for considering

which demands and resources play a role in the maintenance and promotion of WA.

JOB DEMANDS

Although the specific job demands identified in job design theories vary slightly, these theories identify job demands as key occupational factors that negatively impact performance, turnover, and the health and well-being of workers (Bakker & Demerouti, 2007; Grant & Parker, 2009). In line with the JD-R framework, we define job demands as any physical, psychological, social, or organizational aspects of the job (e.g., high workload, time pressure, and unfavorable working conditions) that require sustained physical and/or psychological effort or skills and are therefore associated with physiological and/or psychological costs (Demerouti et al., 2001).

Work overload

Perhaps the most commonly measured, and easily relatable job demand is *work or role overload*, which is the perception that the amount of work assigned is burdensome to the point that it cannot be completed while maintaining the necessary quality of the work (Bakker & Demerouti, 2007; Karasek, 1979). High workloads are well-established predictors of high levels strain (Bakker & Demerouti, 2007; Maslach & Leiter, 2008). Given the established workload to strain relationship, it is not surprising that work overload is also negatively related to WA (McGonagle et al., 2015). Work overload may influence older workers in a similar manner to younger workers, such that the worker develops burnout and their performance suffers. One point of divergence may be how younger and older workers react to work overload, whereas a younger worker may simply seek out another job where they perceive less work overload, an older worker may consider other options such as retirement or reduced work hours. Older workers may be particularly likely to consider retirement when facing constant work overload, which begins to diminish their WA, and they no longer feel they can adequately meet the demands of the job.

Role conflict

Role conflict occurs when an individual faces conflicting demands, for example, an employee with a supervisor and a shift leader that receives different sets of instructions or priorities from

each of the supervisors (Bakker & Demerouti, 2007; Karasek, 1979). The employee must then deal with the uncertainty of which course of action to take and deal with an increased likelihood that they will irritate one of the two leaders for not following their set of instructions. Role conflict is related to perceptions of strain, and burnout (Cordes & Dougherty, 1993) in addition to being associated with lower WA (McGonagle et al., 2015). Role conflict may be particularly difficult for older, more experienced workers to deal with because it stifles their autonomy and may hinder their ability to use their institutionalized knowledge to perform their job duties. Furthermore, if the organizational culture does not foster an environment where employees can openly discuss their concerns with their supervisors, this job demand may be particularly problematic.

Job boredom

Job boredom refers to a state of low arousal and dissatisfaction caused by a work situation in which the individual is not being adequately stimulated (Mikulas & Vodanovich, 1993). Job boredom can manifest in an effective, cognitive, or behavioral manner and is associated to lower WA (Harju, Hakanen, & Schaufeli, 2014). The impact of job boredom on negative work and nonwork outcomes, demonstrates the importance of considering how jobs are crafted and employees are utilized. Simply put, employees are not machines, and when asked to perform in boring, repetitive tasks for extended periods of time, the risk for negative organizational and individual outcomes increases. Furthermore, high job boredom will almost certainly fail to meet older workers' generativity motive, may reduce their intrinsic motivation, and ultimately influence workers' perceptions of the match between their abilities and the mundane demands of their job. Many simple changes may help to mitigate perceptions of job boredom such as task rotation, shorter shifts for monotonous work, and increasing the employee's insight into the significance of the task they are performing.

Physical demands and environmental factors

Occupations that involve high levels of manual labor, such as being required to work in awkward positions, lifting heavy packages, and repetitive lifting, or bending, are viewed as having high *physical demands* (McGonagle et al., 2015). These demands may be particularly troublesome for older workers given the well-established physical declines associated with age

(Goodpaster et al., 2006), which may lead to greater risk for chronic pain conditions, as well as decreased WA (von Bonsdorff et al., 2012). Although there is undoubtedly a great deal of variation in the rate at which individuals age and experience these physical declines, at some point, older workers will be better served transitioning to less physical job tasks.

