

Job Search: The Special Case of Mature-Aged Job Seekers

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General Introduction

Throughout their career, most people engage in job search to find employment. Most of these people will agree that job search is a demanding and often demotivating process that challenges job seekers' self-regulation and requires a high level of perseverance over a long period of time (Nonnis et al., 2023; van Hooft et al., 2020). However, job search is not the same for everyone and the individual experiences and its success depend on various factors.

One distinguishing feature is the age of the job seeker. Despite, after losing their job, mature-aged job seekers (i.e., job seekers over the age of 40) need longer (than younger people) to find reemployment again (Wanberg et al., 2016). Furthermore, they often face stereotypes and discrimination (Posthuma & Campion, 2009), which makes it even more difficult for them to bring their skills, knowledge and competence back into the workplace.

However, not only mature-aged job seekers suffer from their job loss; it is also a problem for organizations, as (1) they lack skilled workers, and (2) as soon as mature-aged workers lose their job, they take this knowledge with them; often before they could share it with their colleagues (Burmeister & Deller, 2016; Fasbender & Gerpott, 2021, 2022).

Paradoxically, organizations and mature-aged job seekers seem to struggle to find each other despite their aligned interests. Even society suffers from financial pressures placed on the social security system, as unemployed or early retirees not only receive social benefits but society is simultaneously missing their income tax (Fasbender et al., 2022; Wöhrmann et al., 2017).

Bringing mature-aged job seekers back to employment and extending their working lives can help to solve the aforementioned problems. However, little knowledge and empirical results exist about mature-aged job seekers' job search. As the process of aging is overarching one's whole life, it inevitably overlaps with the process of job search. Therefore, taking a lifespan development perspective could provide valuable insights into mature-aged job

seekers' job search process (Fasbender & Klehe, 2019). However, models which consider age or age relevant constructs (e.g., aging strategies, or occupational future time perspective) have mostly been discussed conceptually (Fasbender & Klehe, 2019; Klehe et al., 2018).

Furthermore, in the past, job search research has studied mainly quantitative variables such as job search intensity to measure job search and predict employment success. As job search quantity fails to predict employment quality, recent research argues for extending this framework by studying more self-regulatory frameworks and job search quality (van Hooft et al., 2020; van Hooft et al., 2013). Job search quality can be divided in four self-regulatory phases that intermittently relate to each other: (1) goal establishment, (2) planning of goal pursuit, (3) goal pursuit, and (4) reflection (van Hooft et al., 2013).

This dissertation sheds light on mature-aged job seekers' job search by testing parts of the conceptual model by Fasbender and Klehe (2019), which not only focuses on job search quality but also highlights the importance of aging when looking at mature-aged job seekers' job search process. I did so in three ways. First, I looked at elements of self-regulated job search such as goal establishment, goal pursuit, and career exploration. Second, I studied several aging related constructs. Thereby, I introduced so-called aging strategies (elective selection, loss-based selection, optimization, and compensation; SOC strategies) into job search, and studied occupational future time perspective (i.e., the extent to which one's remaining future time and opportunities in the work context are perceived as limited rather than open; Zacher & Frese, 2009), and considered the possibility that mature-aged job seekers might prefer to move into retirement instead of continuing the search. Third, I studied boundary conditions such as age and reemployment efficacy (i.e., mature-aged job seekers' confidence to find a new job (Wanberg et al., 2010) to figure out for whom my findings work. As the job search process is not shaped by the job seeker alone but also by the context in which it takes place as well as the interaction of these two (Baruch & Rousseau, 2019), I further studied age discrimination. Therewith, I looked at the potentially constraining context

in which mature-aged job seekers look for a job. Taken together, this dissertation includes two studies which I will briefly outline in the following (Figure 1).

Study 1: Predicting the Self-Regulated Job Search of Mature-Aged Job Seekers: The Use of Elective Selection, Loss-Based Selection, Optimization, and Compensation Strategies

In my first study, I introduced SOC strategies stemming from the aging literature to the job search context. Coming from a lifespan development perspective, I examined whether and when the use of these strategies can support mature-aged job seekers in their self-regulated job search process (goal establishment and goal pursuit). This process is dynamic and can vary from week to week (Wanberg et al., 2005; Wanberg et al., 2010).

I assumed that elective (prioritizing one rather than multiple goals) and loss-based selection (prioritizing or selecting a new goal after a setback) would foster goal establishment. Goal establishment involves setting job-search-related goals (van Hooft et al., 2013). Further, optimization (investing every effort to achieve one's goal) and compensation (using new or previously unused resources in the face of obstacles) should foster the goal pursuit of mature-aged job seekers. Goal pursuit involves specific behavioral activities (e.g., looking for jobs on the internet, revising the resume, or sending out application letters) to reach the established job search goals (van Hooft et al., 2013). Thereby, goal establishment informs goal pursuit, meaning that the clearer one's goals are, the better these goals can be pursued (Côté et al., 2006).

In addition, I assumed a moderating effect of mature-aged job seekers' age and reemployment efficacy (Wanberg et al., 2010), on the described processes. I assumed that with increasing age, mature-aged job seekers' reemployment efficacy would decrease, and that reemployment efficacy would moderate the SOC strategies' relations with goal establishment and goal pursuit. In other words, I expected that mature-aged job seekers would benefit more strongly from using SOC strategies in weeks in which their reemployment

efficacy is lower (vs. higher) because self-regulation is more important when one's confidence in finding new employment is reduced (Kanfer & Bufton, 2018).

Study 2: Withdrawing from Job Search: The Effect of Age Discrimination on Occupational Future Time Perspective, Career Exploration, and Retirement Intentions

In my second study, I not only considered the mature-aged job seeker self-regulatory behavior, but how the job search context shapes mature-aged job seekers' experiences. Hence, I took a closer look at age discrimination (i.e., an disadvantageous, unfair, or unequal treatment based on age; Redman & Snape, 2006) as a negative experience harming the job search process of mature-aged job seekers. I assumed that age discrimination could pave the way for mature-aged job seekers to become discouraged and as a consequence might lead them to drop out of the job search process and thus the workforce (Heslin et al., 2012). In other words, I considered the possibility that mature-aged job seekers are not necessarily compelled to look for a job or explore their careers options. Career exploration is defined as seeking a broad or diverse range of experiences in multiple fields without a specific goal, as well as targeting a specific experience within a designated field (Lee et al., 2016). Instead, mature-aged job seekers may intend to retire early (i.e., retirement intentions, namely the preference to retire as soon as possible; Wöhrmann et al., 2017).

To understand how mature-aged job seekers form their decision if they should rather explore their career or consider retirement, I utilized career construction theory. Career construction theory examines how people manage work-related transitions and states that people form a decision to look for a new job based on past experiences and their adaptation to these experiences (Savickas, 2013). Applied to mature-aged job seekers, the goal was to examine whether and how occupational future time perspective related to age discrimination, career exploration, and retirement intentions. Occupational future time perspective is the extent to which one's remaining future time and opportunities in the work context are perceived as limited rather than open (Zacher & Frese, 2009).

Taken together, I assumed negative experiences such as age discrimination might limit mature-aged job seekers' future career prospects (i.e., their occupational future time perspective). Specifically, the more mature-aged job seekers feel unfairly treated by potential employers because of their age, the more they might perceive their future work time to shrink. Consequently, mature-aged job seekers who perceive their occupational future as more limited and their future in a negative way may therefore explore their career options less. Furthermore, mature-aged job seekers with little focus on their opportunities (i.e., lower future occupational time perspective) might express a stronger intention or preference to retire at a certain age in the future.

Methodology of This Dissertation

I collected data from 659 mature-aged job seekers in three countries (Germany, United Kingdom, and United States) at four different times over two months to test the hypotheses of my two studies. We invited people to take part in our study if they were unemployed, actively looking for a job, and 40 years or older, which is considered a common cut-off value for the definition of older job seekers (United States Equal Employment Opportunity Commission, 2013). For the first study, I applied a within-person design and used multi-level modeling and for the second study, I used structured equation modeling.

General Discussion

Theoretical Implications

Taken the two studies together, this dissertation provides valuable insights into mature-aged job seekers' job search in three ways. First, I test great parts of the conceptual model of job search and (re)employment from a lifespan developmental perspective by Fasbender and Klehe (2019) and provide first empirical results guided by the propositions made in the conceptual model. Thereby, I focus on a group that has received little attention in previous research (Fasbender & Klehe, 2019; Zacher, 2013; Zacher & Bock, 2014). We know

little about why mature-aged job seekers engage in different job search behaviors (Wanberg et al., 2016). Specifically, the studies showed that loss-oriented strategies (i.e., loss-based selection and compensation) could improve mature-aged job seekers' goal establishment and goal pursuit; especially when they were older and in weeks in which their reemployment efficacy was lower (study 1). Therewith, I shed light on the individual attributes when searching for a new job and highlight how mature-aged job seekers can benefit from SOC strategies especially when they have little confidence to find a new job. Further, using career construction theory, which itself embraces a lifespan development perspective (Rudolph et al., 2019), I study the role of a contextual variable by illustrating how age discrimination can lead to the detachment with the job search process and thus the loss of an important workforce (study 2). Specifically, I study how mature-aged job seekers manage age discrimination experiences and how these experiences can prevent engagement in career exploration and foster retirement intentions. Fetching a little further, it might even be an explanation of why mature-aged job seekers are more likely to leave the labor market than younger job seekers (Wanberg et al., 2020).

Second, this dissertation considers the dynamic nature of a self-regulated job search (Fasbender & Klehe, 2019; van Hooft et al., 2020; Wanberg et al., 2010) by surveying mature-aged job seekers over multiple time points. This longitudinal design allows to understand change within mature-aged job seekers over time as well as between job seekers (Wang et al., 2017). With this, I not only shift attention towards the less studied changes mature-aged job seekers experience over time but also provide a more complete picture of the self-regulated job search process. Also, I strengthen the importance of combined approaches, as results are not always generalizable from one level to another; which was also the case in my dissertation (Dalal et al., 2014). For example, optimization strategies showed only an effect on the between person level but not on the within person level. Thus, only mature-aged job seekers that used optimization strategies more in general could successfully self-regulate

their job search, whereas in weeks in which mature-aged job seekers used optimization strategies more, their goal pursuit did not vary in its amount.

Third, I used and integrated different theoretical frameworks in this dissertation to study how mature-aged job seekers manage their job search. Previous research has already shown that the SOC strategies are not only applicable in the aging context, as they already proven valuable in research on the work context (Moghimi et al., 2017). I have extended the scope of the SOC strategies by successfully applying them in the job search context and thus have helped to further develop the theory and extend its boundary conditions. Further, I successfully combined career construction theory with Heslin et al.'s (2012) discouraged workers approach by considering occupational future time perspective as an underlying mechanism that explains how age discrimination ultimately leads to less career exploration and higher retirement intentions. In other words, I highlight how mature-aged job seekers might suffer from past experiences (i.e., age discrimination) when they negatively appraise these experiences and how they might adapt to these negative experiences by withdrawing from the job search process. By doing so, I demonstrate how these models conceptually relate to each other (study 2). Furthermore, I answer the call to address other key components of career construction theory than career adaptability by studying how a contextual factor shapes the job search process under the light of career construction theory (Rudolph et al., 2019).

Practical Implications

Both studies in this dissertation highlight the detrimental effects of negative aspects (i.e., low reemployment efficacy, age discrimination) during mature-aged job seekers' job search not only on a weekly basis (study 1) but also between mature-aged job seekers (study 2). Therefore, this dissertation identified mechanisms that can be used for developing strategies to keep mature-aged job seekers in the job search process. Specifically, the results showed that mature-aged job seekers need to battle feelings of lower occupational future time perspective and lower reemployment efficacy as well as age discrimination. For instance, they

could learn about SOC strategies (especially loss-oriented strategies) and practice the use of them during job search, as using these strategies has already proven helpful to keep a focus on opportunities (Zacher & Frese, 2011).

For practitioners assisting mature-aged job seekers during their job search, the dissertational results indicate a high need to support mature-aged job seekers to manage negative aspects of the job search process. Accordingly, counselors could teach mature-aged job seekers SOC strategies (with a focus on loss-based selection and compensation). For instance, they could teach mature-aged job seekers the use of goal setting exercises or inform them of ways to compensate reductions in resources (Moghimi et al., 2017). The content of counseling sessions could also try to break the link between age discrimination and occupational future time perspective by fostering mature-aged job seekers' personal growth or by offering advanced trainings (Fasbender et al., 2019; Rudolph et al., 2018). Additionally, raising mature-aged job seekers' awareness for the possibility to encounter age discrimination during the job search might help to manage negative experiences and feelings associated to it (Wanberg et al., 2012). Moreover, mature-aged job seekers could profit from repeated counseling (on a weekly basis) instead of only one-time advice or longer intervals between sessions.

Based on the results, organizations and HRM departments need to work on reducing age stigmata and combat age discrimination in hiring, as both is still a huge problem in organizations (Sykes, C., Gagné, M., 2023). For example, they could encourage mature-aged job seekers' applications by avoiding stereotype attributes in job ads (Burn et al., 2023). Further, organizations and their HRM departments could strengthen decision-makers core-self evaluations as higher core-self evaluations are related to less negative attitudes toward mature-aged job seekers (Fasbender & Wang, 2017).

Limitations and Directions for Future Research

While I consider the research to be carefully designed and executed, the two studies are not without limitations. Even though I added to the knowledge about mature-aged job seekers' job search process with this dissertation, there are still many things left unaddressed, which could provide a more holistic picture of mature-aged job seekers' job search.

I did not include any experimental research in my dissertation; therefore, causal conclusion cannot be drawn from the data. I used multiple time points and a longitudinal design to test the relations of my dissertational studies, which offers a strong support for the assumed mechanisms (Wang et al., 2017). Still, future research might consider possible reversed causality and bidirectional relations to better understand the relations between my dissertational study variables.

Although I tested major parts of the conceptual model by Fasbender and Klehe (2019), some other remained unstudied in this dissertation. For example, other contextual factors such as the support and demands by family and friends received no attention in this dissertation; albeit there are good arguments for their relations with this dissertations' variables. On the one hand, co-rumination with significant others and family members have shown to help battle negative affect and strengthening job search intentions in job seekers (Ferreira et al., 2023). On the other hand, family might raise time demands (e.g., care responsibilities for grandchildren or other relatives), which can undermine job search activities and even lead to early retirement (Lumsdaine & Vermeer, 2015). One could even argue that these effects become even stronger when older job seekers experience age discrimination (by feeling pushed away from work and pulled toward private life).

As discussed in both studies, this dissertations sample comprises three individualistic countries, whereas it misses data from collectivistic ones, reducing the generalizability of the study results. For example, collectivistic countries are associated with more social pressure tighter and group boundaries (Marcus & Fritzsche, 2016; van Hooft & Jong, 2009) while

simultaneously showing less age bias and more positive feelings toward older adults (Ackerman & Chopik, 2021). One could argue that age discrimination might be less of a problem in more collectivistic countries and loss-oriented aging strategies might be less needed. Further, mature-aged job seekers might consider retirement less, because social pressure as well as group boundaries do not allow to retire without risking public discredit.

