Age and Reemployment Success After Job Loss: An Integrative Model and Meta-Analysis

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Despite widespread popular concern about what it means to be over 40 and unemployed, little attention has been paid in the literature to clarifying the role of age within the job seeking experience. Extending theory, we propose mechanisms by which chronological age affects job search and reemployment outcomes after job loss. Through a meta-analysis and examination of 2 supplemental datasets, we examine 5 questions: (a) How strong is the relationship between age and reemployment speed? (b) Does age disadvantage individuals with respect to other reemployment outcomes? (c) Is the relationship between age and reemployment outcomes mediated by job search activities? (d) Are these relationships generalizable? and (e) Are these relationships linear or curvilinear? Our findings provide evidence for a negative relationship between age and reemployment status and speed across job search decade, world region, and unemployment rate, with the strength of the negative relationship becoming stronger over age 50. Job search self-efficacy and job search intensity partially mediate the relationship between age and both reemployment status and speed.

Keywords: job loss, unemployment, aging, age, job search

The effects of the recent recession on older workers were unprecedented (Farber, 2011). For example, in the U.S. the median duration of unemployment tripled for individuals over the age of 55, rising more quickly than the unemployment durations of younger adults (United States Government Accountability Office, 2012). Unemployment for individuals of any age is associated with problems such as financial hardship and decreased subjective well-being (McKee-Ryan, Song, Wanberg, & Kinicki, 2005). However, there is some evidence to suggest that unemployment after job loss is likely to last longer for older workers than younger workers (Klehe, Koen, & DePater, 2012), in part as a consequence of outdated older worker job skills (Fossum, Arvey, Paradise, & Robbins, 1986), less knowledge about modern job search methods (Gibson, Zerbe, & Franken, 1993), and explicit and/or implicit employer preferences for hiring younger workers (Ahmed, Andersson, & Hammarstedt, 2012; Allan, 1990; Berger, 2005; Patrickson & Ranzijn, 2003). The many challenges that older job seekers face in obtaining employment has prompted some to refer to older job seekers as the "new unemployables" (Heidkamp, Corre, & Van Horn, 2010) at the same time that older workers represent the most rapidly growing segment of the labor force in most developed countries.

There has been considerable research attention to the topic of unemployment in general (for a review see Wanberg, 2012), and many factors relevant to successful reemployment have been identified (Kanfer, Wanberg, & Kantrowitz, 2001; Wanberg, Hough, & Song, 2002). However, it is notable that given the widespread popular interest and concern about unemployment for older individuals, little attention has been paid in the literature to clarifying the specific role of age within the job search and reemployment experience (Finkelstein, Truxillo, Fraccaroli, & Kanfer, 2015; Klehe et al., 2012). Age is frequently included in the studies of unemployment in economics, but most often as a control variable rather than a focal variable of interest. Meta-analytic findings of personality and motivational determinants of job search and reemployment outcomes by Kanfer et al. (2001) indicated a relatively weak negative relationship between age and reemployment status ($\rho = -.07$). However, these results were based on only eight studies with a total of 3,425 participants. In addition, that meta-analysis did not address the theoretical foundations for the relationship between age and reemployment success or the nature and

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generalizability of the relationship (e.g., whether it might be curvilinear or have certain moderators). A major obstacle to the study of how chronological age relates to job search and reemployment after job loss has been the lack of a conceptual model that delineates the pathways and psychological processes by which chronological age has its effects. For example, although beneficial age-related changes in emotion regulation may advantage the older worker in terms of job search intensity in the face of failure, pervasive age-related discrimination in employer hiring practices may reduce the likelihood of reemployment success, independent of the individual's search efforts.

Our study has three important objectives. Our first contribution is theoretical. We coordinate theory and research across multiple areas of psychology (including cognitive, life span, occupational, organizational, and social psychology) and economics to describe the many layers of meaning behind a person's chronological age that become relevant in the job search context. We extend current theory by describing age as an imperfect and multifaceted proxy representing (a) age-sensitive person attributes (adult development) and (b) time-sensitive environmental forces and sociocultural reactions that in turn affect individuals' job search activities and reemployment outcomes, including not only reemployment speed but other outcomes such as the quality of the postunemployment position. Within this theoretical development, we provide a discussion of criteria to better understand the varied aspects of job search and reemployment outcomes that may be affected by one's age.

Our second contribution is empirical. We synthesize available research and quantify the effect size, nature, and generalizability (e.g., across decade, geographic region, and unemployment rate) of the relationship between chronological age and job search and reemployment outcomes. Our empirical examination includes a meta-analysis of 94 studies that examine age and job search/reemployment outcomes and analyses of two sets of supplemental data; namely, 303 studies that could not be included in the meta-analysis and the U.S. 2014 Displaced Worker Survey (U.S. Census Bureau, 2014).

Our findings provide preliminary responses to five crucial questions relevant for researchers, policymakers, job search counselors, and job seekers. First, how strong is the relationship between age and reemployment status and speed? Second, does age disadvantage (or advantage) job seekers with respect to other reemployment outcomes, such as the terms of the employment contract (part-time/full-time/temporary work) or the intrinsic and extrinsic characteristics of the new position? Third, is the relationship between chronological age and reemployment outcomes mediated by job search activities? Fourth, to what extent is the relationship between age and reemployment outcomes generalizable across decade, geographic region, and unemployment rate? And finally, what is the nature of the age-reemployment outcome relationship? The psychological literature typically examines relationships using analytical techniques with linear assumptions—in this case assuming that the relationship between age and reemployment speed is linear. Our analyses examine this assumption by evaluating potential curvilinearity in age relationships with these outcome variables; that is, whether there are changes in the putative negative relations between age and reemployment outcomes across adulthood.

A final contribution of our study resides in our identifying significant gaps in the empirical literature—important omissions in available studies of age and reemployment outcome relationships that hinder our ability to comprehensively understand the role of age in the processes that contribute to reemployment success. In our discussion, we identify new research directions that are important to policymakers, job counselors, employers, recruiters, and job seekers in improving the experience and success of job pursuit after job loss.

Age and Job Search: Theoretical Development

We present a conceptual model of age and reemployment outcomes in Figure 1. The model portrays chronological age as an imperfect index reflecting normative changes in adult development and the effects of broad environmental forces and sociocultural reactions over the life span. The model further depicts multiple aspects of job search and reemployment that we propose may be affected by job seeker age. Finally, we propose that the relationships may be moderated by macro factors such as world region, decade, and unemployment rate.

Focal Criteria

Reemployment is not a one-dimensional outcome. Although "the first intuitive criterion of search success is based simply on

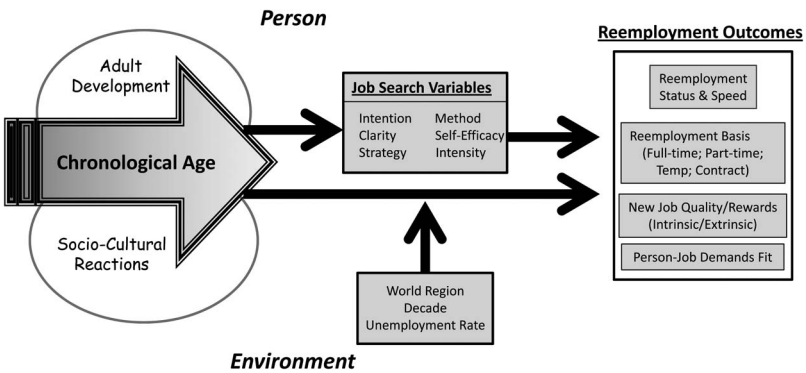

Figure 1. Age and reemployment outcomes: an integrative model. Our empirical data address the relationships between the shaded boxes.

who has found a job," other aspects of this criterion space are critically important (Brasher & Chen, 1999, p. 58). Reemployment status and speed outcomes do not consider, for example, the pay level of the new job in comparison with one's previous position, whether the new job is part-time despite a desire for full-time work, or one's satisfaction with the new job. Drawing upon and extending previous discussions of the reemployment criterion space (Saks, 2006), we propose that reemployment success for unemployed workers be evaluated according to four dimensions: *reemployment status and speed* (e.g., securing a job and how quickly the job is found), *reemployment basis* (e.g., type of job-full-time, part-time, temporary, or contract), the *extrinsic rewards* (e.g., wages, benefits, work schedule, or location), and *intrinsic rewards* (e.g., satisfaction of one's psychological needs, such as need for affiliation or accomplishment) provided in the new job (Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011), and the person-job demands fit (e.g., the match between the individual's skills and abilities and the requirements of the new job; Edwards, 1991).

Because of the expense of unemployment insurance, a critical reemployment outcome for government entities is reemployment/reemployment speed (Luhby, 2012). From a job seeker's perspective, however, reemployment success is likely to reflect the extent to which the reemployment process unfolds in a way that fulfills his or her goals with respect to the four proposed dimensions. For example, reemployment speed may be of most importance to an individual with limited financial resources. However, another job seeker may reject a job offer that provides inadequate challenge or pay (i.e., delay reemployment) to better fulfill intrinsic or extrinsic reward preferences.

Consistent with extant theories of the job search process (e.g., Kanfer et al., 2001), we view job search as self-regulated psychological and behavioral processes that serve as a proximal antecedent to reemployment outcomes. Individual differences in job search behavior are multifold; typically studied components are illustrated in the job search variables box in Figure 1. According to the self-regulation model, job search begins with the establishment of a goal and commitment to finding new employment (*intention to search*). Among individuals approaching a normative retirement age within their respective country or social group, unemployment creates a transition point for consideration of whether or not to continue participation in the labor force (Kanfer, Beier, & Ackerman, 2013; Skirbekk, Loichinger, & Barakat, 2012; Wheaton & Crimmins, 2013). For individuals who establish a reemployment goal and engage in job search, the process is largely autonomous and subject to an individual's ability to self-regulate their activities, effort, and emotions (Kanfer et al., 2001).

Individuals may differ in the manifestation of their job search according to the direction/content of their search (e.g., objectives of the search, job search methods and information sources used, and the quality of the search) and the intensity/effort expended on the job search (Kanfer et al., 2001). These components of job search are highly relevant to individual reemployment outcomes. For example, *job search clarity* (having clear objectives during the search) is related to higher levels of job-organization fit and lower intention to turnover in the new job (Wanberg et al., 2002). Individuals find positions through *job search methods* that are formal (e.g., print and electronic advertisements, employment agencies) and/or informal (e.g., friends, relatives, or acquaintances). Informal sources of information are especially valuable. A survey of individuals in 28 countries showed the proportion of job seekers finding jobs through informal channels ranged from 26% to 83% (Franzen & Hangartner, 2006).