In addition to physical job demands, n*egative environmental factors* such as exposure to machinery, loud noises, and working with vibrating tools are negatively related to WA (McGonagle et al., 2015). These physical demands and environmental factors are in some cases unavoidable; however, in other cases it may be that there are opportunities for rotation such that one individual is not responsible for the vibrating machinery on a daily basis, or is rotated between specific tasks requiring unfavorable body positions or repetitive lifting. The physical nature of specific occupations will certainly influence an individual's WA; as they perceive their physical strength declining or feel they are no longer able to meet the physical demands of their job, they become more likely to exit the workforce.

Emotional demands

Service workers face unique challenges as well, such as the *emotional demands* of being required to present a friendly and inviting demeanor at all times. This can be quite draining on an individual, and particularly difficult when asked to maintain this demeanor for long periods of time, or in the face of customers expressing their displeasure with a service or product they received. Though these demands are different from the physical demands associated with manual labor occupations, these are still very taxing on individuals and can lead to strain-related outcomes (Schaufeli & Bakker, 2004). Limited research has investigated the relationship between emotional demands and WA, and the findings have been mixed; however, given the consistent pattern of findings regarding other job demands and WA, emotional demands warrant further exploration (McGonagle et al., 2014, 2015). These mixed findings may also be the result of demographic differences in samples of service workers compared to samples of manual labor occupations. Whereas service workers may be younger and work in part-time positions, manual labor jobs are often living wage and full-time positions in which exposure to the demands of their job in terms of hours worked may be greater.

JOB RESOURCES

According to the JD-R framework, job resources refer to aspects of the job that are functional in achieving work goals, reduce job demands, and the associated physiological and psychological costs, or stimulate personal growth, learning, and development (Bakker & Demerouti, 2007). Job resources can include organizational factors (e.g., pay and job security), interpersonal factors (coworker and supervisor support), task factors (task significance, performance feedback), and how the work is organized (Bakker & Demerouti, 2007). It is important to note that these resources are beneficial for both meeting the demands of one's job, and providing direct benefits, such as improved health and well-being (Bakker & Demerouti, 2007).

Autonomy

According to Hackman and Oldham's (1976), *autonomy* refers to the degree of freedom, independence, and discretion given to workers in determining their work procedures. Autonomy is one of the five original job characteristics proposed by Hackman and Oldham as important for developing a sense of meaningfulness and responsibility and has been included as an important job characteristic in subsequent job design models. Older workers in particular may benefit from being able to work more autonomously, given their greater work experience and crystallized intelligence (the ability to utilize knowledge, skills, and accumulated experience; Cattell, 1971; Kanfer & Ackerman, 2004). Autonomy also allows older workers opportunities to craft their jobs and choose roles to fit their strengths (Truxillo et al., 2012b). However, the degree to which autonomy benefits older versus younger workers likely varies by the outcome under discussion (Ng & Feldman, 2015).

Specific aspects of autonomy, such as job control and skill discretion, have also been studied in relation to WA. Job control refers to the degree that workers are permitted to have autonomous decision-making and personal discretion in their work, and is positively related to WA (Weigl et al., 2013). Skill discretion is related to intrinsic motivation (Bakker & Demerouti, 2007), and refers to the degree to which a job allows creativity and personal development and contains variety in tasks as well as low levels of repetitiveness (Karasek, 1979). In their study of acute care healthcare workers from six nations (the United States, Australia, the United Kingdom, Brazil, Croatia, and Poland),

McGonagle et al. (2014) found skill discretion to be particularly important for WA, as it was significantly related to WA in samples across the six nations. This finding suggests that increasing job control and skill discretion in certain jobs may help to preserve WA.

Supervisor and coworker support

Supervisor and coworker support are identified as key resources needed to meet the demands of an individual's job because they are functional in achieving work goals (Bakker & Demerouti, 2007). Instrumental support from coworkers can help facilitate more timely and efficient work, which may alleviate the impact of work overload (high demands) on strain (Van der Doef & Maes, 1999). Additionally, according to the stress-buffering hypothesis, social support protects employees from the emotional consequences of stressful experiences (Cohen & Wills, 1985). According to McGonagle et al. (2015), this buffering can occur through coworkers and supervisors providing encouragement or perspective in the face of stressful situations (socioemotional support).