As this dissertation only relied on data from mature-aged job seekers, I cannot discern the wider applicability of the results for other groups beyond mature-aged job seekers such as for younger or middle-aged job seekers. For example, older mature-aged job seekers (compared to younger mature-aged job seekers) needed to buffer their lower reemployment efficacy more to engage in goal establishment and goal pursuit. This trend might continue the younger a job seeker gets, as feelings of exhaustion, disillusion, and disengagement are also higher in mature-aged job seekers compared to younger ones (Nonnis et al., 2023). However, the need to buffer lower reemployment efficacy could also form a u-shaped curve, as unemployed, young job entrees have been shown to hold more unclear job search goals, suffer from high levels of stress, and ostracism (Albath et al., 2023; Wanberg et al., 2010; Werbel, 2000). Further, also younger job seekers might be discriminated for their age (albeit for other reasons than mature-aged ones; Snape & Redman, 2003). However, it is likely that this discrimination has different effects on their occupational future time perspective and their career exploration as early retirement usually is not an option.

The studies of this dissertation addressed the SOC strategies (study 1) as well as occupational future time perspective, and age discrimination (study 2), yet the interplay of these variables need further study. Looking at variables of the two studies of my dissertation combined, we already know that OFTP and SOC are positively linked to each other (Rudolph et al., 2018). However, future research could, for example, study if and how SOC strategies might buffer the effect of age discrimination on occupational future time perspective. As shown in study 1, especially loss-based SOC strategies have proven valuable to sustain a

high-quality job search. Thus, they might also play a prevalent role in tackling age discrimination by buffering its detrimental effect.

Further, study 1 shows that the older mature-aged job seekers are, the lower is their reemployment efficacy. However, as age is just a number, studying the effect of (1) age discrimination or (2) aging experiences on mature-aged job seekers' job search might be more insightful. For example, the detrimental effect of age discrimination could arguably be the same for reemployment efficacy as it has been shown for occupational future time perspective as both variables consider the perception of future prospects of mature-aged job seekers. Furthermore, aging experiences can be divided in gains (e.g., personal growth and self-knowledge) and losses (e.g., physical loss and social loss), whereby losses are expected to outweigh gains throughout the life course (Heckhausen et al., 1989). This might have two implications. First, aging experiences might have an impact on reemployment efficacy depending on the nature of the experience (rather than age), with positive experiences potentially strengthening mature-aged job seekers' reemployment efficacy and negative experiences possibly weakening it. Second, it might also explain why mature-aged job seekers need to use rather loss-oriented strategies, as negative (aging or job search) experiences might rather call for loss-oriented strategies, and positive experiences rather for gain-oriented strategies (cf. Fasbender & Klehe, 2019).

Moreover, much research is needed on studying the effect of mature-aged job seekers' job search on their actual reemployment outcome (e.g., reemployment status or employment quality). For example, mature-aged job seekers that engage in more goal establishment and goal pursuit might be more likely to find a new job in general and probably also of higher quality (Fasbender & Klehe, 2019; van Hooft et al., 2013). Further, mature-aged job seekers that perceive less age discrimination during their job search might explore their possibilities more and as a result might find themselves in a new employment of higher quality (e.g., higher job satisfaction, higher intention to stay in the job, less underemployment).

Conclusion

This dissertation constitutes a substantial contribution to shed light on mature-aged job seekers' job search process. I reveal the positive relations between (especially loss-oriented) SOC strategies and the initial phase of the self-regulated job search process, namely goal establishment and goal pursuit. Further, I show the harming effect of age discrimination on mature-aged job seekers' occupational future time perspective and in a next step even on their career exploration and retirement intentions. Overall, taking a lifespan development perspective I show the impact of age and its (negative) consequences on mature-aged job seekers' self-regulated job search behavior as well as their general perception of their remaining career.

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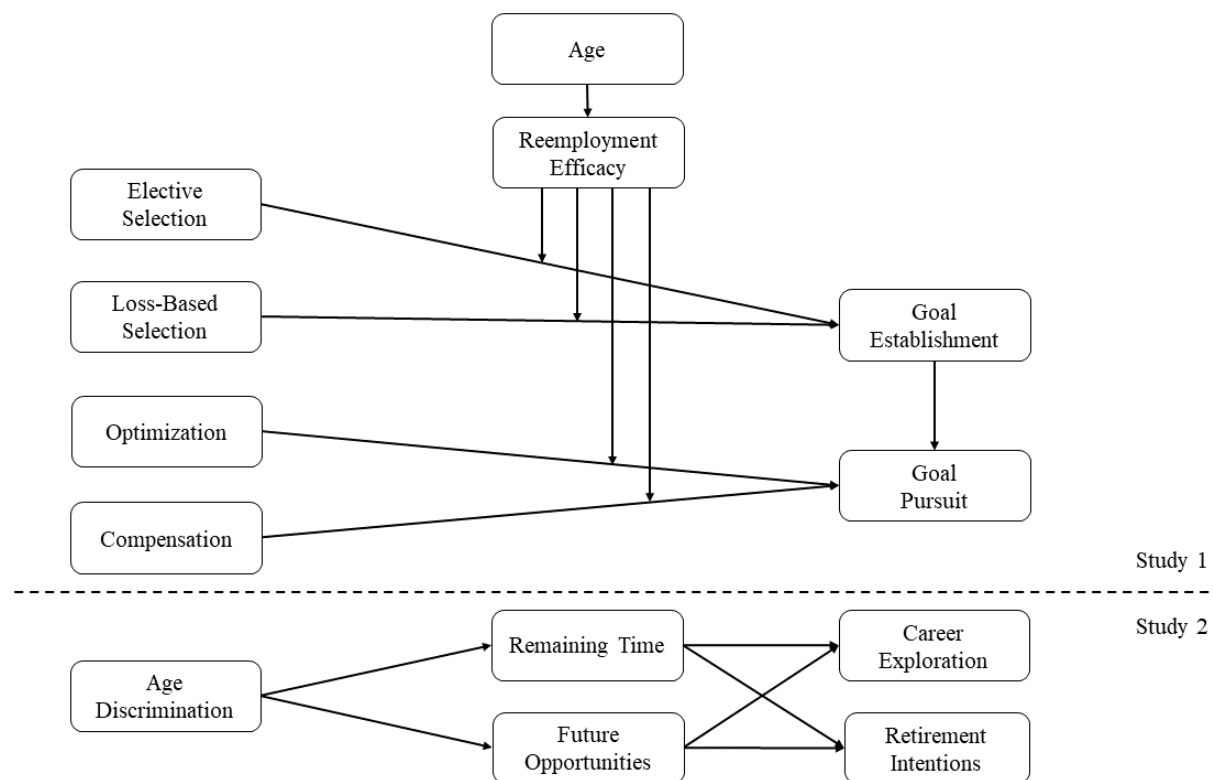
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Figure 1

Conceptual Study Model of this Dissertation.



List of Publications

Watermann, H., Fasbender, U., & Klehe, U. C. (2023). Withdrawing from job search: The effect of age discrimination on occupational future time perspective, career exploration, and retirement intentions. *Acta Psychologica, 234*,
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Watermann, H., Fasbender, U., & Klehe, U. C. (2021). Predicting the self-regulated job search of mature-aged job seekers: The use of elective selection, loss-based selection, optimization, and compensation strategies. *Journal of Vocational Behavior, 128*,
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Predicting the self-regulated job search of mature-aged job seekers: The use of elective selection, loss-based selection, optimization, and compensation strategies[☆]

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ABSTRACT

Job search is a demanding and often demotivating process, challenging job-seekers' self-regulation. Particularly, mature-aged job seekers face lower reemployment chances – and may benefit from strategies known from the lifespan literature. The current study examined whether and when the use of aging strategies (elective selection, loss-based selection, optimization, and compensation; SOC strategies) can support mature-aged job seekers in their self-regulated job search process (goal establishment and goal pursuit). We collected data from 659 mature-aged job seekers in three countries (Germany, United Kingdom, and United States) at four different times over two months. Results of multi-level modeling showed no support for gain-oriented strategies, namely elective selection (prioritizing one instead of multiple goals) and optimization (investing every effort to reach one's goal). In contrast, loss-oriented strategies, namely loss-based selection (prioritizing or selecting a new goal after a setback) and compensation (using new or previously unused means in the face of obstacles), supported mature-aged job seekers' goal establishment and goal pursuit. Moreover, with increasing age, mature-aged job seekers reported lower reemployment efficacy (the confidence to find a new job), which moderated the relation between compensation with goal pursuit. Compensation was particularly helpful for mature-aged job seekers' goal pursuit in weeks in which they reported lower (vs. higher) reemployment efficacy. These findings highlight the importance of loss-oriented aging strategies as beneficial coping strategies. With regard to practice, the present study speaks to the benefits of SOC strategies and points to the development of interventions targeted toward mature-aged job seekers.

Job search and unemployment pose serious challenges not only to people's financial security (Ranzijn et al., 2006), identity (Kira & Klehe, 2016), health, and well-being (Griep et al., 2015) but also to their self-regulation (Klehe & van Hooft, 2018). The search for reemployment is a highly demanding and often demotivating process filled with setbacks and negative feedback (van Hooft & Noordzij, 2009; Wanberg et al., 2010). Mature-aged job seekers in particular face stereotypes and discrimination (Posthuma & Campion, 2009), receive fewer job offers (Wanberg et al., 2016), and need longer to find reemployment (Kanfer et al., 2001). These difficulties can impair job seekers' reemployment efficacy (Dahling et al., 2013; Westaby & Braithwaite, 2003), namely their confidence to find a new job (Wanberg et al., 2010), which makes the search for reemployment even harder. Given these challenges and the

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relevance of mature-aged job seekers in the face of global workforce aging (OECD, 2006), it is important to understand how mature-aged job seekers' ongoing job search can be supported.

Job search calls for continuous high self-regulation because of its unpleasant process and setbacks (van Hooft et al., 2013). For mature-aged job-seekers, the two self-regulatory phases proposed as central are goal establishment and goal pursuit (Fasbender & Klehe, 2019): goal establishment involves setting job-search-related goals, whereas goal pursuit involves specific behavioral activities to reach these goals. Thereby, goal establishment informs goal pursuit, meaning that the clearer one's goals are, the better these goals can be pursued (Côté et al., 2006). When facing the harsh challenges and low prospects that job search entails for mature-aged job seekers, these job seekers' goal establishment and goal pursuit may benefit from four strategies identified in the aging literature to help aging workers to continuously utilize their capabilities in the best possible way, namely elective selection, loss-based selection, optimization, and compensation (SOC strategies; Freund & Baltes, 2002; Moghimi et al., 2017).

We consider the dynamic nature of the job search process (Wanberg et al., 2005; Wanberg et al., 2010) by applying a within-person approach and study how and when the SOC strategies can facilitate mature-aged job seekers' weekly goal establishment and goal pursuit. Specifically, we argue that mature-aged job seekers' goal establishment is stronger in weeks in which they focus on one instead of multiple job search goals (i.e., elective selection) and re-prioritize or select new goals in response to setbacks (i.e., loss-based selection; Freund & Baltes, 2002). Also, we theorize that mature-aged job seekers' goal pursuit is stronger in weeks in which they invest themselves in their job search (i.e., optimization) and respond to setbacks and challenges by using new or previously unused means (i.e., compensation; Freund & Baltes, 2002). Moreover, we focus on the moderating role of age and reemployment efficacy. We expect that with increasing age, mature-aged job seekers' reemployment efficacy will decrease and that reemployment efficacy moderates the SOC strategies' relations with goal establishment and goal pursuit. We assume that mature-aged job seekers benefit more strongly from using SOC strategies in weeks in which their reemployment efficacy is lower (vs. higher) because self-regulation is more important when one's confidence about finding a new job has plummeted (Kanfer & Bufton, 2018). Fig. 1 shows our conceptual model.

With this, we aim to make three contributions to the literature. First, we contribute to the emerging research on the self-regulated job search by focusing on two central phases of the job search process among mature-aged job seekers, namely goal establishment and goal pursuit (Fasbender & Klehe, 2019). As the self-regulated job search is dynamic and can vary from week to week (Wanberg et al., 2005; Wanberg et al., 2010), we apply a within-person design. With this, we shift the attention toward the changes job seekers experience over time and away from the well-studied between-person approach because findings on one level do not necessarily generalize to the other level (Dalal et al., 2014).

Second, we introduce the SOC strategies stemming from the aging literature as adaptive coping strategies to the job search context. Specifically, we study how SOC strategies can facilitate goal establishment and goal pursuit. Thus, we test part of the conceptual model of job search and (re)employment from a lifespan development perspective (Fasbender & Klehe, 2019). While previous research mainly studied whether job seekers have self-regulatory resources or not (Kanfer et al., 2001; Liu, Wang, et al., 2014), little is known about how job seekers actually manage their goals and means during the job search process. Relatedly, we also contribute to the research on SOC strategies. Past research has either focused on the four SOC strategies' aggregated effect (Breevaart & Zacher, 2019; Venz et al., 2018) or isolated strategies (Abele & Wiese, 2008). We add to a more fine-grained understanding of the SOC strategies' usefulness by disentangling the four SOC strategies and examining their distinct effects on goal establishment and goal pursuit.

Third, we deepen our understanding of the job search among mature-aged job seekers by exploring the moderating role of age and reemployment efficacy on the links between SOC strategies with goal pursuit and goal establishment. So far, we know little about why mature-aged job seekers engage in different job search behaviors (Wanberg et al., 2016), as only a few studies addressed the mechanisms explaining the moderating role of age (Zacher, 2013; Zacher & Bock, 2014). We expect that age diminishes mature-aged job

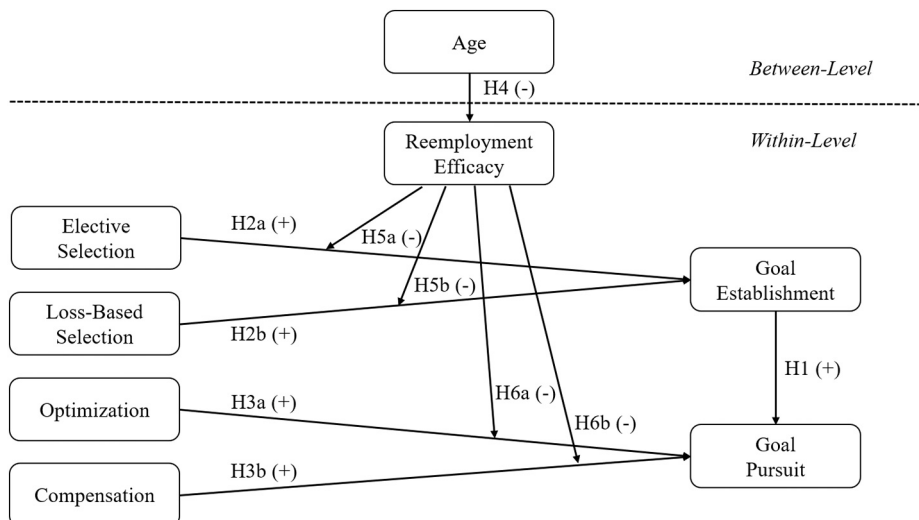


Fig. 1. Conceptual study model including hypotheses.

seekers' confidence in finding reemployment and, thus, explain why SOC strategies become more important with increasing age. Hence, by explicitly taking age and reemployment efficacy into account, we shed light on mature-aged job seekers' psychological conditions when searching for reemployment and highlight how particularly mature-aged job seekers, who often have little confidence to find a new job, can benefit from the use of the SOC strategies.

1. Theoretical background and hypotheses development

1.1. Self-regulated job search

Job search is a self-regulated process in which cognition and behavior are devoted to identifying and pursuing job opportunities (van Hooft et al., 2020). Furthermore, it is highly dynamic with considerable variability within job seekers (da Motta Veiga & Turban, 2018; Kreemers et al., 2018; Wanberg et al., 2005), as job seekers' search intensity can change (i.e., decrease, remain stable, or increase; Wanberg et al., 2005) from week to week.