The *strategy* through which individuals approach their job search is also important. For example, job seekers who tend to use a focused job search strategy (i.e., carefully targeting one's search to fit one's preferences and qualifications) as opposed to a haphazard strategy (i.e., applying randomly, using a scattered approach) tend to be more satisfied with their new jobs (Crossley & Highhouse, 2005). The use of an exploratory strategy (e.g., being open minded to different possibilities) has been related to getting more offers (Crossley & Highhouse, 2005; Koen, Klehe, Van Vianen, Zikic, & Nauta, 2010). *Job search self-efficacy* (confidence about one's success in various aspects of the job search such as writing a good resume) is positively correlated with total number of offers, number of offers from preferred employer, and reemployment speed (Kanfer et al., 2001; Moynihan, Roehling, LePine, & Boswell, 2003). Meta-analytic findings also suggest that individuals who put more time and effort into their job search (*job-search intensity*) receive more job offers and have shorter unemployment durations (Kanfer et al., 2001).

Chronological Age: A Reflection of Adult Development, Environmental Forces, and Socio-Cultural Reactions

Chronological age is commonly referenced by employers, individuals, and the law. The definition of what constitutes "older" in self-and other-judgments related to work varies. In the United States, for example, older individuals are defined by law as persons 40 years of age or older. In Europe, however, individuals are more likely to be defined as older based on the closeness of their age to the mandatory retirement age (i.e., for most European countries around 65 years of age).

Our meta-analysis examines the relationship between chronological (i.e., calendar) age and the job search and reemployment outcomes we outlined in the previous section. As part of our theoretical development and consistent with Figure 1, this section explains how chronological age is a reflection of *adult development* (normative, age-related mean-level changes in abilities, knowledge, skills, health, motives, and social networks) and time-related *environmental forces and sociocultural reactions* (changes that occur in employment trends, technology, and employer stereotypes). This theoretical development allows us to provide a more meaningful discussion of why and how an individual's age might be expected to be relevant to the job search and reemployment process.

Adult Development

Although there is substantial interindividual variability in the speed in which individuals experience the aging process, there is substantial evidence for normative mean-level changes over the life span in areas such as cognitive abilities and knowledge (Ackerman, 2005; Salthouse, 2012), spatial abilities (Borella, Meneghetti, Ronconi, & DeBeni, 2013), physical competencies (Maertens, Putter, Chen, Diehl, & Huang, 2012), social networks (Carstensen, 1992), and work motivation (Inceoglu, Segers, &

Bartram, 2012; Kanfer & Ackerman, 2004). A review of these normative, maturational changes helps elucidate the theoretical aspects of adult development most relevant to the job search and reemployment process.

Abilities, knowledge, skills, and health. An extensive body of research documents normative, age-related change trajectories in abilities, knowledge, skills, and health. Aging is associated with experience-related increases in crystallized intelligence (i.e., general knowledge, vocabulary, and verbal comprehension), domain knowledge (Ackerman, 2014), and higher mean levels of emotional control (Carstensen, Mayr, Pasupathi, & Nesselroade, 2000; Lawton, Kleban, Rajagopal, & Dean, 1992). At the same time, however, aging is also associated with gradual declines in fluid intellectual abilities (e.g., working memory, abstract reasoning, attention, and abstract reasoning), motor skills (Seidler, Alberts, & Stelmach, 2002), and selected physical capabilities (Maertens et al., 2012). Although age-related changes in these attributes have negative implications for older individuals in some areas, such as new skill learning, recent evidence suggests that older individuals may proactively cope with age-related changes in cognitive and nonability domains by job crafting to create appropriate person-job demand fit (Kooij, Tims, & Kanfer, 2015; Weigl, Müller, Hornung, Zacher, & Angerer, 2013).

Age-related declines in physical abilities and health are also well-documented, though the age at which declines take place depends upon individual-environment interactions. Over the life span, most individuals experience decreases in immune system function, muscle mass, strength, aerobic capacity, postural instability, and hearing (Maertens et al., 2012). Although the proportion of occupations that demand high levels of physical ability (about 7%) or long periods of standing (about 33%) is relatively small in the United States, nearly 45% of workers over the age of 58 are employed in occupations that involve performing repeated physical tasks (e.g., moving heavy objects, kneeling, crouching, or standing) or working in uncomfortable conditions (e.g., cramped workspaces, outdoor labor, or exposure to abnormal temperatures; Johnson, Mermin, & Resseger, 2011). Reville and Schoeni (2008) found that 20% of a nationally representative sample of U.S. workers aged 51–61 reported a health concern that limited the type or amount of work they are able to perform. Individuals in occupations that make demands that exceed their current physical stamina or ability are likely to diminish their commitment toward seeking reemployment in the same type of position, and to instead develop job search objectives that support more feasible goals (see, e.g., Niessen, Heinrichs, & Dorr, 2009). Compared with individuals in good physical health, individuals in poor physical health are more likely to make a decision to retire (He, Colantonio, & Marshall, 2003), put less time into their job search (Šverko, Galić, Seršić, & Galešić, 2008), and have longer unemployment durations (Lotters, Carlier, Bakker, Borgers, Schuring, & Burdorf, 2013).

Motives. Work motives refer to an individual' preference (whether driven by conscious or nonconscious values) to strive for specific job characteristics or work outcomes (Kooij et al., 2011). Meta-analytic findings of 84 studies by Kooij et al. (2011) on age-related differences in work motives shows that age is positively related to the strength of intrinsic motives and negatively to the strength of extrinsic motives. Relative to younger workers, older individuals show higher motive strength for work that provides opportunities for accomplishment, autonomy, helping others, contributing to society, and job security. In contrast, learning, advancement, and pay are less important work conditions to older individuals than younger individuals. Compared with younger workers, older workers are less likely to be willing to relocate (Goldberg, Finkelstein, Perry, & Konrad, 2004) and more likely to seek part time jobs (Farber, 1999; Feldman, 1990). Older workers still often begin their job search with higher wage expectations than younger workers because of expectations based on previous pay levels and years of experience (De Coen, Forrier, & Sels, 2013).

Although age-related changes in work preferences are relatively well-documented, less is known about the influence of motives on job search and reemployment outcomes (such as job quality) after job loss. To the extent that motives play a role in job search, older individuals may conduct more focused job searches than younger individuals. Research has shown that unwillingness to relocate is related to slower reemployment (Gutteridge, 1978), suggesting that at least certain types of choosiness can reduce reemployment speed.

Social networks. Socioemotional selectivity theory (SST; Carstensen, 1992; Lang & Carstensen, 1994) posits an age-related reduction in the size and composition of social networks as a consequence of changing goals and resource conservation. Results of a recent meta-analysis by Wrzus, Hänel, Wagner, and Neyer (2013) on the relationship between age and individuals' global social networks (comprised of all of an individual's relationships, including those with family, friends, coworkers, neighbors, and others) provide support for SST and show that as individuals grow older, the size of their personal and friendship networks grows smaller, despite stability in family member network size. Although Wrzus et al. (2013) reported insufficient data to evaluate whether individuals experience a similar pattern of age-related decline in work-related social networks, it is reasonable to expect that older workers will have weakened career-specific networks to help them find jobs when many of their former colleagues and work-related acquaintances have retired. Similarly, unemployed individuals are more likely to know other unemployed individuals, reducing the potential power of the individual's social network in facilitating reemployment success (Cingano & Rosolia, 2012). Individuals with smaller social networks also spend less time networking (Van Hoye, van Hooft, & Lievens, 2009). Although social networks do not seem to help individuals get higher wages, jobs found through social networks tend to be a better match to individuals' career plans (what they want to be doing) and personal abilities (Franzen & Hangartner, 2006).

Environmental Forces and Socio-Cultural Reactions

As shown in Figure 1, the changes in person attributes that unfold as a result of maturational processes represent only one class of factors that give meaning to differences in calendar age. A second class of factors pertains to the environmental forces, including the economic, legal-political, technological, demographic, and sociocultural dynamics (Griffin, 2008) that make up the milieu in which individuals seek reemployment after job loss. In the context of investigating age and job pursuit, these external factors are posited to contribute to sociocultural reactions that affect (a) employment trends and employer expectations (that can over time render previously appealing skills and job search methods out of

date), and (b) the stereotypes that members of society (and employers) hold toward aging and levels of tolerance/willingness to accommodate older workers.

Changing employment trends, technology, and employer expectations. Economic skills obsolescence arises from depreciation in an individual's skills as a function of changes in employment trends (e.g., declining demand for typewriter repair specialists), the introduction of technologies that make extant skills obsolete (e.g., automated bank tellers), and/or changes in organizational skill needs (van Loo, DeGrip, & DeSteur, 2001). Although economic skills obsolescence can occur at any age as a function of changing market demands, older individuals are at a higher risk for this form of skills obsolescence given their characteristically longer job tenures (United States Department of Labor, Employment and Training Administration, 2014) and lower levels of participation in education and job skills training (Hamil-Luker & Uhlenberg, 2002) compared with younger workers. The longer tenures of older individuals also result in a tendency for older job seekers to possess more firm-specific capital (specific knowledge of one employer's people, products, and history, see Becker, 1993) than younger job seekers, a form of knowledge that is valued more highly by the focal organization than it is by the external market (Maestas & Li, 2006). These longer tenures can lead to longer unemployment durations because job seekers' reservation wages are positively influenced by the above-market wages (wages including a premium for firm-specific human capital) that they received at their previous job (Valletta, 1991). Further, older workers are more likely than their younger counterparts to be working in declining industries, such as textile and durable goods manufacturing, because of where the job market needs were when they began their careers (Hirsch, Macpherson, & Hardy, 2000; Koeber & Wright, 2001). Economic skills obsolescence contributes to mismatches between the human capital of job seekers and the types of human capital desired by employers (Hirsch et al., 2000; Hutchens, 1988; Koeber & Wright, 2001). Upon reemployment, older workers are often segregated into a narrower range of industries and occupations than are younger workers, both in the United States and in other developed nations (Daniel & Heywood, 2007; Dygalo, 2007; Hirsch et al., 2000; Hutchens, 1988). Because these industries are also often in decline, more job seekers (laid off from these industries) are competing for fewer job openings, resulting in reduced reemployment speed and quality.

While job skill training represents an effective method for mitigating economic skills obsolescence, there is evidence to suggest age-related differences in the motivation and effectiveness of such training for older employees (see Beier & Kanfer, 2009). Although the effect size is small, older workers are less likely than younger workers to participate in career development and training activities to keep their skills current (Graaf-Zijl, Van den Berg, & Heyma, 2011; Ng & Feldman, 2012; United States Department of Labor, Employment and Training Administration, 2008). Meta-analytic findings by Kubeck, Delp, Haslett, and McDaniel (1996) show a negative relationship between age and job-related training outcomes, although many of these studies use training methods that disadvantage the older worker (Beier & Ackerman, 2005; Czaja & Sharit, 2009). Employers may also be less likely to provide training to older workers than younger workers because of beliefs that older employees are nearer to retirement and less motivated or capable of benefiting from training (Heidkamp et al., 2010; Maurer, Wrenn, & Weiss, 2003).