Supervisor and coworker support have the potential to be particularly helpful to aging employees, because of their changing physical and mental capacities and greater likelihood of experiencing health issues, which can cause them to experience their work as more demanding. SEST (Carstensen, Isaacowitz, & Charles, 1999) supports the view that older workers will benefit more than younger workers from social support because older workers perceive they have decreasing amounts of time ahead of them and place higher priority on emotional goals compared to knowledge-acquisition goals. Therefore, older workers are more likely to experience social support as a salient resource that can help them maintain WA. McGonagle et al. (2015) in fact found that both coworker and supervisor support were significantly and positively related to WA in each of a series of three studies.

Task significance

Task significance refers to the extent to which the job and specific tasks influence the lives and work of other people (Hackman & Oldham, 1976). According to Hackman and Oldham's Job Characteristics Model, task significance is one of the key characteristics that leads to meaningfulness, responsibility, and knowledge of results, which then affect work motivation, performance quality, job and growth satisfaction, and low absenteeism and

turnover. Many studies have demonstrated the positive effects of task significance on employee and organizational outcomes. For example, Grant (2008) found that employees who received a task significance intervention (designed to increase awareness of the meaning and impact of their work) improved their levels of job performance relative other employees and to their own previous performance. He also found that task significance was related to increased job dedication and helping behavior through perceptions of social impact and social worth.

Although task significance is important to all workers, it should be even more salient to older workers (Truxillo et al., 2012b). As mentioned earlier, generativity motives, defined as the desire to establish and guide the next generation (Erikson, 1950, 1963) begin to develop in midcareer (Kanfer & Ackerman, 2004). SEST explains that older workers are more focused on meaning in their work rather than gaining job skills or career advancement (Kanfer & Ackerman, 2004); therefore, engaging in work that is perceived to affect the lives of others is likely to be a job resource for older workers.

Job crafting

Job crafting (Wrzesniewski & Dutton, 2001) refers to the act of independently modifying aspects of one's own job to improve the fit between the characteristics of the job and one's needs, abilities, and preferences (Berg, Dutton, & Wrzesniewski, 2008). According to Wrzesniewski and Dutton (2001), there are three different types of job crafting. Employees may craft (1) the tasks they must fulfill at work; (2) the interpersonal relationships they experience when performing their work; and (3) their own cognitive stance toward their work by positively reframing the way they think about certain aspects of the job.

Job redesign through job crafting allows employees to experience their work in a more engaging and meaningful way (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). Due to their extensive experience, older workers may be able to capitalize on knowledge and expertise they have accumulated over their working lives, if opportunities for job crafting are present. While likely beneficial for all employees, job crafting can positively impact older workers in particular because it can allow them to redesign their jobs to fit their changing needs and abilities, thereby maintaining and even enhancing their WA over time (Truxillo et al., 2012a, 2012b).

Schedule control

Work scheduling autonomy, or schedule control, was identified in the development and validation of Morgeson and Humphrey's (2006) Work Design Questionnaire as a key component of job design that is important to both research and practice concerning employees' well-being and performance. Schedule control has a positive influence on a variety of individual and organizational outcomes. For example, Swanberg, McKechnie, Ojha, and James (2011) found that schedule control led to increased work engagement by increasing schedule satisfaction and perceived supervisor support in a sample of hourly workers. Schedule control is likely very important to mid- and late-career employees because older age is associated to increased health issues, which often take time to manage. Further, many employees (especially older workers) need schedule control in order to adequately meet nonwork demands of caring for children, grandchildren, spouses, siblings, and aging parents.

Kelly and Moen (2007) present some best practices for enhancing schedule control: organizations can better implement common flexible work arrangements (i.e., flextime, telecommuting, reduced-hours options), including more systematic communication of these policies and targeted trainings to help employees and supervisors utilize existing offerings effectively. They also note the importance of supportive leadership and an organizational culture that aid in employees' ability to utilize flexible work arrangements that increase schedule control. Employers who are able to offer schedule control can help employees to maintain WA by letting them design, or at least have input on their schedules, which allows them to meet both their work and nonwork needs and demands most effectively, in a way that minimizes stress and its negative effects on health.