When addressing the job search process among mature-aged job seekers, Fasbender and Klehe (2019) identified two self-regulatory phases as particularly important: goal establishment and goal pursuit. *Goal establishment* involves setting job-search-related goals. Conscious and clear goals are important to initiate targeted job search behavior (van Hooft et al., 2013). Having clear job search goals likely helps to commit to these goals and implement them in an organized hierarchical system (Fasbender & Klehe, 2019; van Hooft et al., 2013). Previous research found clear job search goals to positively predict relevant job search outcomes, such as employment quality (van Hooft et al., 2020), job improvement, career growth, and organizational identification (Zikic & Klehe, 2006). Moreover, interventions including a goal-setting component are more effective for obtaining reemployment than interventions without (Liu, Huang, & Wang, 2014). *Goal pursuit* describes the effort that job seekers put into specific behavioral actions to reach the established job search goal (e.g., looking for jobs on the internet, revising the resume, or sending out application letters). Goal pursuit predicts key job search outcomes, such as the number of received job offers and the duration of unemployment (Kanfer et al., 2001; van Hooft et al., 2020; Wanberg et al., 2016).

Conceptually, goal establishment and goal pursuit are related, meaning that goal establishment should inform goal pursuit (van Hooft et al., 2013). Thus, we assume that in weeks in which job seekers set clearer goals for themselves, it is easier for them to pursue these goals. In contrast, in weeks in which job seekers formulate no or only vague goals, their goal pursuit is lower because it is hard to pursue specific activities out of non-existing or unclear goals. In line with this assumption, previous research on the between-person level found that job seekers who only set vague goals for themselves showed lower goal pursuit (Côté et al., 2006). We state:

Hypothesis 1. Job seekers' within-person goal establishment is positively related to within-person goal pursuit.

1.2. Elective selection, loss-based selection, optimization, and compensation

The SOC model has its origin in the lifespan development literature to address strategies that help people coping with aging-related changes over the lifespan (Baltes et al., 1999), as people experience more losses and fewer gains over the lifespan (Heckhausen et al., 1989), and need to rebalance these experiences. Based on action-theoretical framework, the SOC model describes four aging strategies that are categorized along two dimensions. They can (1) be categorized as goal focused (i.e., elective and loss-based selection) and means-focused (i.e., optimization and compensation), or (2) as gain-oriented (i.e., elective selection and optimization) and loss-oriented (i.e., loss-based selection and compensation). People may use them to rebalance their gains and losses by improving (i.e., gain-oriented strategies) or restoring (i.e., loss-oriented strategies) effective functioning (Moghimi et al., 2017).

The SOC model first addresses the goals that people pursue and differentiates two selection strategies: elective selection and loss-based selection. *Elective selection* is defined as the prioritization of one's primary goals rather than pursuing multiple goals simultaneously in order to reach a desired state (Freund & Baltes, 2002). Applied to the job search context, this might imply, for example, that a job seeker first focuses on finding a job that fits their working experience before looking for a job that also pays well. *Loss-based selection* is defined as the reconstruction of one's goal system to maintain a given level of functioning within that goal domain, despite setbacks and shortcomings. It implies that people disengage from unattainable goals and adjust or select new goals when they experience losses (Freund & Baltes, 2002; Moghimi et al., 2017). Specifically, this strategy is necessary when they cannot compensate for the lack of one capacity by acquiring another (Moghimi et al., 2017). Within job search, this could entail that a job seeker who failed to 'find a job within walking distance' redefines their job search goal (e.g., 'find a job accessible with public transport').

Second, the SOC model addresses optimization and compensation, which are both means-focused (Fasbender & Klehe, 2019; Freund & Baltes, 2002), as they address the approach that people use to pursue their goals. *Optimization* is defined as the use of available means, and it aims to acquire, apply, and improve the use of appropriate means (e.g., effort, knowledge, and time) to reach goals (Freund & Baltes, 1998). Transferred to the job search context, optimization might manifest, for instance, by using a time of the day that one is most motivated to look for a job. *Compensation* is defined as the search for and use of new or previously unused internal (e.g., personal time) or external (e.g., job information from friends) means. It enables people to find alternative ways to reach a goal (Freund & Baltes, 1998) and thus helps to restore functioning in the absence or loss of goal-relevant means (Moghimi et al., 2017). Applied to job search, compensation may entail that a mature-aged job seeker without a computer of their own borrows a computer from a friend or goes to an internet café to pursue their job search goals.

As already mentioned, the SOC strategies can be further categorized into gain-oriented (i.e., elective selection and optimization) and loss-oriented (i.e., loss-based selection and compensation) strategies. Gain-oriented strategies focus on reaching a desired state. In

this regard, elective selection involves the focus on a few goals and a specific goal domain, whereas optimization involves the investment of goal-relevant means to reach these goals. Loss-oriented strategies focus on how to react to a loss. Specifically, loss-based selection is about changing the goal itself, whereas compensation is about the use of alternative means to reach the same goal (Freund & Baltes, 2002).

1.3. Elective and loss-based selection on goal establishment

We expect that elective and loss-based selection support mature-aged job seekers' goal establishment because both strategies concern the appropriate selection of goals. To decide which goals to focus on, one needs to have an idea about which goals are most important, urgent, or desired (Moghimi et al., 2017). A focus on the most important goals likely results in clearer goals that one can better commit to. During job search, elective selection may help to focus on the goal to find a job and to delay goals related to other life domains, such as family (e.g., babysitting the (grand)children) or hobbies (e.g., training for a marathon). However, when mature-aged job seekers face obstacles that are hard to overcome (e.g., a craftsman seeking work after suffering a back injury), loss-based selection may help them to reposition themselves and adjust or find new goals (e.g., teaching students in their field of expertise) instead of giving up. Therefore, both strategies likely facilitate goal establishment. Since both the use of SOC strategies and the job search process vary within people (Moghimi et al., 2017), we assume that mature-aged job seekers show more goal establishment in weeks they use elective and loss-based selection strategies compared to weeks in which they do not use these strategies. Following this argumentation, we state:

Hypothesis 2. Job seekers' within-person (a) elective and (b) loss-based selection are positively related to within-person goal establishment.

1.4. Optimization and compensation on goal pursuit

Optimization and compensation are means-focused. Rather than targeting people's goals per se, they address the means by which people strive toward these goals and thus, are likely to improve job seekers' goal pursuit. Specifically, optimization strategies imply a focus of one's available means to the task at hand. Thus, they may help mature-aged job seekers to allocate their personal time and energy to their job search activities (Venz et al., 2018). Mature-aged job seekers may focus their attention on the benefits of finding a new job (e.g., socio-emotional meaning at work) and withstand temptations like invitations or calls for help by friends. Hence, the use of optimization strategies should ensure that mature-aged job seekers realize their planned job search activities. Compensation may help them to figure out alternative routes toward reemployment instead of giving up after setbacks and losses, and thus foster goal pursuit. Furthermore, compensation likely ensures goal pursuit by utilizing social contacts (i.e., external means) when a job seeker otherwise could not carry out the task. For example, a mature-aged job seeker might contact previous colleagues for advice or possible job openings. Following this argumentation, we assume that mature-aged job seekers show more goal pursuit in weeks when they use more optimization and compensation strategies compared to weeks when they use less of these strategies. Thus, we state:

Hypothesis 3. Job seekers' within-person (a) optimization and (b) compensation are positively related to within-person goal pursuit.

1.5. The moderating effect of age and reemployment efficacy on job search

Job search differs within the group of mature-aged job seekers (Wanberg et al., 2016). Therefore, we study how age moderates the relations between elective selection and loss based selection with goal establishment, and optimization and compensation with goal pursuit. However, as age is just a number, we need to study the psychological mechanism that can explain the moderating role of age, such as reemployment efficacy. *Reemployment efficacy* can be defined as the believed ability to obtain job offers or find an acceptable job (da Motta Veiga & Turban, 2018; Wanberg et al., 2010). We assume that job seekers' age via reemployment efficacy moderates the relations between SOC strategies with goal establishment and goal pursuit. Thus, we want to clarify for whom these strategies are most effective. We expect that these strategies are most effective when mature-aged job seekers' reemployment efficacy is lower, which is more likely the case, the older a job seeker is.

First, we argue that age reduces reemployment efficacy because negative job search experiences add to a heightened experience of losses for mature-aged job seekers. With increasing age, job seekers face more challenges and reduced reemployment prospects. Recruiters tend to have negative attitudes toward mature-aged applicants (Fasbender & Wang, 2017), leading to fewer job offers (Wanberg et al., 2016) and longer time to reemployment (Kanfer et al., 2001). Previous research reported a negative correlation between age and reemployment efficacy (Liu, Wang, et al., 2014; Wanberg et al., 2010). Thus, we state:

Hypothesis 4. Age is negatively related to reemployment efficacy.

Second, reemployment efficacy should moderate the relations between SOC strategies with job search behavior. While we argued how increasing age can weaken reemployment efficacy on the between-person level, job seekers' reemployment efficacy can vary during the job search process (Liu, Wang, et al., 2014). Declines within a job seekers' reemployment efficacy can impair their job search process and therewith, increase the need to use coping strategies (Kanfer & Bufton, 2018). SOC strategies were originally devised to identify how people can successfully cope with the increasing challenges of aging as a context of harsh challenges and declining prospects (Heckhausen et al., 1989). Transferring these insights to the job search context, SOC strategies may be particularly useful in weeks in which mature-aged job seekers doubt to find reemployment. We, therefore, study reemployment efficacy as a moderator to

the links between SOC strategies with goal establishment and goal pursuit.

1.5.1. Reemployment efficacy and goal establishment

Specifically, reemployment efficacy will likely moderate the within-person relations of elective and loss-based selection with goal establishment such that job seekers should benefit more from elective and loss-based selection in weeks in which their reemployment efficacy is lower compared to weeks in which it is higher, as in the latter case, job seekers tend to set higher goals (Bandura & Locke, 2003). Thus, no particular strategies may be needed to ensure a successful goal establishment and job seekers will likely be less dependent on elective and loss-based selection. Yet, in weeks in which job seekers' reemployment efficacy is lower, the successful establishment of their goals is endangered, and they may benefit from elective selection and loss-based selection to ensure a successful goal establishment. For example, the use of elective and loss-based selection enables job seekers to set more autonomous goals (Bajor & Baltes, 2003) and to adjust these goals with a lot of flexibility (Freund & Baltes, 2002). This should keep job seekers' goal establishment high, despite lower reemployment efficacy. However, if mature-aged job seekers fail to electively select their goals or to adapt them while they perceive their reemployment efficacy as lower, they will less likely devise clear goals but rather find themselves discouraged. We state:

Hypothesis 5. Job seekers' within-person reemployment efficacy moderates the relations between within-person (a) elective selection and (b) loss-based selection with goal establishment in a way that the positive relation will be stronger when reemployment efficacy is lower (vs. higher).

1.5.2. Reemployment efficacy and goal pursuit

Similarly, reemployment efficacy will likely moderate the within-person relations between optimization and compensation with goal pursuit. In weeks in which job seekers perceive their reemployment efficacy as higher, they less likely need to manage themselves via optimization and compensation and should maintain a relatively high goal pursuit, as higher reemployment efficacy goes along with persisting in the face of setbacks (Bandura & Locke, 2003). Yet, in weeks in which job seekers perceive their reemployment efficacy as lower, their goal pursuit might be endangered, and they likely benefit more from optimization and compensation, as a higher use of these strategies implies a higher investment of energy into goal achievement (Freund & Baltes, 1998). However, if they fail to optimize their goal pursuit or compensate for experiencing losses in the face of lower reemployment efficacy, they will less likely be able to pursue their goal. We state:

Hypothesis 6. Job seekers' within-person reemployment efficacy moderates the relation between within-person (a) optimization and (b) compensation with goal pursuit in a way that positive relations will be stronger when reemployment efficacy is lower (vs. higher).

2. Method

2.1. Sample and procedure

We surveyed mature-aged job seekers via four online questionnaires spread across two months. The surveys were administered bi-weekly, thus participants were invited to complete a survey every second week. We allowed participants up to four days to complete each survey. We chose a time lag between questionnaires of two weeks because the job search process is highly dynamic and may change from week to week (Kreemers et al., 2018; Wanberg et al., 2005). The data for this study was collected as part of a bigger data collection. The first survey covered participants' demographics (i.e., age, gender, educational level, unemployment duration, country), and all four surveys covered all study variables (i.e., goal establishment, goal pursuit, SOC strategies, reemployment efficacy).

Participants received financial compensation for each questionnaire they completed (up to €17 in total).¹ They were recruited via a professional data collection company, which creates data with similar psychometric properties and criterion validities compared to conventional data collection methods (Walter et al., 2019). We recruited participants from three different countries (i.e., Germany, the United Kingdom, and the United States) and thus considered participants from different cultural, unemployment, and retirement systems (Wanberg et al., 2020). Participants were invited if they were 40 years² or older, currently unemployed and actively looking for a job (cf. Zacher, 2013; Zacher & Bock, 2014). Overall, 659 participants took part at Time 1. To ensure data quality and that participants paid attention to the questions' content, we checked for straightliners (i.e., identical answers in a set of questions so that positive and negative recoded items of a construct were rated the same) at all four time points (Zhang & Conrad, 2014). We excluded 36 participants because they failed the check for straightliners more than once during a questionnaire. Of the resulting 623 participants, 224 also took part at Time 2, 191 took part at Time 3, and 147 took part at Time 4, resulting in 1185 available data points. Following recommendations by Goodman and Blum (1996), we tested if the final sample differed from 'leavers' (i.e., participants who were excluded, stopped responding, and/or found a job during the study) on control (i.e., gender, unemployment duration, country, and educational level) and study variables (i.e., SOC strategies, reemployment efficacy, goal establishment, goal pursuit, and age). We

¹ Participants received €5 for the first and longest questionnaire. For the second, third and fourth questionnaire they received €3, €4, and €5 respectively, as an increase of compensation with each questionnaire can foster participants motivation not to drop-out (Wang et al., 2017).

² Although there is no standardized definition of who is considered a mature-aged worker, we chose 40 years as a cut-off value, which is consistent with the United States Age Discrimination in Employment Act (United States Equal Employment Opportunity Commission, 2013) and previous studies on mature-aged job seekers (Zacher, 2013; Zacher & Bock, 2014).

Table 1

Means, standard deviations, Cronbach's alphas, and correlations of study variables.