Over time, changes in technology and recruiting practices also contribute to job search skill obsolescence among older individuals. Because older individuals have typically been at their past employer longer than younger individuals, this usually means a longer time has passed since they have searched for a job. As such, older job seekers may possess job search skills that are viewed as out of date by employers. For example, in a study questioning employers about the barriers they believed older job seekers faced in finding employment, inadequate preparation for job interviews was a theme (Gibson et al., 1993). Similarly, in a study of job seekers over 40 in Australia (Patrickson & Ranzijn, 2003), employers stated that older job seekers listed their past accomplishments on their resumes with no attempt to explain how their skills were transferable to the new position. In interviews, they talked about past experiences and asked questions about what the company could do for them instead of indicating to their prospective employer how they could fill the employer's needs. Older job seekers are also more likely than their younger counterparts to have difficulty navigating online job search sites and employer websites (United States Government Accountability Office, 2012), and do not use these modern job search tools as often as younger workers (Westaby & Braithwaite, 2003). To the extent that older individuals do not use contemporary job search techniques, their unemployment spells may be longer. To the extent that older individuals have more uncertainty and concern about the search process, they will experience lower job-search self-efficacy (Seo, Barrett, & Bartunek, 2004).

Stereotypes and willingness to accommodate older workers. Stereotypes are beliefs and expectations about the characteristics of individuals in a given group (Cuddy & Fiske, 2002). Negative age-related stereotypes abound, and these stereotypes can affect employer choices and actions in hiring (Bendick, Brown & Wall, 1999; Kite, Stockdale, Whitley & Johnson, 2005; Lahey, 2008; Rosen & Jerdee, 1976). In a recent meta-analysis, Ng and Feldman (2012) delineated six common stereotypes of older workers: (a) poorer performers, (b) less motivated, (c) less willing to participate in training and career development, (d) resistant to change, (e) less trusting, (f) less healthy, and (g) experience more work-family imbalance. However, the only stereotype for which the authors were able to find significant empirical support was that older workers were less willing to participate in training and career development.

Research has also uncovered positive stereotypes of older workers, including reliability, loyalty, and stability (Finkelstein, Burke, & Raju, 1995; Taylor & Walker, 1994). However, these positive stereotypes do not seem to translate into positive perceptions of older job applicants. In a meta-analysis, Bal, Reiss, Rudolph, and Baltes (2011) found that although older workers were perceived by employers as more reliable than younger workers ($k = 13$, $\rho = .31$), ratings of suitability for hiring were more negative for older workers than younger workers ($k = 18$, $\rho = -.30$). Similarly, a meta-analysis of experimental studies in simulated employment contexts found that younger raters rated the job qualifications and potential for development of older workers (usually aged 55–65) as lower than the job qualifications and development potential of younger workers (usually under age 35), with effect sizes of -0.21 and -0.35, respectively (Finkelstein et al., 1995). Warr and Pen-

nington (1994) found that older persons were perceived to be more qualified for jobs that demanded specialized expertise and less qualified for jobs that were fast-paced and required greater energy. Research findings further suggest that age stereotypes may be strongest in certain industries viewed as preferring "young individuals" such as retailing, hotel and catering, finance, and insurance (Posthuma & Campion, 2009).

In the United States, some employers may have biases for younger employees because of issues such as fringe benefit costs. Health insurance, life insurance, and defined benefit retirement plans are more expensive for older workers than any other age group (Lahey, 2007). Employers with high levels of benefits tend to hire fewer older workers (Hirsch et al., 2000; Munnell, Sass, & Soto, 2006; Scott, Berger, & Garen, 1995). In addition to having direct impacts on employment outcomes, these age-related employer judgments may affect an individual's job search. Specifically, age-based hiring judgments may provoke feelings of inadequacy and unfairness on the part of the job seeker, subsequently reducing feelings of control, self-efficacy, and goal pursuit (Niessen et al., 2009). To the extent that older individuals experience lower feelings of control and self-efficacy, they may in turn engage in lower levels of job search intensity (Kanfer et al., 2001).

Moderators

As portrayed in Figure 1, we propose that the relationship between age and reemployment outcomes may be moderated by specific contextual factors, such as geographic region (i.e., location of job search), decade, and labor market demand (as indexed by unemployment rate). Perhaps the most obvious of these moderators is unemployment rate. As unemployment rates increase, the availability of labor increases and employers have more opportunity to enact choice in hiring decisions. Higher unemployment rates can be expected to amplify the difficulty that older individuals may have in finding quality jobs. The moderating effect of decade is proposed to reflect the joint influence of more gradual, macrolevel changes in economic conditions, the implementation of government and institutional policies, and associated changes in social norms that promote job search and reemployment among older workers, which in turn, may influence older individual employment practices. Finally, we examine whether geographic location may moderate age—reemployment relations based on cross-cultural and cross-country differences in values about the role of work in later adulthood (Warr, 2008; Williamson & Higo, 2009) and workforce demographics. For example, in countries with higher proportions of young persons and cultural values that support retirement and leisure in older adulthood, employers may be better able to act on age-related biases.

Research Questions

Our model depicts an individual's chronological age as an index that captures the impact of normative, age-related changes in adult development and environmental and sociocultural forces (changing employment trends and expectations, aging stereotypes), and suggests expected relationships between chronological age, job search, and reemployment. Based on this model and prior findings, we conduct a meta-analysis to examine five research questions, and supplement these findings with analysis of 303 studies (primarily from the economics literature) that could not be included in the meta-analysis. We then examine the first and fifth research question in greater detail using data from the U.S. Displaced Worker Survey.

Our conceptualization and prior findings suggest a negative relationship between age and reemployment status after job loss and speed of reemployment. *Research question one* asks how strong (with respect to effect size) this negative relationship is. *Research question two* examines to what extent age is also related to other reemployment outcomes, such as employment basis (temporary/part-time/full-time), the intrinsic and extrinsic characteristics of the new position, and person-job demand fit. Research on these outcome domains has been rare. Some prior work suggests that some aspects of adult development (such as age-related increases in motive strength for work that provides intrinsic rewards; Kooij et al., 2011) may facilitate aspects of reemployment quality (i.e., intrinsic rewards in the new job). Yet, our cumulative theoretical analysis based on consideration of environmental forces that contribute to job search and economic skills obsolescence suggests that on average, reemployment quality outcomes will be compromised for older (in comparison with younger) job seekers.

With *research question three*, we examine the extent to which age exerts at least part of its influence on reemployment outcomes through job search mechanisms including intention to search, job search clarity, the job search methods or strategy used, job-search self-efficacy, and search intensity. Based upon our review, we expect that age will be negatively related to job search intention, the use of social networks, job-search self-efficacy, and overall search intensity (thus compromising reemployment status, speed, and quality) and positively related to job search clarity and focused job search strategy (having the potential to improve job search status, speed, and quality).

Our investigation allows us to examine two additional research questions. Consistent with our proposed model, *research question four* focuses on the extent to which the relationships between age and job search and reemployment outcomes generalize across regions of the world, over decades, and across employment rates. Because decade represents a complex variable that may reflect gradual changes in normative beliefs or changes in the demand for skills held by employers because of the current state of technology and consumer preferences, we separate out unemployment rate and specifically investigate generalizability across different unemployment rates. Location of job search may reflect differences in cultural values and employer biases with respect to the role of older individuals in the workplace.

Finally, *research question five* examines, across available studies, the nature of the age-reemployment outcome relationships. Specifically, we assess to what extent there is support for a nonlinear relationship between age and reemployment outcomes. The psychological literature often treats age as a linear predictor of reemployment outcomes. There are several potential reasons for why we might expect that age—reemployment relationships may be nonlinear. Using reemployment speed as an example, securing employment is also difficult for job seekers at the youngest ages (Dewan, 2014), suggesting a potential inverted-U shaped curvilinear relationship between age and reemployment speed. It is also possible that the relationship between age and reemployment speed is particularly strong and negative at ages over a certain

point, such as age 60. For example, employer bias may be strongest toward individuals in their 60s and 70s rather than in their 40s or 50s. Nonlinearities in age-related changes, such as in cognitive and physical abilities, further suggest that the negative relationship between age and reemployment speed outcomes would be strongest at the oldest ages. For example, Miller and Lachman (2000) found in a large nationally representative U.S. sample that cognitive speed and reasoning declines were concentrated later in life; differences between the young (25–39) and middle aged (40–59) workers were largely insignificant. Similarly, Backes-Gellner, Schneider, and Veen (2011) report a nonlinear relationship between age and physical ability, with physical ability rising initially, hitting a peak during young adulthood, and then slowly declining over time.

Meta-Analysis

Literature Search and Coding

Studies were identified by searches in the social sciences, economics, psychology, and management computerized databases focused on the keywords "reemployment," "job search" and "unemployment duration" as well as combinations of these keywords. The databases used included Business Source Premier (1944-2013), EconLit (1969-2013), PsycINFO (1970–2013), Academic Search Complete (1970-2013), PsycARTICLES (1970–2013), Psychology and Behavioral Sciences Collection (1970-2013), and Vocational and Career Collection (1970-2013). We also emailed active researchers in the field, searched in-press articles in leading journals, and reviewed articles presented in major conferences. Consistent with our model, we searched for studies that provided findings on the relationship between age and one or more job search variables and reemployment outcomes. We excluded studies that were based on simulations or mathematical models where the direct impact of age on reemployment success could not be ascertained. We included samples of unemployed adults or displaced workers; we excluded studies dealing with employed adults and youth, college graduates, or other labor market entrants. Because the economics literature does not report zero-order correlations, we contacted authors with articles published in 2003–2008 ($n = 52$) to request zero-order correlations. The studies of authors who responded to our requests were included in the meta-analysis ($n = 18$).

To ensure reliability in variable extraction and coding, the third author, the fourth author and a research assistant independently coded all extracted variables from ~70% of the primary studies, with a resulting 98% agreement in coding. Inconsistencies and questions were resolved through discussions with the research team, and the fourth author then coded the remaining 30% of the studies.

Meta-Analytic Procedures

In total, 94 studies contained zero-order correlations between age and job search or a reemployment variable and were included in the meta-analysis. The specific aspects of job search that were correlated with age in available studies include: job search intention ($k = 25$), job search clarity ($k = 4$), use of informal job search methods ($k = 6$), job search strategy ($k = 2$), job search self-efficacy ($k = 24$), and job search intensity ($k = 57$). While most measures of job search intention asked individuals to indicate their intention to actively engage in job search, we included a related proxy (reemployment commitment, or how committed individuals were to finding a job) as an index of job search intention to increase the number of studies available to examine this relationship.