PERSONAL RESOURCES AND DEMANDS

In addition to demands and resources that exist within the job and work environment, research has also shown that personal characteristics are relevant to strain-related outcomes, and WA. For example, Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) proposed that the JD-R framework could be extended to include personal resources of self-efficacy, organizational-based self-esteem (feeling confident and highly-regarded in the organizational context), and optimism. Schaufeli and Taris (2014) have also acknowledged that JD-R models should include personal

demands, or "*personal vulnerabilities*," which are characteristics of the individual that can lead to negative outcomes for employees.

Personal resources are defined as characteristics of an individual associated with resiliency which can be drawn upon in order to meet the demands of a given situation (Hobfoll, Johnson, Ennis, & Jackson, 2003; Xanthopoulou et al., 2007). A great deal of research has demonstrated the importance of considering the interplay between work and nonwork aspects of an individual's life (Frone, Russell, & Cooper, 1992). Furthermore, Hobfoll and Wells (1998) describe how resources from various sources (e.g., life experiences, health, and wealth) can be utilized for successful performance on job tasks. When faced with a difficult situation or a stressful work-related incident, those with better physical and mental health are better equipped to successfully overcome the obstacle they are presented with. Given their importance, these personal resources are expected to have a buffering effect against job demands and serve as distinct beneficial factors for individual outcomes.

Personal health

Personal health is one of the most important personal resources because it has the ability to impact nearly every facet of one's life. Measured broadly, personal health is related to increased WA (Abdolalizadeh et al., 2012), and is directly linked to exit from the workforce via either disability or earlier retirement (Börsch-Supan, 2010; Disney, Emmerson, & Wakefield, 2006). Beyond a global personal health indicator, investigating the relative importance of physical and mental health as well as chronic health conditions provides a clearer understanding of how these various aspects of health impact WA, and the retention of older workers.

Physical health is important to consider in maintaining WA (and is, in fact, included in many WA measures) and retaining older workers because physical health is often a manifestation of other healthy behaviors and habits, and is associated with lower risk for many chronic health conditions (Warburton, Nicol, & Bredin, 2006). Physical health can help meet occupational demands by requiring less energy expenditure, relative to those with lower levels of physical health, in order to accomplish the same manual labor task. For older workers, particularly those in jobs that involve manual labor, physical health, or the decline in it, may be particularly salient when comparing themselves to

others or to their past ability. Supporting this notion, physical health is strongly related to WA, which bolsters the argument for considering physical health in the maintenance of WA (Sörensen et al., 2008).

Mental health (also included in measures of WA) is often measured as the absence of depressive and anxious symptoms and may also include questions regarding general levels of energy or fatigue (McHorney, Ware, & Raczek, 1993). Mental health serves as an important resource for meeting the demands of a given job, which are increasingly cognitive in nature, and is strongly related to higher WA (Bethge, Radoschewski, & Gutenbrunner, 2012). Though organizations are often wary of prying into the personal lives of their employees, including their mental health status, research has shown that training supervisors to be aware of mental health challenges employees face can be an effective intervention technique (Dimoff, Kelloway, & Burnstein, 2015). Dealing with mental health problems is challenging for individuals of any age, and for older workers in particular, staying in the workforce seems to be related to better mental health. Thus, when faced with mental health problems, it is imperative that older workers receive adequate resources, such as employee assistance programs, given that exiting the workforce will likely only exacerbate these problems.

As the workforce ages, *chronic health conditions* have become increasingly prevalent and are often conditions individuals live with for the rest of their lives. These health conditions range from musculoskeletal disorders (MSDs) and cardiovascular disease (CVD) to various forms of cancer and many of these conditions are associated with reductions in WA as well as an increased likelihood for exiting the workforce (Shultz & Wang, 2007). Although the specific treatment options vary considerably, these health conditions clearly represent a significant strain on an individual's ability to meet the demands of their job as well as general day-to-day demands that others may take for granted. Organizations may play a critical role in both reducing the prevalence of chronic health conditions, as well as providing workers who already have a chronic health condition with a workplace that enables them to obtain proper treatment. Given that health problems are commonly cited as a reason for exiting the workforce (Shultz, Morton, & Weckerle, 1998), these chronic health conditions deserve special attention because they are likely to play a crucial role in swaying an older worker's decision to exit the workforce.