	<i>M</i>	<i>SD</i>	<i>ICC</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Age	51.13	7.56		-	0.08*	0.14**	0.02	-0.06**	0.01	-0.08*	-0.09*	-0.05	-0.13**	-0.12**	0.10**	-0.14**
2. Gender ^a	1.31	0.46			-	0.02	0.07**	0.07**	0.04	-0.03	-0.04	-0.04	-0.05	-0.08	-0.01	-0.05
3. Educational level ^b	1.30	0.46				-	-0.17**	-0.12**	0.00	-0.08*	-0.09*	-0.08	-0.13**	-0.07	-0.08	-0.13**
4. Germany ^c	0.22	0.42					-	-0.31**	0.01	0.15**	0.23**	0.10**	0.28**	-0.04	0.11**	-0.01
5. United Kingdom ^c	0.25	0.44						-		-0.12**	-0.21**	-0.15**	-0.24**	-0.10**	-0.17**	-0.02
6. Unemployment duration ^d	5.40	3.47							-	-0.12**	-0.14**	-0.15**	-0.12**	-0.20**	-0.01	-0.13**
7. Elective selection (SOC)	3.65	1.22	0.53							-	0.73**	0.64**	0.61**	0.24**	0.20**	0.46**
8. Loss-based selection (SOC)	3.65	1.31	0.54							0.56**	-	0.74**	0.75**	0.30**	0.25**	0.46**
9. Optimization (SOC)	4.06	1.29	0.55							0.49**	0.57**	-	0.77**	0.36**	0.33**	0.49**
10. Compensation (SOC)	3.91	1.38	0.67							0.36**	0.45**	0.56**	-	0.35**	0.27**	0.52**
11. Reemployment efficacy	4.57	1.36	0.71							0.20**	0.21**	0.22**	0.21**	-	0.21**	0.30**
12. Goal establishment	4.25	1.31	0.65							0.07*	0.09**	0.11**	0.08**	0.05	-	0.23**
13. Goal pursuit	2.78	0.77	0.64							0.14**	0.12**	0.14**	0.14**	0.30**	0.13**	-

Note. Correlations above the diagonal depict person-level correlations ($N = 623$). Person-level correlations of day-level variables are based on the person mean. Correlations below the diagonal depict day-level correlations ($N = 1185$). Reported Cronbach's alphas of day-level variables depict the mean over the four time points.

^a 1 = female, 2 = male.

^b 1 = no university degree, 2 = university degree.

^c For the country dummy variables, the United States was selected as the reference group.

^d In months.

* $p < .05$.

** $p < .01$.

found no significant differences for gender and unemployment duration. However, the educational level was slightly lower among "leavers" ($t(657) = 2.31, p = .013$). In the "leavers"-group were significantly more German job seekers than American job seekers compared to the final sample ($t(657) = -2.19, p = .030$). There was no difference between British and American job seekers in the two groups. Regarding our study variables, we found no difference for elective selection, optimization, compensation, reemployment efficacy, and goal establishment. However, loss-based selection ($t(657) = -2.81, p = .005$) and goal pursuit ($t(657) = -2.74, p = .006$) were both slightly higher among "leavers".

Of the total sample ($N = 623$), 432 (69.34%) were female and 188 (30.18%) held a university degree. About half of the sample ($n = 325, 52.17%$) lived in the United States and the others in the United Kingdom ($n = 158, 25.36%$) or Germany ($n = 140, 22.47%$). On average, participants were 51.13 years old ($SD = 7.56$; ranging from 40 to 80) and on average unemployed for 5.40 months ($SD = 3.47$; longest unemployment duration was 14 months).

2.2. Measures

Items were administered in the respective language of the participants, namely in English and German, for which they had previously been translated using the back-translation process (Brislin, 1970). We introduced all job search-related items with: "In the past week, how have you approached your job search?", followed by the constructs and their items.

2.2.1. Goal establishment

Goal establishment was measured by the three items from Gould (1979) that address the existence and clarity of career goals. The items were answered on a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). An example (reverse coded) item was: "My career objectives are not clear" (Cronbach's $\alpha = 0.88$).

2.2.2. Goal pursuit

We measured goal pursuit with van Hooft et al.'s (2004) 11-item version of Blau's (1994) classic job search scale. The items were answered on a 5-point Likert scale ranging from 1 (*No time at all*) to 5 (*A great deal of time*). The items were introduced with "In the past week, how much time did you spend on each of the following job search activities?"; an example was "Looked for jobs on the internet" (Cronbach's $\alpha = 0.91$).

2.2.3. SOC strategies

We measured the use of the SOC strategies with the 12-item scale by Baltes et al. (1999). Items were answered on a 7-point Likert scale ranging from 1 (*Does not apply at all*) to 7 (*Applies completely*). We contextualized the scale by adding "during my job search" to each item. Example items were: "I concentrate all my energy on few things during my job search" (elective selection; Cronbach's $\alpha = 0.89$), "When I can't do something important the way I did before, I look for a new goal during my job search" (loss-based selection; Cronbach's $\alpha = 0.91$), "If something matters to me during my job search, I devote myself fully and completely to it" (optimization; Cronbach's $\alpha = 0.91$), and "When things don't go as well as they used to during my job search, I keep trying other ways until I can achieve the same result I used to" (compensation; Cronbach's $\alpha = 0.88$).

2.2.4. Age

We rescaled the chronological age of the participants by a factor of 10 to facilitate the interpretation of the coefficient in our statistical analyses and results (Fasbender et al., 2020).

2.2.5. Reemployment efficacy

Reemployment efficacy was measured with the 4-item scale by Wanberg et al. (2010). The items were answered on a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). The items were introduced with "How confident are you about the following", an example item was "Finding a job that I like" (Cronbach's $\alpha = 0.81$).

2.2.6. Control variables

We included gender (1 = *female*, 2 = *male*) and educational level (1 = *no university degree*, 2 = *university degree*) as potential control variables as male and higher educated job seeker showed more job search intensity (Kanfer et al., 2001). We also included country (two dummy-coded variables for the United Kingdom and Germany with the United States as the reference country) as a potential control-variable, as countries differed in respondents' job search intensity (Wanberg et al., 2020). Finally, we controlled for unemployment duration (in months), as job search intensity decreased across the time unemployed (Kulik, 2001).

3. Results

3.1. Preliminary analyses

Table 1 presents correlations, means, standard deviations, and Cronbach's alphas of all study variables. As country, educational level, and unemployment duration correlated significantly with goal establishment or pursuit, we included them as control variables in the analysis (Becker et al., 2016). The intraclass correlations of all within-variables ranged between 0.53 and 0.71, whereas 67% of the total variance of goal establishment was within-person; 24% of goal pursuit, between 69 and 93% of the SOC strategies and 29% of

reemployment efficacy. These results show sufficient within-person fluctuation, calling for a multilevel approach (Singer et al., 2003). Weeks (Level 1) were nested in job seekers (Level 2) and hierarchical linear modeling was applied to meet the requirements of this multilevel structure (Raudenbush & Bryk, 2002). The data was analyzed using MPlus 8.3 (Muthén & Muthén, 2018).

3.1.1. Construct validity

We conducted multilevel confirmatory factor analyses to test the construct validity of the measures used in our model. For goal pursuit we created three parcels using the item-to-construct balance method to improve the parameter to respondents ratio, which otherwise could lead to instability of the factor solution (Little et al., 2002). This is acceptable as our focus lies on the structural relation (Sterba & Rights, 2017; Wanberg et al., 2020). Our 7-factor solution (i.e., goal establishment, goal pursuit, reemployment efficacy, elective selection, loss-based selection, optimization, and compensation) reached an acceptable fit, and was superior to alternative 6-, 5-, 4-, and 1-factor solutions (Table 2). These results support the discriminant validity of the measures used in our study.

3.1.2. Measurement invariance

Next, we tested measurement invariance across the three countries using multigroup confirmatory factor analyses to ensure that the scales were similarly understood by participants from the three different countries (Davidov et al., 2014; Wanberg et al., 2020). First, we tested our model for configural invariance (i.e., same factor structure) which resulted in a reasonable fit ($\chi^2(587) = 878.321, p < .001, CFI = 0.906, RMSEA = 0.035$). We then applied several constraints to test for metric invariance (i.e., same factor loadings), scalar invariance (i.e., same intercepts) and full invariance (i.e., same residuals). We compared the CFI values of the subsequent models and used the recommended cut-off value of 0.01 (Cheung & Rensvold, 2002). The difference between the configural and metric invariance model, and the metric and the scalar invariance model was smaller than the cut-off-value of 0.01. However, the difference between the scalar and full invariance model was bigger than 0.01. The results suggest scalar invariance across the three countries and therefore we can pool the data together into one sample (Table 3).

3.2. Hypotheses testing

Results of the hierarchical linear modeling employed to test Hypotheses 1 to 7 are presented in Table 4. On the within-person level, we found a positive and significant effect for goal establishment on goal pursuit ($\gamma = 0.06, p = .010$); Hypothesis 1 was therefore supported. Additionally, on the between-person level, we found a similar effect ($\gamma = 0.06, p = .010$).

On the within-person level, results revealed no significant effect for elective selection on goal establishment ($\gamma = 0.03, p = .569$); Hypothesis 2a was therefore not supported. However, we found a positive and significant effect for loss-based selection ($\gamma = 0.12, p = .043$), supporting Hypothesis 2b. Similar results emerged on the between-person level for both elective selection ($\gamma = 0.07, p = .306$) and loss-based selection ($\gamma = 0.13, p = .066$).

On the within-person level, results revealed no significant effect for optimization on goal pursuit ($\gamma = 0.05, p = .108$); Hypothesis 3a was therefore not supported. However, we found a positive and significant effect for compensation ($\gamma = 0.12, p = .012$), supporting Hypothesis 3b. Additionally, on the between-person level, we found positive and significant effects for both optimization ($\gamma = 0.09, p = .005$) and compensation ($\gamma = 0.21, p < .001$).

On the between-person level, we found a significant and negative effect of age on reemployment efficacy ($\gamma = -0.21, p = .003$), supporting Hypothesis 4.

On the within-person level, the results revealed no significant interaction effect between reemployment efficacy and elective selection ($\gamma = -0.02, p = .886$), nor between reemployment efficacy and loss-based selection on goal establishment ($\gamma = -0.05, p = .649$). Thus, Hypotheses 5a and 5b were not supported. On the between-person level, the results were similar for the interaction effect between reemployment efficacy and elective ($\gamma = -0.03, p = .637$) and loss-based selection ($\gamma = 0.09, p = .077$).

On the within-person level, we found no significant effect for the interaction between reemployment efficacy and optimization ($\gamma = 0.02, p = .736$), thus, Hypothesis 6a was not supported. However, we found a significant interaction effect between reemployment efficacy and compensation on goal pursuit ($\gamma = -0.14, p = .024$). We plotted the interaction effect one standard deviation (*SD*) above

Table 2
Confirmatory factor analysis fit indices for measurement model.

	χ^2	df	CFI	Δ CFI	RMSEA	SRMR
7-Factor solution	0.339.771	188	0.945	-	0.026	0.037
6-Factor solution ^a	0.428.962	194	0.916	0.029	0.032	0.050
5-Factor solution ^b	0.416.060	199	0.922	0.023	0.030	0.041
5-Factor solution ^c	0.525.807	199	0.883	0.062	0.037	0.047
4-Factor solution ^d	0.541.850	203	0.878	0.067	0.038	0.048
1-Factor solution	1.408.441	209	0.569	0.376	0.070	0.096

^a Goal establishment and goal pursuit loading on one factor.

^b Selection-strategies (i.e., elective and loss-based selection) loading on one common factor and optimization and compensation loading on one common factor.

^c Gain-oriented (i.e., elective selection and optimization) and loss-oriented (i.e., loss-based selection and compensation) SOC strategies loading on one common factor.

^d All SOC strategies loading on one common factor.

Table 3

Results measurement invariance analyses.

	χ^2	df	CFI	Δ CFI	RMSEA	SRMR
1) Configural invariance (equal factor structure)	878.321	587	0.906	-	0.035	0.029
2) Metric invariance (equal factor loading)	940.223	629	0.900	0.006	0.035	0.030
3) Scalar invariance (equal intercepts)	942.574	360	0.899	0.001	0.035	0.030
4) Full invariance (equal residuals)	1055.853	674	0.877	0.022	0.038	0.031

Table 4

Results of multivariate analysis including control variables.

	Goal establishment			Goal pursuit			Reemployment efficacy		
	γ	SE	p	γ	SE	p	γ	SE	p
Intercept	4.24**	0.05	<0.001	2.77**	0.03	<0.001			
Control variables									
Germany ^a	0.16	0.13	0.084	-0.21**	0.07	<0.001			
United Kingdom ^a	-0.27*	0.12	0.075	0.10	0.06	0.240			
Educational level ^b	0.28	0.11	0.015	0.27	0.11	0.081			
Unemployment duration	0.02	0.01	0.144	-0.01	0.01	0.106			
Day-level RE	0.07	0.07	0.340	0.10*	0.04	0.013			
Person-level RE	0.17**	0.05	<0.001	0.04*	0.02	0.041			
Level 1 variables (within-person)									
Goal establishment				0.06*	0.02	0.010			
Elective selection	0.03	0.06	0.569						
Loss-based selection	0.12*	0.06	0.043						
Elective selection \times RE	-0.02	0.05	0.886						
Loss-based selection \times RE	-0.05	0.05	0.649						
Optimization				0.05	0.03	0.108			
Compensation				0.12**	0.05	0.012			
Optimization \times RE				-0.02	0.06	0.736			
Compensation \times RE				-0.14*	0.06	0.024			
Level 2 variables (between-person)									
Age ^c	0.02**	0.01	0.001	-0.01*	0.00	0.074	-0.21**	0.07	0.003
Goal establishment				0.06*	0.02	0.010			
Elective selection	0.07	0.06	0.306						
Loss-based selection	0.13	0.07	0.066						
Elective selection \times RE	-0.03	0.08	0.637						
Loss-based selection \times RE	0.09	0.08	0.077						
Optimization				0.09*	0.03	0.005			
Compensation				0.21**	0.03	<0.001			
Optimization \times RE ^d				-0.06**	0.02	0.001			
Compensation \times RE ^d				0.06**	0.02	0.006			
-2* \log likelihood	5913.09								
Level 1 variance (SE)	0.22 (0.02)								
Level 2 variance (SE)	0.25 (0.02)								

Note. Level-2 $N = 623$. Level-1 $N = 1185$. SE = standard error. Coeff = Coefficient. RE = Reemployment Efficacy.

^a For the country dummy variables, the United States was selected as the reference group.

^b 1 = no university degree, 2 = university degree.

^c Age was rescaled by a factor of 10.

^d Both moderation effects were not further considered as they became non-significant when tested in separate models, whereas within-moderation and main effects remained stable.

* $p < .05$.

** $p < .01$.

and below the mean of reemployment efficacy (Fig. 2). Furthermore, a simple slope difference test revealed that the positive relation between compensation and goal pursuit was stronger when reemployment efficacy was lower (-1 SD, simple slope = 0.26, $p = .004$) as compared to job seekers with average reemployment efficacy (simple slope = 0.12, $p = .009$, slope difference = -0.14 , $p = .020$), and no longer significant when reemployment efficacy was higher ($+1$ SD, simple slope = -0.02 , $p = .729$, slope difference = -0.14 , $p = .020$). Together, these findings support Hypothesis 6b.

Although not explicitly hypothesized, we tested the indirect moderation effect of age via reemployment efficacy on the relation between compensation and goal pursuit. This effect was positive and significant ($\gamma = 0.03$, 95% CI [0.0033, 0.0641]). Specifically, we found that the effect of compensation on goal pursuit was 0.14 (95% CI [-0.0539, -0.0001]) when job seekers' age (via reemployment efficacy) was higher ($+1$ SD) versus 0.09 (95% CI [-0.0359, 0.0001]) when job seekers' age was lower (-1 SD). Relatedly, the difference between the two effects was significant (difference = -0.04 , 95% CI [-0.0218, -0.0001]).

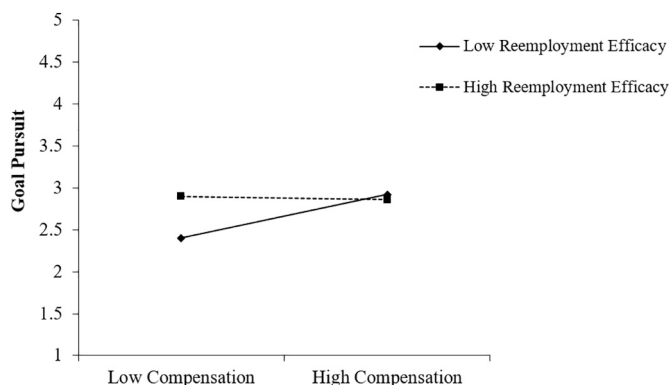


Fig. 2. Within person two-way interaction between reemployment efficacy and compensation on goal pursuit.