The aspects of reemployment success that were correlated with age in available studies include reemployment status (1 = *reemployed at end of study*, 0 = *not reemployed*, $k = 51$), reemployment speed (operationalized as −1 times the number of weeks unemployed before a new job was found; $k = 18$), satisfaction with the new job ($k = 16$), income ratio (a comparison of wages in the new job to the old job; $k = 7$), and person-job fit (e.g., the extent to which the new job measures up to the kind of job the individual was seeking; $k = 5$). We also coded and examined the meta-analytic relationships between age and number of interviews ($k = 6$) and number of job offers ($k = 5$). No studies were available for the meta-analysis that examined the association of age with intrinsic or extrinsic rewards in the new job, or the association of age with reemployment basis (type of job-full time, part time, temporary, or contract). Person-job demand fit (the match between the individual's skills and the abilities and requirements of the job) was also not measured in available studies. We used the Schmidt-Hunter random-effects meta-analysis method to synthesize effect size estimates (Hunter & Schmidt, 2004). Correlations were corrected for measurement error in the dependent variables when local reliability estimates from primary studies were available. We assumed a reliability of 1.0 for age, reemployment status, and length of time unemployed. We did not correct the effect sizes for range restrictions. We calculated two estimates of variability regarding the estimated population effect sizes, that is, 80% credibility intervals and 95% confidence intervals (CIs).

Meta-Analytic Findings

Research questions one and two address the strength of the relationships between age and reemployment outcomes. The top portion of Table 1 shows the meta-analytic relationships between age and reemployment outcomes. Although caution is needed in interpreting results where the number of studies is small, these results show that age is negatively related to reemployment status ($\rho = -.15$, $k = 51$), reemployment speed ($\rho = -.17$, $k = 18$), number of job offers ($\rho = -.11$, $k = 5$), satisfaction with new job ($\rho = -.05$, $k = 16$), and income ratio ($\rho = -.06$, $k = 7$). The 95% CIs of these correlations all excluded zero. Given reemployment status is a dichotomous variable, we can convert the correlation ($\rho = -.15$) into an odds ratio. The result shows that the odds for older individuals to be reemployed at the end of study periods is only 58% of the odds for younger individuals. In addition, older individuals are more likely to take longer to find jobs than younger individuals, and receive fewer job offers than younger individuals. Older individuals are also less likely to be satisfied with their new job, and to report lower income at their new job compared with their lost job than younger individuals. Age was unrelated to number of interviews or perceptions of person-new job fit.

According to Cohen's (1992) classic classification of effect sizes, relationships that are lower than an effect size of $r = .30$ can be considered small. However, Bosco, Aguinis, Singh, Field, and

Table 1
Meta-Analytic Relationships Between Age, Reemployment Outcomes, and Job Search Behavior

Variable	k	N	$\bar{r}$	ρ	SD_ρ	Lower CV	Upper CV	Lower CI	Upper CI
Reemployment outcomes									
Reemployment status (1 = reemployed, 0 = not)	51	500,060	−.15	−.15	.14	−.32	.03	−.18	−.11
Reemployment speed (−1 times the length of unemployment period measured at end of study)	18	71,459	−.17	−.17	.10	−.29	−.05	−.22	−.13
Number of interviews	6	3,762	−.04	−.04	.08	−.14	.07	−.11	.04
Number of job offers	5	2,843	−.11	−.11	.00	−.11	−.11	−.15	−.08
Satisfaction with new job	16	6,274	−.05	−.05	.04	−.11	.004	−.08	−.02
Income ratio	7	316,372	−.06	−.06	.02	−.08	−.04	−.07	−.04
Person-job fit	5	2,013	.01	.01	.05	−.05	.06	−.05	.07
Job search behavior									
Job search intention	25	14,366	−.05	−.06	.11	−.20	.08	−.10	−.01
Haphazard strategy	2	426	−.03	−.04	.00	−.04	−.04	−.14	.05
Exploratory strategy	2	426	.02	.02	.00	.02	.02	−.07	.12
Focused strategy	2	426	−.04	−.05	.00	−.05	−.05	−.14	.05
Job search clarity	4	4,067	−.03	−.03	.04	−.08	.02	−.08	.02
Informal search methods	6	1,640	−.07	−.07	.08	−.18	.03	−.15	.01
Job search self-efficacy	24	10,238	−.07	−.08	.12	−.23	.07	−.13	−.03
Job search intensity	57	32,160	−.08	−.08	.09	−.20	.03	−.11	−.06

Note. k = number of studies cumulated; N = cumulative sample size; $\bar{r}$ = sample-size weighted correlation, not corrected for measurement errors; ρ = sample-size weighted correlation corrected for measurement errors; SD_ρ = standard deviation of ρ; CI = 95% confidence interval; CV = 80% credibility interval of ρ.

Pierce (2015) have recently argued that effect sizes should be considered in a comparison to typical relationships found within the social sciences literature related to work. Based on examination of 147,328 effect sizes from studies reported in *Journal of Applied Psychology* and *Personnel Psychology* between 1980 and 2010, Bosco et al. (2015) found that median effect size was .16, with demographic variables such as age, gender, and tenure having an average sample size weighted relationship with performance of .09 (1,395 effect sizes), and with job movement outcomes such as turnover of .03 (461 effect sizes). Using this information, the relationships obtained between age and reemployment status and speed (r = −.15 and −.17) in this study would be considered moderate to strong when compared with findings between demographic and work outcomes typically obtained in the literature.

Research question three examines the extent to which the relationship between age and reemployment outcomes may be because of job search variables. As shown in the lower portion of Table 1, the estimated true correlations between age, job search intention, job search self-efficacy, and job search intensity were −.06 (k = 25), −.08 (k = 24), and −.08 (k = 57), respectively. The 95% CIs excluded zero. These results suggest modest negative associations between age and key self-regulatory aspects of job search. Specifically, older individuals tended to report weaker intentions to engage in job search, lower job search self-efficacy, and lower levels of job search effort than younger individuals. The 80% credibility intervals included zero, suggesting the potential existence of moderators in the relationships. The estimated relationship was not significant for various search strategies (k = 2), search clarity (k = 4), and informal search methods (k = 6).

Next, we used the meta-analyzed correlations in a meta-analytic path model to examine job search self-efficacy and job-search intensity as potential mediators of the relationship of age and reemployment status and speed (Viswesvaran & Ones, 1995). Although there are other job search and reemployment variables shown in Table 1, we focused on assessing mediation for these two job search variables because they were both significant and sufficient data for the path modeling were available. Specifically, to test a meta-analytic path model, meta-analytic correlations among all aspects of the model are required, some of which were not assessed in this study (e.g., job-search self-efficacy with reemployment speed). To address this issue, we were able to draw meta-analytic correlations between job search self-efficacy, job search intensity, and reemployment status/speed from the Kanfer et al. (2001) meta-analysis that focused more broadly on predictors of job search and reemployment. After prior research (e.g., Zimmerman, 2008) we used the harmonic mean of the sample sizes associated with all the correlations included in path modeling.

Table 2 shows the meta-analytic correlation matrix that was used in our path analysis. Table 3 provides the mediation test results based on the respective correlation matrix with harmonic sample sizes of 10,112 and 6,128 for employment status and speed, respectively. As shown in Table 3, the mediated effects via job search self-efficacy and job search intensity are both negative and significant. In addition, age has a significant direct effect on reemployment status and speed (−.13, $p < .001$ and −.16, $p < .001$, respectively). As supplementary analysis, we used the Baron and Kenny's (1986) multistep approach to test mediation effects via the reduction of age's effects after adding the mediators in the model. Using regressions based on the meta-analytic matrix, the first step shows that age has a coefficient of −.150 ($p < .001$, path c) when predicting reemployment status. In the second step, age was found to significantly predict the two mediators with coefficients identical to those in Table 3. In the third step, the two mediators were entered into the regression, and we found the remaining direct effect of age to be −.132 ($p < .001$, path c'). As such, the reduction in age's effect was $c—c' = -.018$ ($p < .01$).

Table 2
Meta-Analytic Correlation Matrix Among Age, Job Search Self-efficacy, Job Search Intensity, and Reemployment Status/Speed

Variable	1	2	3	4
Reemployment status				
1. Age	—			
2. Job search self-efficacy	ρ = −.08 (*k* = 24, *N* = 10,238, CI [−.13, −.03])	—		
3. Job search intensity	ρ = −.08 (*k* = 57, *N* = 32,160, CI [−.11, −.06])	ρ = .27[a] (*k* = 28, *N* = 10,020, CI [.26, .29])	—	
4. Reemployment status	ρ = −.15 (*k* = 51, *N* = 500,060, CI [−.18, −.11])	ρ = .09[a] (*k* = 11, *N* = 5,251, CI [.06, .12])	ρ = .21[a] (*k* = 21, *N* = 5,818, CI [.19, .24])	—
Reemployment speed				
1. Age	—			
2. Job search self-efficacy	ρ = −.08 (*k* = 24, *N* = 10,238, CI [−.13, −.03])	—		
3. Job search intensity	ρ = −.08 (*k* = 57, *N* = 32,160, CI [−.11, −.06])	ρ = .27[a] (*k* = 28, *N* = 10,020, CI [.26, .29])	—	
4. Reemployment speed	ρ = −.17 (*k* = 18, *N* = 71,459, CI [−.22, −.13])	ρ = .12[a] (*k* = 4, *N* = 2,335, CI [.08, .16])	ρ = .14[a] (*k* = 9, *N* = 3,243, CI [.10, .17])	—

Note. ρ refers to true correlations; *k* refers to the number of independent samples; *N* refers to the accumulated total number of individuals from primary studies; CI refers to 95% confidence intervals. Each cell in the matrix contains a meta-analyzed correlation either from the current meta-analysis or from Kanfer, Wanberg, and Kantrowitz's (2001) Table 2 and Table 3 (denoted by[a]).

For reemployment speed, we found that path $c = -.170$ ($p < .001$), and after the two mediators were entered into the model, path $c' = -.155$ ($p < .001$). The reduction in age's effect was $c—c' = -.015$ ($p < .01$). These results indicate job search self-efficacy and job search intensity partially mediate the relationship between age and both employment status and speed.