Self-efficacy

Self-efficacy is an individual's general belief in their ability to be successful and perform well (Judge & Bono, 2001). It refers to the broader belief in one's ability, which is distinct from WA in that WA is referring specifically to one's ability to meet the physical and mental demands of one's job (Ilmarinen, 2007, 2009; Tuomi et al., 1997). Self-efficacy is an important predictor of positive outcomes in many contexts including coping with work-related stressors (Airila et al., 2014; Palermo, Fuller-Tyszkiewicz, Walker, & Appannah, 2013) and may be important for coping with age-related physical and mental changes as well. In fact, Palermo et al. (2013) found that self-efficacy, is positively associated with WA. Fortunately, a fair amount of research has been conducted on measuring and improving self-efficacy (Gist & Mitchell, 1992; Margolis & McCabe, 2006), which allows organizations to utilize this knowledge to empower their workforce.

Personality

Unlike some of the other personal resources, it may be more difficult to foster personality-related resources due to their relatively stable nature. However, these personal characteristics remain important for dealing with job demands, as well as the physical and mental changes that accompany aging. Although organizations may not be able to make large changes in an individual's personality, it may be possible to foster a general orientation that favors positive affectivity, emotional stability, and conscientiousness.

Positive affect refers to how much an individual feels enthusiastic, active, and alert. High positive affect is characterized by high energy, concentration, and engagement, whereas low positive affect is characterized by a lack of energy and general sadness (Watson, Clark, & Tellegen, 1988). Those with generally high levels of positive affect may experience the events that unfold around themselves as less stressful in comparison to the same events occurring in one's life that is low in positive affect. Research has indeed linked positive affectivity to greater levels of resilience as well as lower levels of burnout (Gloria, Faulk, & Steinhardt, 2013). Clearly, those high in positive affect seem to be best positioned to deal with challenging job demands and occupational contexts. Older workers with low levels of positive affect may find it particularly difficult to cope with changes in their WA, and thus may be at greater risk for exiting the workforce compared to those higher in positive affect.

The second personality trait that has been linked to WA is *neuroticism*, or the opposite of it, *emotional stability* (McGonagle et al., 2015), which is one of the five primary personality traits that constitute the Big Five (Digman, 1990; McCrae & John, 1992). Neuroticism refers to an individual's propensity to experience nervousness, distress, frustration, worry, and irrational self-consciousness (McCrae & John, 1992). Clearly, for individuals low in emotional stability, the chronic experiences of these negative feelings will take a toll on an individual over time. Supporting this view, greater levels of neuroticism have even been linked to shorter lifespans, in longitudinal studies (Terracciano, Löckenhoff, Zonderman, Ferrucci, & Costa, 2008). Older workers with high levels of neuroticism may be at increased risk for chronic health conditions, and their excessive worrying may exacerbate the challenges of coping with many work situations, as well as any declines in WA.

The third personality trait linked to WA is *conscientiousness* (McGonagle et al., 2015), which is also one of the personality traits identified in the Big Five (Digman, 1990; McCrae & John, 1992), and refers to one's propensity for being detail oriented, organized, and generally diligent in their actions and decision making (McCrae & John, 1992). While conscientiousness has been identified as an important factor for many organizational outcomes including job performance (Barrick & Mount, 1991), it is also associated with a longer lifespan (Terracciano et al., 2008). Interestingly, older workers tend to have slightly higher levels of conscientiousness, and this gradual personality change may represent an opportunity for organizations and researchers to facilitate further development of conscientiousness in their workforce. Conscientiousness may facilitate adaptation to changing physical and mental abilities in older workers, and therefore serve as a protective factor against experiencing declines in WA despite changing mental and physical abilities.