On the between-person level we further found significant interaction effects for reemployment efficacy and both optimization ($\gamma = -0.07, p = .001$) and compensation ($\gamma = 0.05, p = .006$, Table 4). Yet, both between-person level moderation effects became non-significant when tested in separate models and thus were not further considered.

3.3. Post-hoc multigroup analysis

Following the procedure of Wanberg et al. (2020), we further analyzed the robustness of our results across the three countries. In particular, we specified the three countries as groups and ran a multigroup multilevel analysis. First, we estimated a free model as a baseline model for our outcome variables where all paths could vary freely across the three countries. Next, we set all the hypotheses' relevant effects (i.e., SOC strategies, interaction terms and goal establishment on the within-level and age on the between-level) invariant across the three countries to create a substantive study variables model. The results showed no significant deterioration of the model fit compared to the baseline model ($\Delta\chi^2(20) = 22.207, p = .329$). Furthermore, we applied additional equality constraints by setting the rest of the variables (i.e. SOC strategies, interaction terms and goal establishment on the between-level as well as the control variables and reemployment efficacy) invariant across the three countries. The results showed no significant deterioration of the model fit compared to the substantive study variables model ($\Delta\chi^2(38) = 47.518, p = .139$). These results suggest that the effects we found for our substantive study variables as well as for our control variables are similarly supported in all three countries (Cheung & Rensvold, 2002; Wanberg et al., 2020).

4. Discussion

This study aimed to investigate whether the use of the SOC strategies can support mature-aged job seekers in the course of their job search process and to understand the moderating role of age and reemployment efficacy. With this, we contributed to the literature on self-regulation during job search and tested the potential benefits of aging strategies not in the aging but in another context full of challenges and setbacks (i.e., job search context).

The findings from our multilevel analysis indicate that goal establishment informed goal pursuit on the within- and the between-person level. Thus, in weeks in which job seekers established clearer employment goals for their future, they also pursued these goals more intensely, and job seekers who generally set clear goals showed a higher goal pursuit.

Moreover, we found on the within-person level that mature-aged job seekers' goal establishment improved whenever they used loss-based selection and their goal pursuit improved whenever they used compensation strategies. In contrast, elective selection was unrelated to participants' goal establishment, nor did their use of optimization strategies lead to an increase in their goal pursuit. On the between-person level, our results were similar, with the exception of loss-based selection, which was only marginally significant and optimization, as job seekers who generally used it more showed a higher goal pursuit. Taken together, these results highlight the benefits of loss-oriented aging strategies (i.e., loss-based selection and compensation) in supporting mature-aged job seekers in their self-regulatory job search process. As we consistently found these effects both on the within- and between-person level, loss-oriented strategies generally appear beneficial, both for an individual going through the job search process across time and between persons. Job seekers who apply these strategies more were also more engaged in goal establishment and goal pursuit. In contrast, in the case of the gain-oriented aging strategies, we only found an effect for optimization, and this effect only occurred on the between-person-level. These findings are in line with earlier research that noted how losses are more salient to people than gains (Schmitt et al., 2012; see also Hobfoll, 1989) and showed that SOC strategies lead to higher work-related outcomes, such as an increased job performance and work engagement (Moghimi et al., 2017; Venz et al., 2018).

Regarding the moderating role of reemployment efficacy, we found that compensation strategies were primarily effective in supporting goal pursuit in weeks in which mature-aged job seekers faced a lower reemployment efficacy. In contrast, in weeks when reemployment efficacy was higher, job seekers' goal pursuit remained comparably high, regardless of their use of compensation strategies. Especially since reemployment efficacy neither moderated the relations between elective or loss-based selection with goal

establishment nor between optimization with goal pursuit, we see an increased need for compensation to keep on going as soon as a job seeker is in doubt of their job search success. These results fit previous research showing SOC strategies to be particularly effective in difficult (employment) situations (Müller et al., 2016). Additionally, the difficulties accompanied by lower reemployment efficacy seem to be only relevant when job seekers pursue their job search goals but does not seem to influence the goals they set themselves.

Furthermore, we found that with increasing age, mature-aged job seekers reported lower levels of reemployment efficacy. Thus, the relation between compensation and goal pursuit was indirectly moderated by age via reemployment efficacy: Older mature-aged job seekers with lower reemployment efficacy benefited more from compensation to improve their goal pursuit than younger mature-aged job seekers with lower reemployment efficacy.

4.1. Theoretical implications

This study offers three theoretical implications for the scholarly literature. First, in line with conceptual work on the job search process (van Hooft et al., 2013), we found goal establishment to inform goal pursuit. Therefore, we expand our understanding of job search as a dynamic process by applying a within-person design and showing intra-individual variability in the job search process over time (Schmitt et al., 2012; Venz et al., 2018). By simultaneously considering within-person and between-person effects, we provide a complete picture of the self-regulated job search. Furthermore, we underline the importance of such combined approaches, as our results were not always generalizable from one level to another.

Second, our findings extend the job search literature by introducing the SOC strategies and expand our knowledge on the job search among mature-aged job seekers by supporting parts of the conceptual model of job search and reemployment by Fasbender and Klehe (2019). Prior research has addressed the benefits of different resources that aid job seekers' job search (Kanfer et al., 2001; Liu, Wang, et al., 2014). This study does not focus on job seekers' resources but on their aging strategies in terms of selecting and pursuing their employment goals. Specifically, we showed that loss-oriented strategies play a crucial role in mature-aged job seekers' job search process. No support was found for the benefits of gain-oriented strategies. Thus, protecting oneself from negative aspects and finding a way around obstacles of the job search process seems to offer a greater benefit for mature-aged job seekers' self-regulated job search than prioritizing a small number of goals and optimizing one's available means and behavior, which might be because of the rather heightened amount of negative job search experiences (Klehe & van Hooft, 2018). Considering research on SOC strategies (Breevaart & Zacher, 2019; Venz et al., 2018), our findings show distinct effects of different SOC strategies, rather than combining these strategies in a conglomerate (cf. Moghimi et al., 2017), our results thus encourage a differentiated consideration.

Third, we deepen our understanding of job search particularly among mature-aged people, by highlighting the moderating role of age and reemployment efficacy concerning the relation between the SOC strategies and goal establishment and goal pursuit. We uncovered a mechanism (i.e., reemployment efficacy) that explains why mature-aged job seekers with increasing age engage differently in their job search behavior (Wanberg et al., 2016). Specifically, we found that those with higher (vs. lower) age benefit more from using compensation strategies to improve their goal pursuit due to their lower (vs. higher) reemployment self-efficacy. The difference within the group of mature-aged job seekers illustrates the importance of age-heterogeneity when studying specific age groups (cf. Nagy et al., 2019).

4.2. Practical implications

With regard to practice, the present study first points to the variability of job search within people. For practitioners advising job seekers during the job search process, this may imply that rather than offering one-time advice, job seekers may benefit from repeated counseling to clarify and adjust their goals and maintain a high goal pursuit.

Second, the results suggest that the use of loss-oriented SOC strategies should be encouraged within mature-aged job seekers to manage the increased losses and setbacks they encounter when searching for a job. Specifically, they should focus on learning about loss-based selection to foster their goal establishment and about compensation to foster their goal pursuit. For example, instead of giving up on a goal (e.g., finding a job in the same industrial sector), a job seeker should look for other attainable goals (e.g., finding a job in another industrial sector; i.e., loss-based selection), or they could involve friends and family members to help with their job search (e.g., proof-reading the motivation letter; i.e., compensation).

Furthermore, our findings point to the development of interventions targeting job seekers' SOC strategies use. For example, earlier research demonstrated notable effects of face-to-face interventions focusing on the training of SOC strategies among nurses who faced difficult employment situations (e.g., low job control; Müller et al., 2016). In the context of job search, career counselors and unemployment agencies could implement such interventions, for instance, by training mature-aged job seekers to select relevant job search goals and to allocate their time and effort effectively, especially in the face of job-search-related losses. Furthermore, they could be made aware of the dynamic nature of the job search and its possible pitfalls. Our findings highlight that job seekers can profit from interventions targeting SOC strategies particularly in times in which their reemployment efficacy is lower.

Moreover, also mature-aged job seekers' reemployment efficacy should be fostered, since interventions that target both motivational aspects (e.g., reemployment efficacy) and skill enhancements (e.g., goal setting, SOC strategies) are more effective in contrast to interventions that focus on only one of these aspects (Liu, Huang, & Wang, 2014). It is reasonable to assume that other job seekers who are challenged by unfavorable conditions during the job search could also benefit from such interventions. For example, younger unemployed job seekers suffer from higher levels of stress and more unclear job search goals and thus interventions have proven to be particularly effective for them (Liu, Huang, & Wang, 2014).

4.3. Limitations and directions for future research

In our study, attrition due to participants finding employment, dropping out or responding carelessly reduced our overall sample size. We do not think that these drop-outs have a major effect on our results, as they do not seem to come from particular demographic groups. In addition, we corrected the data by applying full information maximum likelihood estimation and therewith estimating missing values (cf. Wang et al., 2017).

We used scales for goal establishment and goal pursuit that are well known and often used in current job search research (Kanfer et al., 2001; Liu, Huang, & Wang, 2014; Zikic & Klehe, 2006). However, following the definition of these constructs by self-regulation theories in job search, the scales we used rather focus on single facets (e.g., we focused on specific behavior activities when measuring goal pursuit). As there are no existing measures of goal establishment and goal pursuit that capture them holistically (i.e., considering each facet of their definitions), future research can optimize these measures by developing new scales that eliminate these concerns, for example by capturing all facets (e.g., further facets of goal pursuit are goal shielding, self-control, and self-monitoring³; van Hooft et al., 2013) or by focusing on another facet or a different measure to capture goal establishment or pursuit.

Further, while our sample comprises three countries (Germany, United Kingdom, and United States), and while we found no differences between those countries, even though they differ in respect to unemployment and retirement systems (Wanberg et al., 2020) these are all individualistic and no collectivistic (e.g., Asian) countries. In more individualistic cultures, job seekers tend to be more motivated by their personal attitudes and less by social pressure (van Hooft & de Jong, 2009). We, therefore, recommend future research to study whether our findings are also applicable to collectivistic countries.

In addition, this study is based on self-reported data. However, we reduced concerns of common method variance as we used (1) a multivariate design with multiple points of measurement enabling us to consider and test within- and between-person level effects and (2) different scale points and anchors (Podsakoff et al., 2012). Nevertheless, future research could gather other-reported data (e.g., from career counselors or family members) or objective data (e.g., number of applications sent out), as well as measures of eventual job-search success. This would enable a more holistic and thus reliable understanding of the involved processes.

Moreover, future research may capture the daily dynamics of the job search process. As we tested the effect of goal establishment on goal pursuit without a time lag, more research is needed to test if goal pursuit also informs goal establishment and in which time horizon this effect may be strongest (i.e., daily or weekly). Furthermore, for unemployed job seekers, the job search process itself usually qualifies as a rather negative experience, as it is filled with setbacks and negative feedback (van Hooft & Noordzij, 2009; Wanberg et al., 2010). Our findings suggest loss-oriented strategies to cope with the potential negative experiences. Since negative aspects, such as experienced losses, are more present than positive aspects (Schmitt et al., 2012), future research could investigate whether job seekers can change their perceptions by focusing on positive job search experiences on a daily basis and study whether the importance of gain-oriented SOC strategies for the job search process could be increased.

Understanding the SOC strategies as loss- and gain-oriented discloses new ways into understanding the mechanisms of these strategies. Future research could explore potential antecedents of mature-aged job seekers' use of SOC strategies. Aging experiences seem to be promising as a potential antecedent because they can also be divided in positive and negative changes and these changes presumably would lead to the use of the respective strategy. Specifically, future research should test if negative aging experiences guide job seekers to use loss-oriented SOC strategies, whereas positive aging experiences guide them to use gain-oriented SOC strategies (cf. Fasbender & Klehe, 2019).

5. Conclusion

Overall, this study shed light on the two central phases of mature-aged job seekers' job search process, specifically we found that goal establishment informed goal pursuit. Moreover, our findings showed that both could be improved using SOC strategies and suggested loss-based selection and compensation as beneficial coping strategies. Regarding age and reemployment efficacy, we unravel their moderating role on these relations and highlight their importance for the link between compensation strategies and goal pursuit.

CRediT authorship contribution statement

Henriette Watermann: Formal analysis, Visualization, Writing – original draft. **Ulrike Fasbender:** Methodology, Writing – review & editing. **Ute-Christine Klehe:** Funding acquisition, Supervision, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

³ As goal monitoring can be seen as an "after" phase of the self-regulation process (see Klehe et al., 2021 for a framing of career-related action phases), we ran additional analyses looking at the effects of the SOC strategies on goal monitoring. Compensation had a positive effect on goal monitoring, whereas elective selection, loss-based selection, and optimization had no significant effects. Results are available on request to the first author.

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Withdrawing from job search: The effect of age discrimination on occupational future time perspective, career exploration, and retirement intentions[☆]

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ABSTRACT

Older job seekers dropping out of the active workforce is a major challenge for individuals, organizations, and society, resulting in the need to protect and extend their working lives. Based on the discouraged workers approach, this study used career construction theory to study how past experiences can discourage older job seekers and make them withdraw from the job search. Specifically, we explored how age discrimination is connected to lower levels of older job seekers' occupational future time perspective (i.e., remaining time and future opportunities) and how it results in less career exploration and higher retirement intentions. Using a three-wave design, we followed 483 older job seekers in two countries (the United Kingdom and the United States) over a total period of two months. Results of structural equation modeling showed that perceived age discrimination decreased older job seekers' remaining time and future opportunities. Further, remaining time was negatively linked to retirement intentions, whereas future opportunities were positively linked to career exploration. Furthermore, results revealed two indirect effects of age discrimination on (1) retirement intentions via remaining time and (2) career exploration via future opportunities. These results show how damaging age discrimination can be in the job search context and we call for the search of potential moderators that can buffer the negative impact of age discrimination. Practitioners should work on protecting older job seekers' occupational future time perspective to keep them active instead of losing them to early retirement.

Older workers are a valuable source of knowledge and competence in the workplace. However, when they lose their job, it is difficult for them to bring their skills and know-how back into a workplace as they need longer (than younger people) to find reemployment (Wanberg et al., 2016). Combined with the challenges of demographic trends (decreased birth rates and increased longevity; Chand & Tung, 2014), this brings problems for older job seekers (e.g., struggling with the vast stress of job search), organizations (e.g., lacking skilled workers), and society (e.g., financial hazard of paying social benefits for unemployed or early retirees while missing their income tax; Fasbender et al., 2022; Wöhrmann et al., 2017).

Bringing older job seekers back to employment can solve all of the above problems (Mariappanadar, 2013). An important first step toward employment is to engage in the job search by exploring one's career (van Hooft et al., 2020). Career exploration is the gathering of information

concerning one's further career path (Zikic & Klehe, 2006). However, older job seekers in particular can step away from employment by withdrawing from the exhausting job search and instead intend to retire early. Retirement intentions is the preference to retire as soon as possible (Wöhrmann et al., 2017). To understand how they form their decision, we utilize career construction theory (CCT). CCT examines how people manage work-related transitions and states that people form a decision to look for a new job based on past experiences and their adaptation to these experiences (Savickas, 2013). Applied to older job seekers, they decide to explore their career and intend to retire based on their work and job search experiences, which includes discriminatory experiences such as age discrimination.