Research question four addresses issues of generalizability across environmental conditions using decade of job search, geographic region, and unemployment rate as moderators of the relationships between age and reemployment outcomes. Decade and region were tested as categorical moderators. As shown in Table 4, finer breakdowns in region and decade were available for some outcomes, depending on the number of studies that were conducted in each region/decade. A significant moderator effect is indicated where the 95% CIs for the categories do not overlap. Job search decade was a significant moderator for the age-reemployment status relationship, but not for relationships between age and reemployment speed or between age and satisfaction with the new job (see Table 4). Specifically, a significantly stronger negative relationship between age and successful reemployment was reported in studies that covered job search processes occurring during the 1990s (ρ = −.32, *k* = 20, with a corresponding odds ratio for older vs. younger individuals = .29) than among studies of job search occurring between 2000 and 2007 (ρ = −.07, *k* = 26, odds ratio = .78). Geographic region was also a significant moderator of the age—reemployment status relationship only. Older individuals were significantly less likely to obtain employment in Europe and Australia (ρ = −.29, *k* = 26, odds ratio = .33) compared with North America (ρ = −.07, *k* = 21, odds ratio = .78) or Eastern Asia (ρ = −.10, *k* = 3, odds ratio = .69).

Although not shown in table format, we also examined geographic region and job search decade as categorical moderators of three of the age–job search behavior relationships (i.e., age-job search intention, age–job search self-efficacy, and age–job search intensity). No significant differences were noted.

Unemployment rate was tested as a continuous moderator (see the left column shown in Table 5) of the relationship between age and three reemployment outcomes (status, speed, or satisfaction with new job). Because of the relatively small sample sizes used in the WLS regressions, we used a one-tailed test for the significance of predictors and reported the associated 90% CIs in Table 5. Results indicated consistency in the relationships between age and these three outcomes across varying unemployment rates. As shown in the lower left panel of Table 5, unemployment rate was

Table 3
Mediation Tests on the Relationship Between Age and Reemployment Status/Speed

	Path *a*	Path *b*	Mediated effect [95% confidence interval]	Direct effect (Path *c'*)
Age–reemployment status				
Job search self-efficacy	−.08***	.03**	−.002* [−.004, −.001]	−.13***
Job search intensity	−.08***	.19***	−.015** [−.019, −.011]	
Age–reemployment speed				
Job search self-efficacy	−.08***	.08***	−.006** [−.010, −.003]	−.16***
Job search intensity	−.08***	.11***	−.009** [−.013, −.004]	

Note. The two mediators are examined in the same mediation model simultaneously. Harmonic sample sizes are $N = 10{,}112$ and $N = 6{,}128$ for reemployment status and speed, respectively.
** $p < .01$. *** $p < .001$.

Table 4
Categorical Moderator Analyses on the Relationship Between Age and Reemployment Success

Variable	*k*	*N*	$\bar{r}$	ρ	SD_ρ	Lower CV	Upper CV	Lower CI	Upper CI
Age and reemployment status									
Decade of job search									
Before 1990	2	11,769	.05	.05	.04	−.004	.10	−.01	.11
1990–1999	20	158,303	−.32	−.32	.12	−.47	−.16	−.37	−.27
2000–2007	26	326,563	−.07	−.07	.02	−.09	−.05	−.08	−.06
2008 till now	3	3,425	−.10	−.10	.00	−.10	−.10	−.14	−.07
Geographic region									
North America	21	320,258	−.07	−.07	.02	−.09	−.05	−.08	−.06
Europe and Australia	26	176,804	−.29	−.29	.15	−.48	−.09	−.34	−.23
Eastern Asia	3	1,948	−.10	−.10	.04	−.15	−.04	−.16	−.03
Age and reemployment speed									
Decade of job search									
1990–1999	11	44,430	−.14	−.14	.08	−.25	−.04	−.19	−.09
2000–2007	5	12,543	−.13	−.13	.06	−.21	−.06	−.19	−.08
Geographic region									
North America	6	7,535	−.14	−.14	.14	−.32	.03	−.26	−.03
Europe and Australia	11	62,469	−.17	−.17	.07	−.25	−.08	−.21	−.12
Age and satisfaction with new job									
Decade of job search									
1990–1999	8	4,812	−.05	−.05	.04	−.11	.001	−.09	−.01
2000–2007	6	1,028	−.03	−.04	.00	−.04	−.04	−.10	.03
Geographic region									
North America	10	5,033	−.05	−.06	.06	−.13	.02	−.10	−.01
Europe and Australia	4	748	−.02	−.03	.00	−.03	−.03	−.10	.05
Eastern Asia	2	493	−.04	−.05	.00	−.05	−.05	−.14	.04

Note. *k* = number of studies cumulated; *N* = cumulative sample size; $\bar{r}$ = sample-size weighted correlation, not corrected for measurement errors; ρ = sample-size weighted correlation corrected for measurement errors; SD_ρ = standard deviation of ρ; CI = 95% confidence interval; CV = 80% credibility interval of ρ. In cases where the numbers of studies do not match with Table 1, it is because of missing data on the moderator variable.

a significant moderator of the relationship between age and job search self-efficacy ($b = -.06$, $SE = .02$, $p < .01$, $k = 24$). When job search was conducted during a period with higher unemployment rates, age was more negatively related to job search self-efficacy.

Research question five concerns the potential curvilinear relationships between age, job search behaviors, and reemployment success. To address this question, we used the mean age of each study's sample as a continuous moderator. Using this method, we can assess whether the relationships between age and our outcomes are stronger for older samples. As shown in the right hand panel of Table 5, sample mean age significantly predicted the correlations between age and reemployment status ($b = -.01$, $SE = .002$, $p < .05$ one-tailed), between age and reemployment speed ($b = -.01$, $SE = .006$, $p < .05$ one-tailed), between age and job search intention ($b = -.01$, $SE = .004$, $p < .05$ one-tailed),

Table 5
Weighted Least Square Regression Analysis With Continuous Moderators

Relationship	Unemployment rate as the moderator				Sample mean age as the moderator			
	B(*SE*)	90% CI	R^2	*k*	*B*(*SE*)	90% CI	R^2	*k*
Age–reemployment status	−.01 (.02)	[−.04, .02]	.01	51	−.01* (.002)	[−.01, −.002]	.12	51
Age–reemployment speed	.01 (.05)	[−.07, .08]	.003	18	−.01* (.006)	[−.02, −.001]	.15	17
Age–satisfaction with new job	−.03 (.03)	[−.08, .02]	.01	16	.01* (.006)	[.001, .02]	.32	15
Age–job search intention	.03 (.02)	[−.004, .07]	.13	25	−.01* (.004)	[−.02, −.003]	.19	24
Age–job search self-efficacy	−.06** (.02)	[−.09, −.02]	.27	24	.01 (.01)	[−.004, .02]	.08	23
Age–job search intensity	−.00 (.01)	[−.03, .02]	.002	57	−.01* (.003)	[−.01, −.001]	.05	53

Note. Unstandardized weighted least square regression coefficients (*B*) and their standard errors (*SE*) are presented. *k* is the total number of effect sizes. CI refers to confidence intervals. *k* refers to number of independent samples. Unemployment rate was the country-specific *z*-score, calculated by using country average and country *SD*. The mean and *SD* of the unemployment rate of a country refers to a particular county's average and *SD* in unemployment rates from year 1991 to 2007, based on data from the World Bank. The raw unemployment rate for the job search period was transformed as *z*-score rate = (raw rate−country mean rate)/country *SD* In cases where the numbers of studies do not match with Table 1, it is because of missing data on the moderator variable.

* $p < .05$ (one-tailed test). ** $p < .01$ (two-tailed test).

and between age and job search intensity ($b = -.01$, $SE = .003$, $p < .05$ one-tailed). These results indicate that as the sample's mean age increases, the relationships between age and job search intention, job search intensity, reemployment status, and reemployment speed become increasingly more negative. For instance, when the sample mean age increases by one year, the age–reemployment status correlation will be −.01 stronger (i.e., more negative). Sample mean age positively predicted the correlations between age and satisfaction with new job ($b = .01$, $SE = .006$, $p < .05$ one-tailed). There were insufficient data to complete this analysis for number of interviews, number of job offers, income ratio, person-job fit, search strategy, and use of informal search methods.

Analysis of Studies Not Reporting Zero-Order Correlations

A large number of studies ($n = 303$), primarily from the economics literature, were relevant but could not be included in the meta-analysis. That is, these studies included age in multivariate equations as one of several predictors of the outcomes of interest in our study, but the authors did not report the zero-order correlations between the study variables (a requirement of meta-analysis). As a supplement to our meta-analytic results, we provide a count-based description of the results of these studies within this section. For example, we report how many of the studies reported a statistically significant negative or positive relationship between age and the available outcomes at the 5% α level.

Although rudimentary, this count-based summary is valuable as a supplement to the meta-analysis. For example, in contrast to studies in the psychological literature, the studies stemming from the economics and related literatures were distributed across a broader span of time (i.e., 1960s through the 2000s), took place across a wider range of countries (including many of the transition economies of Eastern Europe), and tended to use large, population-based random samples (a typical methodology in the economics literature). The analyses reported in these studies include a variety of control variables (e.g., industry, occupation, and tenure at last job) that varied by study. While this muddies the interpretation of simple counts of significant findings, observed relationships between age and the outcomes can be considered even more robust after accounting for other relevant variables. Furthermore, this methodology provides insight into the extent to which certain control variables are likely to decrease the probability of finding a significant result for the age-outcome relationship.

The 303 studies that comprise this supplemental dataset used age as a predictor of reemployment speed ($k = 251$), reemployment wage ($k = 52$), and reemployment basis ($k = 4$). None of these studies used age as a predictor of job search activities, although job search was included as a control variable in some of the studies. No zero-order correlations between age and any job search variables were available in these studies. Studies focused on reemployment speed included assessments of reemployment status (1 = *reemployed at end of study*, 0 = *not reemployed*), reversed unemployment duration (−1 times the number of weeks unemployed before a new job was found), and reemployment hazard (the probability of finding a new job during the current week). Reemployment wage was operationalized as either actual (or logarithmic) wage or actual (or logarithmic) wage change/ratio from the last job. Studies on the determinants of reemployment basis consisted of two types: those that compared the effect size of the relationship between age and finding a part-time versus full-time job, and those that compared the effect size of the relationship between age and securing permanent versus temporary work. Because these studies were limited in number ($k = 4$) they were combined. A negative result in the table is coded when the study found a negative relationship between age and finding part-time and full-time employment. Similarly, a negative result was coded when the study found a negative relationship between age and finding permanent and temporary work.

Our count-based summary of the results of these studies is shown in Table 6. Supporting and extending our meta-analytic results, 81.2% of the studies that used age to predict reemployment speed reported a significant negative relationship (17.6% were not significant; 1.2% reported a positive relationship between the variables). Of the 52 studies that examined the relationship between age and reemployment wage, 44.2% reported a significant negative relationship, 44.3% showed a nonsignificant relationship, and 11.5% a significant positive relationship.