ADDITIONAL RESOURCES AND PROTECTIVE FACTORS

The above resources are far from an exhaustive list of the job and personal resources that may impact employees' WA throughout the lifespan. Each particular job, job context, and individual, has unique resources that can buffer against the effects of job demands on well-being and performance outcomes, such as WA. For example, feedback on success in work tasks is a job resource that can have a long-term effect on engagement, and

subsequently, WA (Airila et al., 2014). As the research on WA continues to grow, researchers and practitioners will have increased knowledge of the job characteristics that help to maintain and improve their employees' WA throughout the lifespan.

While health has been identified as one of the most important personal resources an individual has to meet the demands of their job, *healthy behaviors* in many ways shape an individual's level of personal health. Though there are certainly biological factors that contribute to differences in risk for various illnesses and diseases that cannot be altered, healthy behaviors such as exercise, eating a healthy diet, refraining from smoking, and moderating alcohol consumption can certainly play a large role in minimizing risks for various health problems (Serdula et al., 1996). These behaviors are also associated with a host of other positive outcomes, which underscores their importance for keeping older workers in the workforce, in good health, with a high level of WA (Penedo & Dahn, 2005). Of these behaviors, exercise is the most clearly linked to greater WA (Kaleta, Makowiec-Dąbrowska, & Jegier, 2006; von Bonsdorff et al., 2012), whereas diet is likely to be very important, but has been studied less frequently. Smoking has also shown a consistent negative impact on WA (von Bonsdorff et al., 2012), whereas the link between WA and alcohol consumption remains unclear (von Bonsdorff et al., 2012).

Conclusion

Based on our discussion of WA thus far, we will conclude this chapter with a discussion of future directions for research on WA, offer some recommendations that organizations can take to promote and maintain WA, and finally discuss potential challenges organizations may face in working to promote and maintain WA.

FUTURE RESEARCH DIRECTIONS

The research discussed in this chapter has provided an overview of WA and identified specific job and personal mechanisms that play a role in the maintenance and promotion of WA. Though this research has identified demands and resources important for the development of WA, this is a relatively new topic in the I/O and OB fields, and these organizational and personal factors should be explored further.

One of the greatest needs for future research is to investigate how psychosocial factors (e.g., leadership, the work-family interface, organizational climate) play a role in the development and maintenance of WA. Given that these factors play an important role for various performance, health, and well-being outcomes, we anticipate that a much broader array of psychosocial factors impact WA than the factors that have been investigated in the existing literature. Relatedly, the identification of moderators (e.g., job type) that determine when psychosocial variables affect WA is an important issue to investigate. Second, we advocate for continued discussions and research aimed at the development of a coherent definition, and measurement of WA. In fact, we see this issue as a key hindrance to the meaningful use of the WA construct within the psychosocial literature. Although some initial work has been done in this regard, it seems that measures of WA have now proliferated, and a key issue for the future of WA research is to investigate how these measures differentially fit into the nomological network of WA and predict exit from the workforce.

Finally, although there have been intervention studies aimed at improving WA, the vast majority have focused on physical therapy-based interventions, or studies conducted with individuals already suffering from chronic or acute disorders or injuries (Kuoppala & Lamminpää 2008). While these findings are useful, these may not generalize to relatively healthy older workers. Furthermore, these studies do not address how to maintain adequate WA; rather, they focus on how to improve it once something goes wrong. Thus, we urge researchers to continue investigating WA as a construct, and developing and evaluating psychosocial intervention strategies aimed at improving WA (Truxillo et al., 2015).

RECOMMENDATIONS FOR ORGANIZATIONS

Given the lack of intervention-based research on promoting WA specifically, the following recommendations are based on the observed relationships identified in the previous sections. We encourage researchers to continue developing and testing a wider range of interventions to better understand the most effective interventions for promoting and maintaining WA.