Age discrimination is a disadvantageous, unfair or unequal treatment because of one's age (Redman & Snape, 2006), and older job seekers often face discrimination during the job search (Posthuma & Campion,

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2009). While already a lot is known about the negative effects of age discrimination at the workplace such as reduced job satisfaction and career engagement (Bayl-Smith & Griffin, 2014; Griffin et al., 2016), comprehensive knowledge about how age discrimination is appraised and managed during the job search is lacking. We assume that age discrimination paves the way for older job seekers to become discouraged (Heslin et al., 2012). Understanding the underlying mechanisms would enable us to develop interventions that prevent older job seekers from becoming discouraged and dropping out of the workforce based on age discrimination and thus would make a longer working life possible for them (Heslin et al., 2012).

Previous research highlighted that older employees need sufficient opportunities to continue working, as they tend to retire sooner if they do not receive such offers (Pak et al., 2019). Applied to the job search context, we want to study older job seekers' perception of their occupational future time perspective (OFTP), which is the extent to which people perceive their remaining future time and future opportunities in the work context as open-ended rather than limited (Zacher & Frese, 2009). We assume that the more older job seekers feel treated unfairly by potential employers because of their age, the more they perceive their remaining time and possibilities in their career to shrink. As a result, older job seekers might rather disengage from the job search and consider early retirement.

The goal of this study is to understand how age discrimination leads to lower career exploration and higher retirement intentions by integrating CCT (Savickas, 2013) with the discouraged workers approach (Heslin et al., 2012). So far, CCT has not been studied much within underrepresented groups such as discouraged workers or older job seekers (Rudolph et al., 2019). Heslin et al.'s discouraged workers approach focuses on minority socialization and job search self-efficacy to explain what drives older job seekers in their late career and how older job seekers become discouraged. Using CCT, we extend this approach by arguing that negative experiences (age discrimination) and the negative appraisal of these experiences (lower OFTP) might lead to (1) less career exploration and (2) stronger retirement intentions. Fig. 1 shows our conceptual model. With this study, we aim to make three contributions to the literature of the job search.

First, we add to previous research on older job seekers from a lifespan perspective (Fasbender & Klehe, 2019; Watermann et al., 2021; Zacher, 2013; Zacher & Bock, 2014). Specifically, we expand the knowledge of extant research about the role of contextual factors during job search by considering past experiences (age discrimination) of older job seekers and offer an explanation of why older job seekers are more likely to leave the labor market than younger job seekers (Wanberg et al., 2016; Wanberg, Ali, et al., 2020). This enables us to better understand the hindering effects of negative beliefs and experiences (Jiang et al., 2019), which pave the way for older job seekers to become discouraged (Heslin et al., 2012).

Second, we study the motivational dilemma of unemployed older job seekers to explore their careers and to retire. So far, very little is known about how of older job seekers construct and explore their careers, as it mainly has been studied among young adults and adolescents in employment (rather than unemployment; Jiang et al., 2019; Rudolph et al., 2019). To enable older job seekers to extend their working lives,

we study how they manage negative contextual factors (i.e., age discrimination) and negative personal beliefs (i.e., lower OFTP), as it may prevent engagement in career exploration and foster retirement intentions (Bal et al., 2015; Jiang et al., 2019; van Hooft et al., 2020; Wanberg, Ali, et al., 2020).

Third, we integrate Heslin et al.'s (2012) discouraged workers approach with CCT by focusing on the two subscales of OFTP as an underlying mechanism between age discrimination and career exploration and retirement intentions. That is, we incorporate past experiences and the appraisal of these experiences that shape late career construction into the discouraged workers approach. With that, we (1) expand the knowledge of extant research about OFTP during career transitions (Rudolph et al., 2018) and (2) provide a more detailed understanding of the processes involved than the overall OFTP score would allow (cf. Bal et al., 2015). Only by understanding this process, it will be possible to develop strategies to keep older job seekers in the job search process and thus secure their valuable skills and know-how for the workforce (Mariappanadar, 2013).

1. Theoretical background and hypotheses development

When older people face job loss and, consequently, job search, they are confronted with the motivational dilemma of trying to stay in the active workforce (in our case by exploring their careers) and considering leaving it by retiring. As this process is shaped by individual and contextual factors, which might even be beyond their own control, and because the job search among older job seekers is particularly hard, these individuals may be inclined to become discouraged.

Discouraged workers (in our case older job seekers) are people who want to work but stopped looking for work because of labor market-related reasons including (age) discrimination (Heslin et al., 2012). Unemployed and discouraged workers are two distinct groups as they differ for example regarding their reemployment speed (i.e., discouraged workers taking longer to find reemployment than other unemployed people; Heslin et al., 2012). Older job seekers are overrepresented in the group of discouraged workers (Heslin et al., 2012; Ranzijn et al., 2006). To prevent older job seekers from becoming discouraged and from ultimately dropping out of the workforce by retiring and to motivate them to explore their careers, it is necessary to understand which processes are involved.

According to career construction theory, people use their past experiences and their appraisal of these experiences to adapt to career transitions (Savickas, 2013). Applied to the context of older job seekers' job search, people form a decision to look for a new job based on their previous work and their current (and potentially previous) job search experiences and on their appraisal of it. Specifically, we consider age discrimination (past experiences) and occupational future time perspective (their appraisal) to be relevant for career exploration and retirement intentions (adaptation result). Previous research already showed that for example aging experiences matter for future career construction (Fasbender et al., 2019; Fasbender et al., 2022).

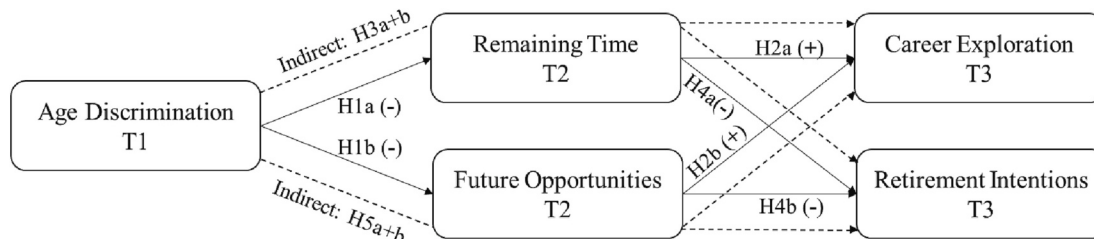


Fig. 1. Conceptual study model.

1.1. Age discrimination and occupational future time perspective

We combine Heslin et al.'s (2012) framework of discouraged workers with career construction theory in older job seekers. Age discrimination might discourage older job seekers, as experiencing age discrimination likely fosters the appraisal of not being desired by the labor market and thus the appraisal of diminishing time and opportunities in the workforce. Age discrimination is characterized by an unequal treatment based on one's chronological age (Redman & Snape, 2006). Older job seekers face several disadvantages during their job search such as being less likely invited to interviews and being less likely hired (Fasbender & Wang, 2017), which has quite a few negative implications such as low self-esteem and life satisfaction (Garstka et al., 2004). We aim to understand the consequences of the individual experience of age discrimination in older job seekers, who show the intent to continue working for a prolonged period of time by actively looking for a job. For this, we study the impact on their occupational future time perspective.

OFTP is the extent to which one's remaining future time and possibilities in the work context are perceived as limited or open-ended (Zacher & Frese, 2009). Viewed through the lens of career construction theory, age discrimination is a negative job search experience that causes older job seekers to reappraise where they are in their careers. Previous research showed that positive work-related factors, such as personal growth, increased older workers' OFTP, whereas negative factors such as meta-stereotypes concerning age (i.e., the conviction of older workers that the majority of their colleagues feels negative about them) were associated with lower OFTP (Bal et al., 2015; Fasbender et al., 2019). Older job seekers are often perceived for example as old and incompetent by potential employers and face lower reemployment chances, which leaves the impression of not being wanted or needed by the labor market anymore (Kira & Klehe, 2016; Wanberg et al., 2016). Following this line of argumentation, we assume that the experience of age discrimination during the job search has a limiting effect on OFTP; leading to the perception of lower remaining time and fewer opportunities in older job seekers. Thus, we state:

Hypothesis 1. Age discrimination is negatively related to perceived a) remaining time and b) future opportunities.

1.2. Career exploration

An important first step a job seeker needs to initiate to successfully find a new job is to explore their career opportunities (van Hooft et al., 2020). Career exploration is defined as seeking a specific experience as well as a wide or diverse array of experiences without a specific target (Lee et al., 2016). It is relevant across the whole life-span and is often among the first responses triggered by life transitions, such as during the job search (Jiang et al., 2019; Zikic & Klehe, 2006). Career exploration increases not only job search clarity, job search self-efficacy (Zikic & Saks, 2009), and interview performance (Stumpf et al., 1984), but also quality reemployment such as a higher job improvement, organizational identification, and career growth (Zikic & Klehe, 2006). However, as only little is known about the nature of and factors driving career exploration during late adulthood (i.e., older job seekers; Jiang et al., 2019), we study how older job seekers' OFTP might foster their career exploration.

Previous research demonstrated that several positive future-oriented beliefs such as hope or career decision self-efficacy promote career exploration (Jiang et al., 2019; Rogers & Creed, 2011). Further, it is already known that an open-ended OFTP fosters other aspects of career engagement such as career planning and career commitment in older workers (Fasbender et al., 2019; Park & Jung, 2015). Based on career construction theory, we assume that the more older job seekers perceive their remaining time in the workforce as open-ended, the more reason they have to explore their careers to successfully shape their careers and to improve the probability of their reemployment. Also, the more

opportunities older job seekers see for themselves in the labour market, the more attractive such different opportunities may appear to them to explore. In contrast, if they perceive their remaining time and future opportunities as limited, they may indeed perceive little reason or incentive to explore and thus, we assume that they are less likely to engage in career exploration. We state:

Hypothesis 2. Perceived a) remaining time and b) future opportunities are positively related to career exploration.

Taken together, the above hypotheses also suggest that age discrimination reduces older job seekers' exploration of viable career options and how to reach them and thus might result in the withdrawal from the labor market altogether. However, there is no empirical evidence of the impact of negative contextual factors, such as age discrimination, on career exploration (Jiang et al., 2019). We use the main idea of CCT, namely that the appraisal of past experiences shape the adaptation to a situation, to explain the connection between age discrimination and career exploration. Specifically, we argue that the more older job seekers perceive age discrimination the more they appraise their time and opportunities as limited and thus, they perceive their future in rather negative ways. This might result in discouraged job seekers that feel like they cannot hold their ground in the labor market any longer. As a result, they adapt to their situation by disengaging from career exploration activities. In a similar line, if older job seekers were to experience less age discrimination, they would not need to reappraise their OFTP as much and there would be less negative experience to adapt to, resulting in older job seekers more likely engaging in career exploration activities. We state:

Hypothesis 3. There is a negative indirect relation between age discrimination and career exploration via perceived a) remaining time and b) future opportunities.

1.3. Retirement intentions

Older job seekers do not necessarily need to explore their careers to increase the likelihood and quality of their reemployment. Instead, they can also consider fully withdrawing from the job search by retiring. In our study, we look at older job seekers' retirement intentions, which is the intention or preference to withdraw from the workforce at a certain age in the future (Wöhrmann et al., 2017).

Previous research showed that older workers with a lower occupational future time perspective desired less to work beyond the required retirement age (Rudolph et al., 2018; Weiss et al., 2022). Applied to the case of (older) job seekers, we establish how their perception of their remaining time and opportunities might form the decision of when they want to retire. Specifically, we assume that the more older job seekers perceive their remaining time in the workforce as open-ended, the more it might delay their retirement intentions. In a similar line, the more older job seekers feel as if they have many opportunities they can follow up on, the more they might be motivated to continue working and thus express weaker retirement intentions (Pak et al., 2019; Zacher & Yang, 2016). In contrast, when they perceive their time as limited and their opportunities to be small, they might feel as if there is no opportunity left to rejoin the workforce and their motivation to continue in the weary process of searching for a job might wear off. As a result their wish to retire might increase. Thus, we state:

Hypothesis 4. Perceived a) remaining time and b) future opportunities are negatively related to older job seekers' retirement intentions.

Taken together, the above hypotheses also suggest that age discrimination strengthens older job seekers' retirement intentions. It is already well known that among older employees age discrimination leads to job withdrawal, the intention to leave an employer, the intention to retire early and lower bridge employment intentions (Griffin et al., 2016; Pak et al., 2019; Peng, 2022; Redman & Snape, 2006;

Zaniboni, 2015). Even though the negative effect of age discrimination on retirement intention is arguably stronger among older job seekers, it has not been in the focus of previous studies in the field of job search. According to CCT, older job seekers are threatened to become discouraged due to age discrimination, because the more they feel discriminated for their age the more shrinks their remaining time and opportunities. Thus, they feel like they cannot sustain in the labor market for much longer, no matter what they do or how qualified they might be. As a result they adapt to their new appraisal of their situation by desiring to cross into a final career stage: retirement. In contrast, if older job seekers were to experience less age discrimination, they would not need to reappraise their OFTP as much and would see more options to follow up on than retirement. We state:

Hypothesis 5. There is a positive indirect relation between age discrimination and retirement intentions via perceived a) remaining time and b) future opportunities.

2. Method

2.1. Transparency and openness

Data for this study were collected as part of a larger data collection (a transparency table is available in the supplementary materials). One other study with non-overlapping variables has already been published (authors blinded for review).

2.2. Sample and procedure

We surveyed older job seekers using three online questionnaires, administered at three different time points spread across two months. Participants had one week to answer the respective questionnaire and were invited to the next survey two weeks later, each time. Data were collected via a professional data collection company. This study measured participants' demographics (i.e., age, gender, unemployment duration, educational level, and country) and age discrimination in the first survey, occupational future time perspective in the second survey and career exploration and retirement intentions in the third survey. All in all, 659 participants from the United States, the United Kingdom, and Germany were recruited at Time 1. We invited people to take part in our study if they were 40 years or older¹ (Zacher, 2013; Zacher & Bock, 2014), unemployed, and actively looking for a job. Participants received €5 for the first, €3 for the second, and €4 for the third questionnaire, thus up to €12 in total.

To ensure data quality, we checked if participants paid attention to the content of the questions by using straightliners at all three time points. Accordingly, we excluded 36 participants due to careless responding (i.e., they rated positive and negative recoded items of a construct the same more than once during a questionnaire; Krosnick, 1991; Zhang & Conrad, 2014). We excluded the German sample (140 participants) as we did not reach measurement invariance with this sample (see Preliminary Analyses for details).

As a result, we had 483 participants (time 2 = 180 and time 3 = 115), of which 343 (71.01 %) were female and 167 (34.58 %) held a university degree. On average, participants were 51.04 years old ($SD = 7.81$) and unemployed for 5.94 months ($SD = 3.55$). More than half of the sample lived in the United States ($n = 325$, 67.29 %) and the others in the United Kingdom ($n = 158$, 32.71 %).

¹ 40 years is a common cut-off value for the definition of older job seekers and in line with the United States Age Discrimination in Employment Act (United States Equal Employment Opportunity Commission, 2013).

2.3. Measures

Unless indicated otherwise, items were answered on a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

2.3.1. Age discrimination

We used Redman and Snape's (2006) 4-item scale to measure age discrimination ($\alpha = 0.91$). We changed 'people I work with' and 'my supervisor' to 'potential employers' and 'recruiters' to fit the context of unemployment (e.g., 'Potential employers treat me less favorably because of my age.').