Only four studies examined the relationship between age and reemployment basis (full- vs. part-time and contract vs. permanent positions). These studies used a competing risks reemployment hazard methodology (survival analysis with a multinomial instead of dichotomous dependent variable), where exits from unemployment (finding a job) were separated into categories (i.e., reemployment bases), and simultaneously estimated. All studies found that it was more difficult for older job seekers

Table 6
Analysis of Studies Not Reporting Zero-Order Correlations: Relationship Between Age and Reemployment Outcomes

	k	*N*	Percentage of studies with negative age–reemployment relationship (%)	Percentage of studies with positive age–reemployment relationship (%)	Percentage not significant
Reemployment speed	251	5,807,971	81.2	1.2	17.6
Reemployment wage	52	212,503	44.2	11.5	44.3
Reemployment basis	4	5,283	100	0	0

Note. k = number of studies; N = cumulative sample size. A negative age–reemployment relationship was coded if age was negatively related to the hazard rate, positively related to unemployment duration, or negatively related to reemployment status at the end of the study, and this relationship was statistically significant at the 5% α level. A negative age–reemployment wage relationship was coded if older individuals had lower relative wages than younger individuals in their new job, and this relationship was statistically significant at the 5% α level. A negative age–reemployment relationship was coded if older individuals were less likely to be in full time employment after job loss, $p < .05$.

than younger job seekers to find a job, regardless of the basis of employment. In the studies that compared temporary and permanent reemployment hazards, the relationship between age and reemployment was stronger for temporary work than for permanent work. In the studies that compared full-time and part-time reemployment hazards, the relationship between age and reemployment was higher for full-time than part-time work.

In comparison with the psychological literature, studies in the economics domain were more likely to include measures of variables such as industry or occupation and reservation wage (amount of desired pay) in their studies. As a further descriptive summary, we examined the extent to which studies controlling for specific variables that we have described as theoretically relevant to the age-outcome relationship such as industry or occupation continued to find a negative relationship between age and reemployment speed and wages (see Table 7). As shown in Table 7, job search intensity was the only control variable that when included reduced the likelihood that age would be negatively related to reemployment speed. Specifically, 81.2% of the studies reported a negative relationship between age and reemployment speed (see Table 6), but only 66.7% of the studies that controlled for job search intensity reported a negative relationship between these two variables (Table 7, the difference is significant at $p < .05$). This pattern of findings compliments the meta-analytic finding that job search intensity partially mediates the relationship between age and reemployment speed. As also shown in Table 7, controlling for other variables did not appear to affect the likelihood for finding a significant negative relationship between age and reemployment speed.

The lower half of Table 7 displays the extent to which studies controlling for relevant variables continued to find a negative relationship between age and reemployment wage. No significant relationship between age and reemployment wage was found in any of the seven studies that controlled for job search intensity (the reduction in percentage was significant at $p < .05$). These findings extend meta-analytic results to suggest that job search intensity may play a mediating role in the relationship between age and reemployment wages.

Because these studies were conducted across several decades of job search, geographic regions, and unemployment rates, we used the descriptive count technique to examine whether study results differed as a function of these variables as moderators. The descriptive results, presented in Table 8, suggest that studies were likely to find a significant negative relationship between age and reemployment speed during the 1980s, 1990s, and 2000s. Fewer studies found significant, negative relationships between age and reemployment speed before 1980 (the difference is significant at $p < .01$), but most of the studies that did not find such relationships during these early decades had

Table 7
Analysis of Studies Not Reporting Zero-Order Correlations: The Remaining Direct Relationship Between Age and Reemployment Outcomes After Including Control Variables

	k	*N*	Percentage of studies with negative age–reemployment relationship (%)	Percentage of studies with positive age–reemployment relationship (%)	Percentage not significant (%)
Reemployment speed					
Job search intensity[a]	21	22,655	66.7	4.8	28.5
Health	42	721,608	88.1	0.0	11.9
Human capital					
Industry or occupation of lost job (controls for whether industry or occupation is growing or in decline)	116	1,326,877	79.3	0.9	19.8
Tenure at lost job (proxy for loss of firm-specific human capital)	76	667,154	88.2	0.0	11.8
Motives					
Willingness to move or home ownership	26	67,934	88.5	0.0	11.5
Part-time or hours	32	458,380	78.1	0.0	21.9
Wealth or severance pay	110	1,066,779	80.0	0.9	19.1
Reservation wage	13	22,205	84.6	0.0	15.4
Reemployment wage					
Job search intensity[a]	7	923	0.0	0.0	100.0
Health	1	359	100.0	0.0	0.0
Human capital					
Industry or occupation (proxy of whether industry or occupation is growing or in decline)	24	126,265	25.0	25.0	50.0
Tenure (proxy for loss of firm-specific human capital)	34	119,111	44.1	17.7	38.2
Motives					
Willingness to move or home ownership	3	6,831	100.0	0.0	0.0
Part-time or hours	8	35,137	50.0	0.0	50.0
Income at previous job	44	138,460	47.7	11.6	40.7

Note. k = number of studies cumulated; N = cumulative sample size. The percentages indicate the extent to which studies controlling for the variables continue to find a direct relationship between age and reemployment speed.
[a] Denotes statistical significance at the 5% α level in a one-tailed test where the null hypothesis is that the difference between the percentage of studies finding a negative relationship between age and reemployment speed when the variable is controlled is greater than or equal to the percentage of studies finding a negative relationship between age and reemployment speed when the variable is not controlled. Statistical significance tests were not conducted when $k < 6$ because of insufficient data.

Table 8
Analysis of Studies Not Reporting Zero-Order Correlations: Relationship Between Age and Reemployment Outcomes by Decade, Region, and Unemployment Rate

	k	*N*	Percentage of studies with negative age–reemployment relationship (%)	Percentage of studies with positive age–reemployment relationship (%)	Percentage not significant (%)
			Reemployment speed		
Decade of job search					
Before 1980[a]	21	52,101	61.9	4.8	33.3
1980–1989	84	386,154	84.5	1.2	14.3
1990–1999	79	1,117,268	79.8	0.0	20.3
2000–2007	27	3,219,635	88.9	0.0	11.1
Geographic region					
North America	89	366,077	76.4	2.3	21.4
Latin America (Argentina)	1	3,073	100.0	0.0	0.0
Europe–developed economies[b]	116	2,289,391	86.1	0.9	13.0
Europe–transition economies	30	2,930,495	76.7	0.0	23.3
East Asia	9	114,360	77.8	0.0	22.2
Middle East (Israel and Jordon)	2	104,575	100.0	0.0	0.0
Unemployment rate					
High relative unemployment	130	1,785,727	83.1	0.8	16.1
Low relative unemployment	86	3,230,575	76.7	2.3	20.9
			Reemployment wage		
Decade of job search					
Before 1980	10	24,392	20.0	0.0	80.0
1980–1989	21	95,443	42.9	28.6	28.6
1990–1999	14	25,242	64.3	0.0	35.7
2000–2007	0		0.0	0.0	0.0
Region of the world					
North America	41	105,767	46.3	9.8	43.9
Europe (developed economies)	9	99,024	22.0	22.2	55.6
East Asia (Japan)	2	7,712	100.0	0.0	0.0
Unemployment rate					
High relative unemployment	34	57,281	31.2	17.7	51.1
Low relative unemployment	18	31,671	50.0	0	50

Note. k = number of studies cumulated; N = cumulative sample size. East Asia includes Japan. Relative unemployment was calculated as the country-specific z-score for the country's unemployment rate relative to its average unemployment rate, divided by the country's standard deviation. For studies where the data were collected after 1991, the average unemployment rate refers to a particular county's average unemployment rate from year 1991 to 2007, based on data from the World Bank, consistent with the definition in the meta-analysis. For older studies, the average unemployment rate for the country was its unemployment rate during the decade of data collection. For studies where data collection occurred for over a decade, a relative unemployment rate was not calculated. The raw unemployment rate for the job search period was compared with the particular country's average unemployment rate. Several studies did not list sample size, and so their sample size is not included in the total observations estimate, but their results are included in the table.
[a,b] Denotes statistical significance at the 10% and 5% α level in two-tailed tests where the null hypothesis is that the difference between the percentage of studies finding a negative relationship between age and reemployment outcome in the focal group compared with all the nonfocal group is zero. Statistical significance tests were not conducted when $k < 6$ because of insufficient data.

small sample sizes and relied on less sophisticated methodologies.

Consistent with the meta-analytic findings, studies conducted in the developed economies of Western Europe were more likely to find a significant negative relationship between age and reemployment speed than studies in developing European countries (Eastern Europe), or countries in North America and Asia (the difference is at $p < .10$, two-tailed test). Because the Middle East had only two studies, and Latin America had only one study, more research is needed before the relationship between age and reemployment speed in these regions can be determined.

Studies conducted in areas where the unemployment rate was relatively high were more likely to observe a significant negative relationship between age and reemployment speed than studies conducted in areas where the unemployment rate was relatively low, but this result is not statistically significant.

Analysis Using U.S. Displaced Worker Survey

Research question five addresses to what extent there is support for a nonlinear relationship between age and reemployment outcomes. In the previously described meta-analysis, we examined this question indirectly at the study level by using the mean age of each study sample. To supplement that analysis, we identified a large, U.S. nationally representative sample of displaced workers (the 2014 Displaced Worker Survey, DWS) that could be used to examine this question directly. The dataset is a supplement to the federal government's monthly Current Population Survey and provides the nationally representative

sample on which U.S. official government employment statistics are based. The DWS includes persons 20 years of age and older who were involuntarily separated from their job because of the plant/office having closed or moved, their position or shift being abolished, or insufficient work during the past 3 years.[1] The sample includes all of those who lost their jobs during 2011, 2012, and 2013, resulting in a total sample size of 3,337 displaced workers, and we used DWS weights to ensure that the samples used represented the U.S. population of displaced workers 20 years or older. We used the data to estimate the linear and curvilinear relationship between age and reemployment status (1 = *having obtained reemployment by January 2014*, 0 = *otherwise*), unemployment duration (measured as the number of weeks unemployed after losing one's job), and reemployment wage ratio (one's weekly wage at the new job divided by the weekly wage at the lost job).

Reemployment Status

Of the 3,337 displaced workers in the sample, 67.0% (95% CI [65.2, 68.9%]) had become reemployed by January 2014. The mean percentage of job seekers in the subsample aged 50 years and older who were reemployed was 57.7% (95% CI [57.3, 58.1%], $n = 1177$). For the younger subsample (aged 20–29) and midcareer subsample (aged 30–49) job seekers, 72.3% (95% CI [68.4, 76.2%], $n = 667$), and 72.2% (95% CI [69.6, 74.8%], $n = 1493$), were reemployed, respectively. The correlation coefficient for the relationship between age and reemployment status was $-.16$ ($p < .001$, $n = 3337$), which is similar to our meta-analysis finding on the age-reemployment status relationship. The correlation coefficient of the relationship between age and reemployment status among the subsample of job seekers aged 50 years and older was $-.19$ ($p < .001$, $n = 1177$). The correlation coefficients among the subsample of young job seekers was positive, $r = .13$, $p < .01$ and among the subsample of midcareer job seekers was insignificant, $r = -.04$, $p = .17$. These findings indicate that the relationship between age and reemployment status is stronger in later adulthood.