One method organizations may be able to use to promote WA among their employees is to reduce employee job demands, and increase their job resources, as identified in the previous

sections. This can be done through supervisor-based trainings, such as those used in safety interventions (Zohar & Polachek, 2014) and Total Worker Health TWH™ interventions (Hammer & Sauter, 2013). Similarly, organizations can revisit policies that may limit employee job resources or place unnecessary demands on employees. Second, in line with TWH™ interventions, organizations can go beyond providing workers with job resources and reducing job demands to include more holistic approaches aimed at promoting worker health and well-being. Given the strong relationship between worker health and WA, improving employee health may be one of the most effective mechanisms for promoting and maintaining WA.

Third, organizations can develop a system for monitoring employee WA in order to help identify those potentially in need of more directed attention. Similar efforts have been adopted by Japan, which recently implemented a nationwide standard for stress monitoring (Kawakami & Tsutsumi, 2016). This monitoring enables organizations to identify those at risk for high levels of stress and enables organizations to take steps toward reducing the stress of these workers. Relating to WA specifically, researchers at the Finnish Institute of Occupational Health have incorporated WA measurement into occupational health settings (Ilmarinen et al., 1991a, 1991b; Tuomi et al., 2001). Implementing this type of monitoring would require that employees' privacy is protected, and that employees with low WA are not stigmatized but instead provided with adequate resources, or opportunities to alter their specific job tasks to better match their physical and mental ability.

ORGANIZATIONAL CHALLENGES

Though there may be a number of individual, organizational, and societal benefits to promoting WA, there are also undoubtedly many challenges that organizations will face in this process. First, in some occupations, maintaining WA later in life is simply physiologically and biologically impractical. For example, in occupations requiring manual labor, the physical declines of aging will eventually make such occupations unrealistic and potentially unsafe for older workers. Nevertheless, increasing job crafting, shifting older workers in those fields to less physical positions that capitalize on their depth of knowledge, is one method for improving the match between an employee's physical and mental abilities and the demands of their position.

A second challenge organizations face lies in the need to consistently monitor WA and intervene with those most at risk for exiting the workforce. Some segment of the workforce may prefer that their organization not know their current level of WA and may reject any monitoring of WA for that reason. While this is a valid concern, the same rejection may come from nearly any organizational initiative requiring personal information. Furthermore, recent examples such as that of Japan implementing stress monitoring (Kawakami & Tsutsumi, 2016), and the Finnish Institute of Occupational Health utilizing WA in occupational health settings (Ilmarinen et al., 1991a, 1991b; Tuomi et al., 2001), show promise for the use of WA as a monitoring tool.

A third concern may be that any intervention that targets those most at risk for diminished WA, specifically older workers, and those reporting lower levels of WA, may be viewed as discriminatory or preferential treatment. While this type of monitoring in a sense is in fact preferential treatment if targeted at specific individuals, the majority of mechanisms that appear to drive WA (e.g., personal health, supervisor support, autonomy) also benefit younger workers. Thus, we would encourage organizations to implement these changes for all employees rather than only for those low in WA as they may serve as mechanisms for preventing reductions in WA before they begin.

A fourth set of challenges faced by organizational decision makers in promoting WA are the return on investment and monetary considerations. When taking into account the expected return on investment, it will be important for decision makers to take into account the wide range of potential benefits of WA promotion programs rather than focusing on short-term performance gains. These benefits include stability of the workforce, reductions in costs of training new workers, and even improved health and well-being which may increase performance beyond simply maintaining WA.

Finally, a concern with the implementation of interventions related to WA is the lack of empirical studies on workplace interventions to support older workers, including those taking a WA approach (Truxillo et al., 2015). In other words, although the I/O and OB literature can provide suggestions about how to support WA, testing of robust interventions is still scarce. This is, in fact, one of the key avenues for future WA research and one that we encourage researchers to continue investigating.

In sum, although WA was only recently introduced into the I/O and OB literature, we believe it can increase our knowledge

of how to retain older workers and see it as a critical antecedent to exit from the workforce. Given the challenges that an aging workforce presents, WA appears to be well suited to aid in improving our understanding and ability to manage these demographic shifts in the workforce. Thus, we encourage researchers to continue investigating the antecedents and outcomes of WA with a particular focus on the psychosocial factors, and intervention-based studies aimed at maintaining and promoting WA.

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