2.3.2. Remaining time

Remaining time was measured using the three items developed by Zacher and Frese (2009). An example item was: "My occupational future seems infinite to me." ($\alpha = 0.82$). The items were answered on a 7-point Likert scale ranging from 1 (*Does not apply at all*) to 7 (*Applies completely*).

2.3.3. Future opportunities

Future opportunities was measured using the three items developed by Zacher and Frese (2009). An example item was: "My occupational future is filled with possibilities." ($\alpha = 0.96$). The items were answered on a 7-point Likert scale ranging from 1 (*Does not apply at all*) to 7 (*Applies completely*).

2.3.4. Career exploration

Career exploration was measured with the ten items of the subscales in-breadth career exploration (e.g., "I learnt about various jobs that I might like.") and in-depth career exploration (e.g., "I learnt what I can do to improve my chances of getting into my chosen career.") from the Vocational Identity Status Assessment (VISA; Porfeli et al., 2011). Career exploration was modeled as a higher-order factor with the two subscales as lower-order factors ($\alpha = 0.93$).

2.3.5. Retirement intentions

Based on the conceptual work on retirement decision-making from Feldman and Beehr (2011), we developed a 5-item scale to measure employees' retirement intentions. Previous research has often relied on an 1-item open response question in which employees' typically nominate the age at which they intend to retire (Schermully et al., 2014; Wöhrmann et al., 2017; Zaniboni, 2015). Asking people to nominate the age at which they intend to retire is difficult to separate from the age at which employees are formally eligible to receive a state pension. In fact, the variance of such 1-item measures is often limited because a large percentage of people indicate the earliest possible age at which they can retire (see, for example, Wöhrmann et al., 2017), limiting researchers' ability to explain variance by using conceptually relevant variables.

We asked participants to indicate their retirement intentions with the following five items: "I would like to retire as early as possible", "If offered the same income as I have now, I would retire today", "I don't actually want to retire" (reverse coded), "If my physical and mental strengths would allow it, I would continue working until I die" (reverse coded), and "I would like to postpone my retirement for as long as possible" (reverse coded). We pre-tested the new scale with a completely new sample, which consisted of 586 older people from the UK. They were between 50 and 79 years old ($M = 57.13$, $SD = 5.22$) and had to work at least 20 h per week, whereas most participants worked full-time (77 %) and were thus not necessarily looking for a job. After participating, they received a small incentive (£ 3.25). A confirmatory factor analysis showed a reasonable model fit ($\chi^2(5) = 147.433$, $p < .001$, CFI = 0.939, RMSEA = 0.220, SRMR = 0.043), supporting its construct validity. In addition, the scale showed a high reliability ($\alpha = 0.92$). In the current study, the reliability was equally high ($\alpha = 0.92$), further supporting the quality of the new scale.

2.3.6. Control variables

Age, gender, country, educational level, and unemployment duration were added as control variables. We controlled for age because older people tend to desire to retire more than younger people (Zaniboni, 2015). We also controlled for country as we considered participants from different unemployment and retirement systems (Wanberg, van Hoof, et al., 2020) and for gender and educational level because being male and of a higher educational status is positively associated with a lower intent to retire and postretirement employment (Bal et al., 2015; Fasbender et al., 2016). Further, we controlled for unemployment duration because the long-term unemployed are overrepresented among discouraged workers (Heslin et al., 2012).

3. Results

3.1.1. Preliminary analyses

Correlations, means, standard deviations, and reliabilities of the study variables are shown in Table 1. We conducted structural equation modeling to test our hypotheses using MPlus 8.3 (Muthén & Muthén, 2018).

We tested for measurement invariance across the two language versions (German vs. English). Therefore, we compared the CFI values of the subsequent models and used the recommended cut-off value of 0.01 (Cheung & Rensvold, 2002). We had to delete the second order factor of career exploration and loaded all items of in-breadth and in-depth career exploration on one common factor instead. However, we had no metric invariance, as the CFI value of our configural model ($\chi^2(530) = 1800.716, p < .001, CFI = 0.734, RMSEA = 0.090$) differed more than 0.01 to the metric model ($\chi^2(550) = 1850.474, p < .001, CFI = 0.723, \Delta CFI = 0.011, RMSEA = 0.116$). Consequently, we excluded the German sample (140 participants) and tested measurement invariance only for the United Kingdom and the United States. We tested our model for configural invariance, which resulted in a reasonable fit ($\chi^2(530) = 1483.920, p < .001, CFI = 0.758, RMSEA = 0.086$). We further established scalar invariance, as the difference between the configural and metric invariance model and the metric and scalar invariance model was smaller than the cut-off-value of 0.01 (Table 2). As a result, we can pool the data together into one sample.

Missing values were estimated using maximum likelihood estimator. Tests for selective drop-out relating our control (i.e., age, gender, unemployment duration, and educational level) and study variables (i.e., age discrimination, occupational future time perspective, career exploration, and retirement intentions) showed that data were mostly missing at random² (Newman, 2014). Specifically, we tested if the final sample differed from the group of "leavers", thus participants who only completed two out of three questionnaires or stopped answering the questionnaires completely, for example because they found a job during the course of the study. Therefore, we entered all variables at time 1 in a logistic regression analysis predicting the probability of being included in the time 2 and time 3 sample (Goodman & Blum, 1996). We found no significant differences in any of the above-mentioned variables, except country ($b = 0.397, p = .006$). Thus, participants from the United States were more likely to remain in the study. Further, we tested the mean differences of the "stayers" and "leavers" with a *t*-test for independent variables. The test for country ($M_{\text{stayers}} = 1.78 (SD = 0.41), M_{\text{leavers}} = 1.64 (SD = 0.48), t(181) = -2.96, p = .007$), unemployment duration

($M_{\text{stayers}} = 6.10 (SD = 3.43), M_{\text{leavers}} = 5.19 (SD = 3.49), t(481) = -2.37, p = .018$), and retirement intentions ($M_{\text{stayers}} = 4.17 (SD = 1.40), M_{\text{leavers}} = 4.52 (SD = 1.57), t(481) = 1.98, p = .048$) were significant, whereas the mean difference of country and retirement intentions represents only 7 % of the range of the scales (as unemployment duration has no finite scale anchors, we cannot translate the difference into a percentage here). Furthermore, we tested for differences in the variances among the "stayers" and the whole sample as suggested by Goodman and Blum (1996). Variances remained comparable among all variables in question.

Gender, unemployment duration, and educational level had no effect on neither career exploration nor retirement intentions, whereas age had a significant effect on retirement intentions ($\gamma = -0.044, SE = 0.019, p = .020$) and country had a significant effect on career exploration ($\gamma = 0.225, SE = 0.109, p = .039$).³

3.1.2. Construct validity

We conducted a series of confirmatory factor analyses to ensure the construct validity of our core measures (i.e., age discrimination, remaining time, future opportunities, career exploration, and retirement intentions). Results showed a good fit for our 6-factor solution, where we modeled career exploration as a higher-order factor with in-breadth and in-depth career exploration as lower-order factors. Our 6-factor solution was superior to alternative 5-, 4-factor solutions. Furthermore, the 6 factor-solution where occupational future time perspective was modeled as a higher-order factor with remaining time and future opportunities as lower-order factors yielded no better fit (Table 3).

3.2. Hypotheses testing

Results of this study's direct effects are shown in Table 4. Specifically, age discrimination at T1 had a negative effect on remaining time at T2 ($\gamma = -0.784, SE = 0.139, p < .001$) and future opportunities at T2 ($\gamma = -0.565, SE = 0.119, p < .001$), thus supporting Hypotheses 1a and 1b. Further, we found no significant effect for remaining time at T2 ($\gamma = 0.050, SE = 0.150, p = .741$), but a positive and significant effect of future opportunities at T2 on career exploration at T3 ($\gamma = 0.308, SE = 0.141, p = .029$); supporting Hypotheses 2b but not Hypothesis 2a. As can be seen in Table 5, also the negative indirect effect of age discrimination at T1 on career exploration at T3 via future opportunities at T2 was significant (*indirect effect* = $-0.174, 95\% \text{ CI } [-0.371, -0.018]$), supporting Hypotheses 3b. Hypothesis 3a regarding the indirect effect of remaining time at T2 was not supported (*indirect effect* = $-0.039, 95\% \text{ CI } [-0.280, 0.190]$). However, we found a negative effect of remaining time at T2 on retirement intentions at T3 ($\gamma = -0.400, SE = 0.173, p = .020$), supporting Hypotheses 4a, but no effect for future opportunities at T2 ($\gamma = -0.020, SE = 0.141, p = .887$) and thus no support for Hypothesis 4b. Also, the positive indirect effect of age discrimination at T1 on retirement intentions at T3 via remaining time at T2 was significant (*indirect effect* = $0.314, 95\% \text{ CI } [0.049, 0.605]$), supporting Hypothesis 5a. Hypothesis 5b regarding the indirect effect via future opportunities at T2 was not supported (*indirect effect* = $0.011, 95\% \text{ CI } [-0.146, 0.179]$).

³ When control variables were not included in the analysis, the direct effect of remaining time on retirement intentions ($\gamma = -0.339, SE = 0.249, p = .174$) and the direct effect of future opportunities on career exploration became not significant ($\gamma = 0.231, SE = 0.240, p = .336$).

² Results remained stable even when listwise deletion (i.e., analysis only with participants that participated in all three waves; $n = 79$) was used. The direct effect of remaining time on retirement intentions became not significant ($\gamma = -0.432, SE = 0.261, p = .098$), most likely as a result of the high drop-out and the respectively small sample size.

Table 1

Means, standard deviations, Cronbach's alphas, and correlations of study variables.

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Age	51.04	7.82	-									
2. Gender ^a	1.29	0.45	0.09*	-								
3. Educational Level ^b	1.34	0.48	0.14**	0.00	-							
4. Country ^c	1.67	0.47	0.06	-0.12**	0.20**	-						
5. Unemployment Duration ^d	5.94	3.55	0.05	0.04	0.00	0.06	-					
6. Past Experience:Age Discrimination T1	4.13	1.47	0.34**	0.04	0.10*	-0.05	0.17**	(0.86)				
7. Appraisal: Remaining Time (OFTP) T2	3.24	1.39	-0.34**	-0.08	-0.09	0.16**	-0.17**	-0.45**	(0.73)			
8. Appraisal: Future Opportunities (OFTP) T2	3.52	1.51	-0.20**	0.03	-0.02	0.22**	-0.19**	-0.34**	0.75**	(0.93)		
9. Adaptation Result: Career Exploration T3	4.64	0.97	-0.12**	-0.15**	-0.07	0.15**	-0.11*	0.01	0.41**	0.48**	(0.91)	
10. Adaptation Result: Retirement Intentions T3	4.50	1.54	-0.12**	-0.07	-0.06	-0.12**	-0.03	-0.08	-0.14**	-0.16**	-0.12**	(0.91)

Note. N = 483 at T1, N = 224 at T2, N = 147 at T3. OFTP = occupational future time perspective.

^a 1 = female, 2 = male.

^b 1 = no university degree, 2 = university degree.

^c 1 = UK, 2 = US.

^d = in months.

* p < .05.

** p < .01.

Table 2

Results measurement invariance analyses.

	χ^2	df	CFI	Δ CFI	RMSEA	SRMR
1) Configural invariance (equal factor structure)	1483.920	530	0.758		0.086	0.111
2) Metric invariance (equal factor loading)	1504.502	550	0.758	0.000	0.085	0.116
3) Scalar invariance (equal intercepts)	1540.272	570	0.754	0.004	0.084	0.117

Table 3

Confirmatory factor analysis fit indices for measurement model.

	χ^2	df	CFI	Δ CFI	RMSEA	SRMR
6-factor solution ^a	328.7280	264	0.976	-	0.023	0.065
6-factor solution ^b	329.839	266	0.977	0.001	0.022	0.068
5-factor solution ^c	402.763	265	0.950	0.026	0.033	0.073
4-factor solution ^d	485.843	269	0.921	0.055	0.041	0.077

^a Remaining time and future opportunities loading on two factors, career exploration modeled as a higher order factor with in-breadth and in-depth career exploration as lower-order factors.

^b Occupational future time perspective modeled as a higher order factor with remaining time and future opportunities as lower-order factors, career exploration modeled as a higher order factor with in-breadth and in-depth career exploration as lower-order factors.

^c Remaining time and future opportunities loading on two factors, in-breadth and in-depth career exploration loading on one common factor.

^d Remaining time and future opportunities loading and in-breadth and in-depth career exploration loading each on one common factor.

Table 4

Results of structural equation modeling including control variables (direct effects).

	Remaining Time T2		Future Opportunities T2	
	Coeff (SE)	p	Coeff (SE)	p
Age Discrimination T1	-0.784** (0.139)	<0.001	-0.565** (0.119)	<0.001
	Career Exploration T3		Retirement Intentions T3	
	Coeff (SE)	p	Coeff (SE)	p
Age	-0.015* (0.010)	0.147	-0.044* (0.019)	0.020
Gender ^a	0.099* (0.160)	0.539	-0.116* (0.294)	0.692
Country ^b	0.225* (0.109)	0.039	-0.212* (0.151)	0.160
Educational Level ^c	-0.138* (0.204)	0.498	0.023* (0.331)	0.944
Unemployment Duration ^d	-0.015* (0.027)	0.591	-0.039* (0.039)	0.314
Age Discrimination T1	0.202* (0.129)	0.117	-0.237* (0.179)	0.184
Remaining Time T2	0.050* (0.150)	0.741	-0.400* (0.173)	0.020
Future Opportunities T2	0.308* (0.141)	0.029	-0.020* (0.141)	0.887

Note. N = 483. Coeff = unstandardized coefficient. SE = standard error.

^a 1 = female, 2 = male.

^b 1 = UK, 2 = US.

^c 1 = no university degree, 2 = university degree.

^d in months.

* p < .05.

** p < .01.

Table 5

Indirect effects of age discrimination on career exploration and retirement intentions via occupational future time perspective.

Age Discrimination T1 via	Career Exploration T3		Retirement Intentions T3	
	Coeff	CI LL / CI UL	Coeff	CI LL / CI UL
Remaining Time T2	-0.039	-0.280/ 0.190.	0.314	0.049/ 0.605
Future Opportunities T2	-0.174	-0.371/ -0.018	0.011	-0.146/ 0.179

Note. $N = 483$. Coeff = unstandardized coefficient, CI LL = lower level of bias-corrected 95 % confidence interval, CI UL = upper level of 95 % bias-corrected confidence interval.

3.3. Exploratory results

3.3.1. Additional control variables and baseline assessments

When we added health, financial situation, and age meta-stereotypes⁴ as controls, age meta-stereotypes had a significant effect on career exploration ($\gamma = 0.195, SE = 0.090, p = .030$) and health had a significant effect on retirement intentions ($\gamma = -0.222, SE = 0.112, p = .046$). Further, to account for the longitudinal design, we added baseline assessments of perceived opportunities and remaining time at T1 and career exploration and retirement intentions at T2 to our model.

Remaining time at T1 had a significant effect on remaining time at t2 ($\gamma = 0.561, SE = 0.085, p < .001$). Perceived opportunities at T1 had a significant effect on perceived opportunities at T2 ($\gamma = 0.652, SE = 0.084, p < .001$). Career exploration at T2 had a significant effect on career exploration at T3 ($\gamma = 0.668, SE = 0.151, p < .001$). Retirement intentions at T2 had a significant effect at retirement intentions at t3 ($\gamma = 0.788, SE = 0.105, p < .001$). Results remained mostly stable even when we controlled for the additional control variables and baseline assessments, whereas the direct effect of remaining time on desire to retire became not significant ($\gamma = -0.086, SE = 0.102, p = .395$).⁵ Table 6 shows all results in more detail.