While this correlational analysis aids comparison with the meta-analysis, with a dichotomous dependent variable, logit is a better methodology for the accurate determination of effect size. Therefore, we also ran a logit analysis (reporting odds ratios), first with age as a linear variable, and then with age in quadratic form. We did not include control variables in the analysis. In our linear model, age was negatively related to reemployment ($exp(b) = .974$, $p < .001$). For each one year increase in age, the odds of being reemployed decreases by 2.6%. Our quadratic model replicated the curvilinearity in the relationship between age and reemployment speed (for age, $exp(b) = 1.093$, $p < .001$; for age squared $exp(b) = .999$, $p < .001$).

Unemployment Duration

For the 2,623 individuals who were either currently unemployed (and actively seeking work within the last month), or reemployed at any point before January 2014, we obtained their unemployment duration (reemployment speed). Workers not in the labor force were excluded, and unemployment duration was capped at 96 weeks for workers who had completed spells, and censored on the survey date for those who were unemployed in January 2014. The mean unemployment duration for all 2,623 unemployed and reemployed job seekers was 20.1 week (95% CI [19.0, 21.2]). The mean unemployment duration for the subsample aged 50 years and older was 25.3 weeks (95% CI [23.1, 27.6], $n = 828$). For the younger subsample (aged 20–29) and the midcareer subsample (aged [30, 49]), unemployment durations were 14.7 weeks (95% CI [12.9, 16.5], $n = 558$) and 19.5 weeks (95% CI [17.9, 21.2], $n = 1237$), respectively. The overall correlation coefficient for the relationship between age and unemployment duration was .15 ($p < .001$, $n = 2623$), which is similar to our corresponding meta-analysis finding. The correlation coefficient for the relationship between age and unemployment duration among the subsample of job seekers aged 50 years and older was .11 ($p < .01$, $n = 828$). The correlation coefficients among the younger and the midcareer subsamples were insignificant ($r = .03$, $p = .58$; $r = -.03$, $p = .39$, respectively).

While correlations coefficients are better for comparison with the meta-analysis, a more accurate effect size can be determined via survival analysis. Therefore, we ran a Cox Proportional Hazard Model, without control variables, first estimating the impact of age on the reemployment hazard (hazard = .987, $p < .001$). For each one year increase in age, the odds of finding a job during that week decreased by 1.3%. Second, we estimated the impact of a curvilinear age function on the reemployment hazard (age hazard = 1.03, $p = .075$; age^2 hazard = .9995, $p < .01$).

Wage Ratio

For the job seekers who found reemployment, we estimated the relationship between age and the ratio of wages in one's current job compared with their lost job, unadjusted for inflation. In this analysis, we removed a small percentage of outliers from the dataset (ratios above 7.5, affecting 1% of observations), and only had data for displaced workers who were working at the time of the survey, so the sample size was reduced to 1,578. The mean overall reemployment wage ratio for reemployed displaced workers was 1.12 (95% CI [1.08, 1.17]). The mean reemployment wage ratio for the subsample aged 50 years and older was 1.01 (95% CI [.93, 1.09], $n = 460$). For the younger subsample (aged 20–29) and midcareer subsample (aged 30–49), the mean reemployment wage ratios were 1.37 (95% CI [1.24, 1.50], $n = 327$) and 1.07 (95% CI [1.01, 1.13], $n = 791$), respectively. The overall correlation coefficient for the relationship between age and the reemployment wage ratio among all job seekers was $-.15$ ($p < .001$), and among the subsample aged 50 years and older was $-.01$ ($p = .91$, $n = 460$). The correlation coefficients among the younger (aged 20–29) and midcareer (aged 30–49) subsamples were also insignificant ($r = -.07$, $p = .27$; $r = -.06$, $p = .11$, respectively).

To further test the curvilinearity of the relationship between age and the reemployment wage ratio, we conducted regression analysis without control variables. When age was entered linearly into the model, it was significantly negatively related to the wage ratio ($b = -.010$, $p < .001$). When age was entered quadratically in the

[1] Data from the DWS used in this supplemental analysis were not included in the previously reported meta-analysis or descriptive summary of multivariate studies.

model, there was a statistically significant curvilinear relationship (for age: $b = -.049$, $p < .01$; for age squared: $b = .0005$, $p < .05$).

Discussion

Although it is common for older job seekers to report difficulties finding reemployment because of their age (Allan, 1990; Berger, 2005; Patrickson & Ranzijn, 2003), theoretical analysis and targeted examinations of the relationship of age to job search and reemployment outcomes remain surprisingly sparse. Building upon research on adult development and sociocultural reactions to aging across multiple areas of psychology and economics, we developed an integrative framework to explicate the personal and situational dynamics through which chronological age affects job search activities and reemployment outcomes after involuntary job loss. Through our empirical findings we elucidate the relationships between age, job search, and reemployment outcomes. In this discussion we identify critical gaps in the literature and offer new directions for future research on a topic of rapidly growing importance to nations, organizations, and individuals around the world.

Our first research question addressed the strength of the relationship between age and reemployment status and speed. Our meta-analytic results suggest that as age increases, individuals receive fewer offers ($\rho = -.11$, $k = 5$) and are less likely to obtain reemployment after a job loss ($\rho = -.15$; $k = 51$). When reemployment does occur, older individuals take longer to find reemployment compared with younger workers ($\rho = -.17$; $k = 18$). These findings were supported by the additional 303 studies that we were unable to use in the meta-analysis and by our analysis of the U.S. DWS. Of the 303 studies that were not included in our meta-analysis, 81.2% showed a negative relationship between age and reemployment speed, even after controlling for many important variables, such as job seeker health, industry, and tenure at lost job. Our analysis of the DWS indicated that individuals over the age of 50 had a period of unemployment that was 5.8 weeks longer than individuals between the ages of 30–49 and 10.6 weeks longer than individuals ages 20–29. These findings provide compelling evidence for the negative impact of age on reemployment status and speed. The findings do not permit us to know whether older individuals are finding the type of work they want (e.g., full time, part time) or whether older individuals are leaving the workforce involuntarily.

Our second research question examined the extent to which age disadvantages (or advantages) job seekers with respect to reemployment quality dimensions, such as employment basis (part-time/full-time/temporary work) or the intrinsic and extrinsic characteristics of the new position. Our extensive literature review shows that researchers have only rarely examined these types of outcomes. For example, very little evidence exists regarding the relationship between age and the basis of reemployment, and no meta-analyzable correlations were available. Only four studies relevant to this question were identified, and these were not included in the meta-analysis. The results of these four studies suggest that age is more negatively related to finding full-time jobs than part-time jobs, and temporary jobs than permanent jobs. However, it is unclear whether older workers wanted versus settled for these types of jobs.

The meta-analytic findings suggest that older individuals are more likely to receive lower reemployment wages than younger individuals. These findings must be considered as preliminary, because the meta-analytic correlation of -0.06 between age and reemployment wage was based on only seven studies, and fewer than half of the studies that could not be included in the meta-analysis found a negative relationship between age and reemployment wage. It is possible that the pattern of findings obtained might be due in part to the curvilinearity of the relationship between age and reemployment wages. The DWS data provide support for this notion. In this sample, although no significant correlation was observed between age and reemployment wage for the whole sample, a significant, negative correlation was observed between age and reemployment wage among a subsample of workers aged 50 and older. Although our theoretical review suggests that older job seekers may simply be emphasizing intrinsic rewards over compensation when applying for and accepting jobs, our results show a small but significant negative correlation between age and satisfaction at one's new job ($\rho = -.05$, $k = 16$). Although this effect may be too small to be practically meaningful, it is noteworthy given previous findings which show that job satisfaction generally improves with age (Ng & Feldman, 2010).

Our third research question addressed the extent to which age exerts at least part of its influence on reemployment outcomes through the manifestation of job search activities, including decision to search, direction-content of search activities, and job search intensity. Consistent with Kanfer et al. (2013) and Wang and Shultz (2010), who suggest that motivation for job search and reemployment may be weaker among older workers than younger workers, we found a significant negative meta-analytic relationship between age and job search intention. We also found that job search intensity and job-search self-efficacy partially mediated the relationship between age and reemployment success. These findings represent an important topic for future research, as they have potential implications for job seekers and the people who assist them. For example, some evidence suggests older job seekers perceive that they have, or expected to, encounter age discrimination (Allan, 1990; Berger, 2005), contributing to a reduction in job search intensity because of frustration and reduced confidence. Our integrative model helps to identify gaps in what has not been studied with respect to job search among older job seekers. At this point, we know very little about whether (and if so why) older job seekers engage in different job search strategies or how they may differ from younger job seekers in the clarity of their job search goals.

A unique feature of this study was our ability to examine the generalizability of our findings across different world regions, decades, and labor markets. We found that these measures exerted different moderating effects on the relationships between age, job search, and reemployment outcomes. For example, study location moderated the relationship between age and successful reemployment, with older individuals showing lower probabilities of reemployment than younger individuals in developed European countries than in countries in Eastern Europe or North America. As such, these findings indicate limitations in the generalizability of the observed relationship between age and reemployment success by world region. More important, however, the reasons for these differences are unclear and underscore the importance of better understanding the chaining of environmental forces to sociocultural reactions. It may be that our findings reflect the effects of more generous social welfare systems in the developed European

countries relative to Eastern Europe and North America. It is also possible that the findings may be due in part to region differences in legal-political forces, including mandatory age retirement laws and associated cultural norms pertaining to the age of workforce withdrawal. Finally, it is also possible that regional differences in the unemployment and job search experience contribute to motivational and attitudinal differences in job search. For example, older Americans tend to blame themselves for their unemployment and job search experiences, and therefore, experience a subsequent drop in self-efficacy as a result of such attributions, while older Israelis tend to blame the system for their experience of unemployment, and do not report the drops in self-efficacy experienced by their American counterparts (Sharone, 2013). More research is needed for understanding the key pathways by which macrolevel environmental forces affect sociocultural reactions among and toward older workers and the experience of unemployment.