3.3.2. Country differences

We used the population averaged method, more specifically cluster-robust standard errors, to nest individuals within the countries without splitting our model into multiple levels (McNeish et al., 2017). Our results remained comparatively stable. Additionally, the effect of remaining time on career exploration became significant (Hypothesis 2a; $\gamma = -0.087, SE = 0.043, p = .044$).

⁴ Health was measured using the following two items: 'How good is your health?' and 'How good do you generally feel physically?' ($\alpha = 0.90$) The items were answered on a 7-point Likert scale ranging from 1 (Bad) to 5 (Good). Financial situation was measured using the following item: 'How difficult is it for you to live on your total household income right now?'. The items were answered on a 7-point Likert scale ranging from 1 (Not at all difficult) to 5 (Very difficult). Age meta-stereotypes was measured with 8 items by Finkelstein et al. (2015). The items began with 'Please indicate the extent to which each of the following traits is characteristic of your age group' and ended with 8 different words such as 'Confident', 'Competent', 'Friendly', or 'Warm' ($\alpha = 0.92$). The items were answered on a 7-point Likert scale ranging from 1 (Extremely uncharacteristic) to 7 (Extremely characteristic).

⁵ Results remained comparable even when control variables (i.e., age, gender, educational level, country, unemployment duration, health, financial situation, and age meta-stereotypes) were not included in the analysis.

Table 6

Results of exploratory structural equation modeling including health, financial situation, and age meta-stereotypes as control variables and baseline assessment of remaining time, future opportunities, career exploration, and retirement intentions (direct effects).

	Remaining Time T2		Future Opportunities T2	
	Coeff (SE)	p	Coeff (SE)	p
Age Discrimination T1	-0.350** (0.113)	0.002	-0.230* (0.096)	0.017
Remaining Time T1	0.574** (0.080)	<0.001	-	-
Future Opportunities T1	-	-	0.670** (0.076)	<0.001

	Career Exploration T3		Retirement Intentions T3	
	Coeff (SE)	p	Coeff (SE)	p
Age	-0.015* (0.011)	0.053	0.010 (0.015)	0.504
Gender ^a	0.032* (0.161)	0.815	0.005* (0.213)	0.983
Educational Level ^b	0.128* (0.193)	0.406	0.111* (0.219)	0.611
Country ^c	0.167 (0.087)	0.054	-0.100 (0.123)	0.415
Unemployment Duration ^d	0.004* (0.546)	0.807	-0.052* (0.026)	0.043
Health	-0.012 (0.087)	0.887	-0.222* (0.112)	0.046
Financial Situation	-0.045 (0.050)	0.370	0.094 (0.064)	0.142
Age Meta-Stereotypes	0.195* (0.090)	0.030	-0.102 (0.132)	0.439
Age Discrimination T1	0.208* (0.094)	0.027	-0.145* (0.122)	0.236
Remaining Time T2	-0.061* (0.087)	0.484	-0.131 (0.150)	0.381
Career Exploration T2	0.726** (0.130)	<0.001	-	-
Future Opportunities T2	0.182* (0.087)	0.035	0.064* (0.123)	0.603
Retirement Intentions T2	-	-	0.802** (0.090)	<0.001

Note. $N = 483$. Coeff = unstandardized coefficient. SE = standard error.

^a 1 = female, 2 = male.

^b 1 = no university degree, 2 = university degree.

^c 1 = UK, 2 = US.

^d = in months.

* $p < .05$.

** $p < .01$.

3.3.3. Alternative mediator

We included job search self-efficacy⁶ as an alternative mediator to the model as Heslin et al.'s discouraged workers approach uses job search self-efficacy as an explanatory mechanism for how they become discouraged (Heslin et al., 2012). Job search self-efficacy at T1 had a significant effect on job search self-efficacy at T2 ($\gamma = 0.619, SE = 0.083, p < .001$). However, age discrimination had no significant effect on job search self-efficacy ($\gamma = -0.048, SE = 0.063, p = .448$), and job search self-efficacy had no significant effect on career exploration ($\gamma = 0.020, SE = 0.121, p = .871$) or retirement intentions ($\gamma = -0.169, SE = 0.150, p = .261$). All main results remained stable, even though we controlled for job search self-efficacy as an alternative mediator.

⁶ Job search self-efficacy was measured with the 6 item measure by Rigotti et al. (2008). The items were adapted to the job search context by adding 'during my job search' or 'while looking/searching for a job' to the items. An example item was: 'Whatever comes my way during my job search, I can usually handle it' ($\alpha = 0.95$). The items were answered on a 7-point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree).

3.3.4. Possible moderator

We included employability⁷ as a possible moderator to buffer the effect of age discrimination on occupational future time perspective. Employability at T1 had no significant effect on remaining time at T2 ($\gamma = -0.104$, $SE = 0.216$, $p = .629$) or perceived opportunities at t2 ($\gamma = 0.219$, $SE = 0.173$, $p = .206$). Furthermore, employability did not moderate the effect of age discrimination on remaining time ($\gamma = 0.041$, $SE = 0.135$, $p = .761$) or perceived opportunities ($\gamma = -0.037$, $SE = 0.113$, $p = .742$).

4. Discussion

With this research, we set out to understand how age discrimination is connected to older job seekers' occupational future time perspective and ultimately their career exploration and retirement intentions. Results of structural equation models showed that older job seekers felt that their future opportunities and their remaining time in their career were limited when they perceived to be discriminated because of their age. Furthermore, when older job seekers perceived their future opportunities to be limited, they explored their careers less and when they felt as if their occupational future time was coming to an end (i.e., remaining time) they had stronger intentions to retire. However, older job seekers' perception of their future opportunities was not connected to their retirement intentions and their remaining time was not connected to their career exploration. Accordingly, regarding the indirect effect of occupational future time perspective, we found that age discrimination was connected to (1) less career exploration via future opportunities and (2) stronger retirement intentions via remaining time.

4.1. Theoretical and practical implications

This study offers meaningful contributions to the literature. First, we extend the knowledge of extant research about the job search from a lifespan development perspective (Fasbender & Klehe, 2019; Watermann et al., 2021). Specifically, we reveal the damaging effect of the contextual factor age discrimination on OFTP and show how this negative experience can hinder older job seekers' job search and thus paves the way for them to become discouraged (Heslin et al., 2012). This can also explain why older job seekers are more likely to drop out of the job search process. Further results demonstrate that age discrimination experiences harm older job seekers' OFTP, thus extending the knowledge from previous research that shows the damaging effects of age discrimination on other personal constructs of job seekers such as self-esteem and life satisfaction (Garstka et al., 2004).

Second, we unravel the motivational dilemma of older job seekers by demonstrating how perceived age discrimination leads to a withdrawal from the job search process (van Hooft et al., 2020; Wanberg, Ali, et al., 2020). Specifically, we show how older job seekers explore their careers less and have stronger retirement intentions when they perceive to be discriminated against their age. This is in line with previous research that found damaging effects of age discrimination on older workers' career engagement (Bayl-Smith & Griffin, 2014). With this, we expand the knowledge of extant research about older job seekers' career construction in general and about their career exploration in particular (Jiang et al., 2019; Rudolph et al., 2019). As a result, we are able to develop interventions that could help older job seekers to stay engaged with their job search and thus could help them to extend their working lives instead of dropping out of the workforce.

Third, we shed light on how older job seekers create their career during career transitions (i.e., the job search; Rudolph et al., 2018) by

integrating Heslin et al.'s (2012) framework of discouraged workers with career construction theory (Savickas, 2013). Specifically, our results showed that OFTP plays a critical role in older job seekers' career construction and that it can function as an additional mechanism (next to minority socialization and self-efficacy) that could explain how job seekers experiencing age discrimination become discouraged. In particular, as we added job search self-efficacy as an alternative mediator in an explorative analysis, we could demonstrate that occupational future time perspective plays a role in the question of how older job seekers become discouraged above and beyond job search self-efficacy and, as a result, successfully extend the discouraged workers approach by Heslin et al. (2012). Furthermore, we underline the importance to consider subscales of constructs as we discovered that the subscales of OFTP allow for different predictions of constructs (Bal et al., 2015). Specifically, to help older job seekers (1) to foster their career exploration it is more important to work on older job seekers' perception of their future opportunities, while (2) to decrease their retirement intentions they need to perceive their remaining time as rather open-ended. These results suggest that the more time-based component remaining time, of OFTP shapes time-based constructs (retirement intentions), whereas the more content-based component future opportunities effects content-based constructs (career exploration). This is in line with previous research showing that older workers' remaining time (but not their future opportunities) profited from work-family enrichment with increasing age (i.e., a time-based variable; Henry & Desmette, 2018) and that a higher job control (i.e., a rather content-based construct) increased perceived future opportunities (Zacher & Frese, 2009).

With regard to practice, this study highlights the importance of battling age discrimination in order to keep older job seekers in the job search process. For example, organizations should encourage applications from older job seekers and train their HR departments to conduct fair application procedures to combat age discrimination in hiring. Previous research suggests that to do so it would be helpful to reduce for example decision-makers' negative attitudes toward older job seekers by strengthening decision-makers' core-self evaluations (Fasbender & Wang, 2017).

On the individual level there is also a need to break the link between age discrimination and OFTP. This study informs possible interventions to keep older job seekers engaged in the job search process with the potential to rejoin the workforce. For example, interventions could address older job seekers' OFTP and help them to maintain a favorable perception of their occupational future, for instance by fostering their personal growth or by offering advanced trainings (both in a field of expertise and in a field with the potential of improvement) as both are known to extend occupational future time perspective and thus could be a way to overcome shrinking future time and opportunities at work (Fasbender et al., 2019; Rudolph et al., 2018). As a result, this might then reduce older job seekers' intentions to retire and foster their career exploration.

4.2. Limitations and future research

To put the results of this study into perspective, we consider potential limitations. Our sample size was reduced because participants (1) found a job during the study, (2) were excluded due to careless responding, or (3) were part of the German data set. Yet, we corrected for missing values by using the full information maximum likelihood estimation in Mplus; decreasing the probability of data misinterpretation (Newman, 2014). Additionally, we could demonstrate that participants that completed all questionnaires did not differ in demographics compared to participants that only answered one or two questionnaires by comparing variances of these two groups. Further, their means differed only in regard to country and unemployment duration and only country could predict the group of a participant based on logistic regressions. Taken together, this leaves only little concern for selective dropout.

We further tested the robustness of our results by several control

⁷ Employability was measured with three items by de Cuyper et al. (2014). An example item was: "I am confident that I will quickly get another job" ($\alpha = 0.89$). The items were answered on a 7-point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree).

variables to our analyses (i.e., age, gender, educational level, country, unemployment duration, health, financial situation, and age meta-stereotypes), which did not affect our result pattern and thus puts a greater emphasis on the stability of our results. Moreover, we added baseline assessments of remaining time, future opportunities, career exploration, and retirement intentions to our analyses, which all significantly predicted their follow-up measures. Remaining time was no longer significantly connected to retirement intentions, which probably was due to the strong autoregressive effect of retirement intentions. However, all other results remained the same strengthening our proposed study model in a longitudinal design.

As our sample consisted of two individualistic countries (United Kingdom and United States), we used population averaged method to nest individuals within the countries without splitting our model into multiple levels. However, population averaged method handles clusters that vary widely with regard to numbers of observations within each cluster only limitedly well (McNeish et al., 2017), restraining the informative value of these analyses. Moreover, with the selection of our countries we neglected collectivistic (e.g., Asian) countries. The question of whether age discrimination and its consequences differ in individualistic compared to collectivistic countries remains unanswered. On the one hand, collectivistic countries are associated with tighter group boundaries (Marcus & Fritzsche, 2016), while on the other hand, research also shows less age bias and more positive feelings toward older adults in collectivistic countries (Ackerman & Chopik, 2021). Therefore, we call for more research in collectivistic countries to study whether our findings can be generalized to other and non-WEIRD (Muthukrishna et al., 2020) contexts.

Common-method bias is a potential limitation as we collected self-reported data. To reduce common-method variance, we, however, used multiple time points and different scale anchors (Podsakoff et al., 2012). To further diminish this concern, future research could gather other-reported data such as data from career counselors or family members (e.g., their perception of an older job seekers' career exploration activities) or objective data such as the actual retirement age.

To extend knowledge on older job seekers' job search, future research may uncover individual characteristics and environmental factors that act as boundary conditions regarding the effects of age discrimination. Specifically, it should be studied not only for those whom age discrimination poses a threat, but also, more importantly, how older job seekers can maintain (a qualitatively high) job search in the face of age discrimination. For example, in our exploratory results we present that older job seekers with perceived lower employability were neither vulnerable to age discrimination nor did perceived higher employability buffer the damaging effect of age discrimination on older job seekers' job search. Thus, other potential buffers should be considered. For example, previous research found that social support could buffer the detrimental effect of age discrimination on life satisfaction in older police officers (Redman & Snape, 2006).

On a similar note, future research may also study the positive and direct effect of age discrimination on career exploration, which we found beyond our study aims in our exploratory analyses as this suggests that next to negative mechanisms investigated in this study, there seems to be unknown positive mechanisms involved. In other words, future research could examine how age discrimination prompts older job seekers to explore their careers more. Research suggests that people can appraise a job search demand such as age discrimination experiences as a challenge or a hindrance, heavily influencing their motivation to deal with this demand (Wanberg et al., 2012). Thus, it would be helpful to know, if and when older job seekers view age discrimination as a challenge (vs. hindrance) and if this perception can be induced to provoke adaptational responses instead of maladaptive coping (LePine et al., 2005). In this regard, we call for research to identify ways that can "switch-on" or strengthen the challenge appraisal (of age discrimination) within older job seekers. For example, it might be helpful to raise older job seekers' awareness for possible demands, such as age

discrimination, they encounter during the job search (Wanberg et al., 2012).

Regarding OFTP, future research might address if our results are generalizable to younger or middle-aged job seekers or even consider different career phases (e.g., career/job entry). Furthermore, within-person analyses might help to further address this topic as our results are only between-person and results do not necessarily generalize from one level to another (Dalal et al., 2014). While it is already known that remaining time develops in the same manner within people (whereas the initial perception of their remaining time varies) and that the perception of future opportunities varies in both the initial level and the development of these perceptions within people (Weikamp & Goeritz, 2015), it is unknown how it affects the construction of people's career. Future research could, for example, investigate whether career exploration can be increased, and retirement intentions decreased when the previously low perception of an older job seekers' occupational future is expanded (e.g., through a motivational conversation with a worker of an employment agency). Moreover, OFTP has a third subscale (focus on limitations; Rudolph et al., 2018; Zacher, 2013), which we did not focus on in our study, but which might also help to further understand the role of OFTP. For example, age discrimination might lead older job seekers to focus more on their limitations as a result of being confronted with less favorable treatment during application procedures due to their age. Further, focus on limitations might also reduce older job seekers' career-related behavior (e.g., career exploration), because they take a pessimistic perspective on their future (Zacher, 2013). Specifically, it might prevent them from seeing new alternatives and instead might raise their retirement intentions, as they feel like their time in the workforce is coming to an end. Thus, we call for future research that tests a mediating effect of age discrimination on remaining time and future opportunities via focus on limitations.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.actpsy.2023.103875>.

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