In a related vein, we also found that that unemployment rate significantly moderated the negative relationship between age and job search self-efficacy. Specifically, the negative relationship between age and job search self-efficacy is stronger when the unemployment rate is higher. Contrary to the assumption that older workers may hold lower judgments of search efficacy as a result of decayed search skills, our findings suggest another potential explanation; namely, that older individuals are more sensitive to probabilistic information about the likelihood of reemployment success when making motivational judgments related to job search. Consistent with the model of selective optimization with compensation (SOC; Baltes & Baltes, 1990) and conservation of resources theory (Hobfoll, 1989), our findings suggest that age-related differences in job search self-efficacy may be driven in part by the perceived diminished utility of allocating valuable resources toward job search during periods of high unemployment. From a practical perspective, this explanation suggests that interventions directed toward increasing job search self-efficacy among older workers during periods of high unemployment may benefit from increased focus on the perceived costs and benefits of job search.

Finally, our findings on the relationship between age and reemployment outcomes suggest that future research should examine age as a nonlinear predictor of reemployment outcomes. In our meta-analysis, results of moderator analyses using sample mean age showed that the older the sample age, the stronger was the relationship between age and reemployment outcomes. Consistent with these findings, examination of findings from the U.S. DWS indicate that the negative relationship between age and reemployment speed and reemployment wages was more likely to be nonlinear and to intensify over time. Such nonlinearities result in an overestimation of the correlation between age and target outcomes for some age groups (such as the differences in reemployment outcomes for individuals in their 20s vs. individuals in their 40s), and understated for other age groups (such as the differences in reemployment outcomes for job seekers in their 40s vs. those in their 60s). From a practical perspective, evidence for nonlinearity in the relationship between age and reemployment speed and wage is consistent with older job seeker reports of substantially longer job search and less positive reemployment outcomes than younger individuals.

Theoretical Contributions

Our article extends current theory on the complex role of age in the reemployment experience in several ways. First, the proposed model and findings synthesize two historically disparate streams of psychological research investigating the impacts of age-related changes in person attributes (such as cognitive abilities, motives, and health) and contextualized judgments about an individual based on age (such as employer judgments and job skill obsolescence). There are many studies that have examined the adult development and sociocultural reactions that accompany aging (the literature discussed in our theory development). However, these factors have rarely been studied *in direct relation to the job seeking process*. Our theoretical synthesis suggests a wealth of important directions for future research. For example, as select physical and cognitive abilities decay, how specifically do job seekers shift the types of jobs they apply for and how does this particular factor impact reemployment quality and speed? Furthermore, some evidence suggests that job search skills may be out of date for older job seekers. How serious is this problem (as it is one that is more easily remedied) and how is it manifested in applications and interviews? There is also a dearth of studies examining the role of work motives in older worker job search. Research is needed to investigate whether and in what ways older individuals may (or may not) be more selective than younger individuals. Recent findings by Eriksson and Lagerström (2012) and Maestas and Li (2006), for example, suggest that older job seekers do not set wage expectations too high. Research on worker selectivity in reemployment search needs to go beyond wages to examine other factors that older workers may focus on during job pursuit.

Although slower reemployment may be due in part to distal environmental factors, such as labor market demand, few studies have examined the pathways by which these factors may advantage or disadvantage older workers. The elimination of mandatory retirement age, for example, may prompt changes in employer perceptions and judgments about older worker employability. A finer-tuned understanding of the age at which discrimination is an issue in employer hiring decisions, how this differs across industry, and the extent it plays a role in comparison with other factors in our model is a critical question to determine with future research. This research may also examine ways in which unintentional (or intentional) discrimination may be produced by factors such as employer compensation plans and other human resource management practices. Compensation systems designed to enhance employee loyalty by increasing pay and benefits in later years of job tenure (e.g., delayed payment systems, defined benefit pensions) may operate to reduce employer interest in hiring additional older workers as a result of large age-based cost differentials between younger and older workers (Lazear, 1979, 1981; Munnell et al., 2006; United States Government Accountability Office, 2012). That is, while older workers in the firm remain employed, additional older workers are rarely hired (Daniel & Heywood, 2007; Heywood, Ho, & Wei, 1999; Hutchens, 1988). Such investigations might also examine employer expectations, age-stereotyping, and age-reemployment relations across countries that vary in cultural norms and values, type of economy, workforce laws, and age demography (Finkelstein et al., 2015).

Our detailed summary of available research according to each of the outcomes in our model highlights the strong need for more

research on the relationship between age and reemployment quality. We extend theory by delineating the importance of future work examining job seeker goals in conjunction with achieved outcomes. For example, we suggest that future studies: (a) assess specific facets of satisfaction reflecting both extrinsic and intrinsic components of the job (e.g., satisfaction with pay, benefits, and other working conditions and features, such as commute distance, work hours, schedule flexibility, and job autonomy) as well as (b) information about the person's goals and how they were met or not met in the new employment context. Such studies are critical for ascertaining the manner and extent to which older adults are more adversely affected by job loss than younger adults.

Finally, the model's delineation of the multiple pathways by which dynamic person attributes and sociocultural reactions may affect job search activities and reemployment outcomes has broad applicability. Although our study focused on older workers, the model may be used to understand job search and outcomes among other important segments of the workforce, such as younger or disabled individuals who seek reemployment after job loss. Our integrative model also contributes not only to the psychological literature, but to economics as well. The psychological literature provides most of the research on age-related changes in adult development and sociocultural reactions, whereas economics has focused more on how older workers are hampered by macro employment trends, changes in technology, and employer expectations. Neither literature has provided an integrated discussion of how age-related changes relate to job search and employment. Our empirical findings and identified research gaps similarly inform both literatures.

Practical Implications

Our model, describing the ways in which aging is associated with multiple factors (e.g., physical abilities, motives, social networks, search strategies, and marketplace demands) is relevant to job search will be useful to practitioners that assist job seekers. Although practitioners have a deep expertise in working with multiple job search populations and understand the job search process very well, our model provides the first systematic integration of research findings on this topic. By organizing and describing relevant factors in one place, it provides a valuable synthesis that can help guide discussions with job seekers.

For example, a typical concern of older job seekers is being discriminated against by employers. While extant research suggests that discrimination against older workers does occur (Finkelstein et al., 1995), our theoretical model suggests there are other contributing factors to the age and reemployment relationship beyond discrimination. Practitioners can help older job seekers diagnose which factors may be relevant to them. For example, the increased popularity of certain search strategies, such as social networking and social media use, may disadvantage older workers who maintain smaller social networks and are unfamiliar with newer social media platforms.

Our proposed model and findings also highlight the importance of understanding the criterion domain. Our four-dimensional model of the reemployment outcome domain represents an initial step in systematizing key aspects of reemployment. Practitioners may use this template to be clear with older job seekers about what they are seeking. On the research side, we have a great deal to learn about how best to help practitioners better understand the relationship between job search and outcomes other than reemployment status and speed. Additional research is needed to more clearly delineate the nomological network and relationships between aging, the factors underlying aging, and reemployment basis, wages, job features, status, and speed. Such research can be expected to increase our understanding of how age-related person and contextual factors contribute to employment outcomes after job loss.

Study Limitations and Caveats

Although we use multiple methods to address our research questions, our study is not without limitations. First, as noted previously, the paucity of studies investigating the relationship between age and reemployment outcomes beyond status and speed limits our ability to draw nuanced conclusions about the impact of aging on the reemployment process. Our study is extensive and a solid advancement of the literature in this area, but we were unable to evaluate important relationships that may exist between age and other key reemployment outcomes such as job basis and work characteristics.

Second, the meta-analytic finding of a -0.17 relationship between age and reemployment speed may be a conservative estimate of this relationship, since many studies used in the meta-analysis suffer from right censoring. For example, some studies calculate the unemployment duration of nonreemployed job seekers as the number of weeks at the time of the last available period of data collection. Because older job seekers are more likely to take longer to obtain reemployment, their higher reemployment durations were more likely to be underestimated in this type of analysis. Studies examining reemployment status as a dichotomous variable at one particular point in time result in right censoring (as the individuals still unemployed may vary considerably in how long they will still stay unemployed) as well as range restriction (we do not know how quickly those reemployed found jobs). These problems were common in the studies we summarized. Thus, our estimates are probably best interpreted as representing the lower bound of the true relationship between age and reemployment status and speed.

A third limitation in the interpretation of our findings pertains to ambiguity in whether the observed age-reemployment status relation stems from a desire to quit working or low expectancies of reemployment success (e.g., becoming a discouraged job seeker). Older job seekers are more likely than younger job seekers to leave the labor market, but the reasons for which they leave the labor market remain relatively unexplored. In recent years, competing risks models (survival/hazard regressions combined with multinomial dependent variables) have been developed to separately identify the impact of age on leaving the labor market (for any reason) and obtaining a job. These studies have found that age is negatively related to finding a job and positively related to leaving the labor market (Carling, Edin, Harkman, & Holmlund, 1996; Carling, Holmlund, & Vejsiu, 2001; Cazes & Scarpetta, 1998; Edin, 1989; Kupets, 2006; Lamo, Messina, & Wasmer, 2011; Lubyova & van Ours, 1999; van Ours & Vodopivec, 2006). However, two studies have found that age was not negatively related to finding a new job when the choice to leave the labor market was controlled (Lenkova, 1997; Maxwell, 1989). Overall,

the evidence suggests that while the greater propensity to leave the labor market is in part responsible for the negative relationship between age and reemployment speed, it is not fully responsible.

Conclusions

We find a negative relationship between age and reemployment speed and status that is small by the standards put forth by Cohen (1992) but moderate to strong with respect to average relationships demographic variables tend to have with work-relevant outcomes (Bosco et al., 2015). More important, we also show that the negative relationship between age and reemployment outcomes becomes stronger for individuals over the age of 50. We found that although reemployment after job loss takes longer and is less likely to occur among older workers compared with younger workers, the reasons for these findings are complex and not likely to be fully captured by explanations that focus exclusively on the job seeker or employers. Rather, we show that the negative relationships between age and reemployment success and speed are partially mediated through job search mechanisms (e.g., job search self-efficacy and job search intensity), and are moderated by broad contextual factors, such as location and unemployment rate. Our findings indicate that greater attention should be paid to understanding the relationships between age and reemployment outcomes beyond reemployment speed, and to more closely mapping the associations between environmental conditions and sociocultural reactions to older job applicants. Taken together, these findings provide initial evidence for the viability of an integrative person-environment model that offers researchers and practitioners from different disciplines a unified framework from which to better understand and improve job search, employability, and well-being among older adults.

References

† References marked with a dagger indicate studies included in the meta-analysis that are discussed in the text.

* References marked with an asterisk indicate studies included in the Supplemental Unemployment Duration Analysis that are discussed in the text.

** References marked with a double asterisk indicate studies included in the Supplemental Reemployment Wage Analysis that are discussed in the text.

*** References marked with a triple asterisk indicate studies included in Both Supplemental Unemployment Duration and Wage Analyses that are discussed in the text.

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