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

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A B S T R A C T

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,

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).
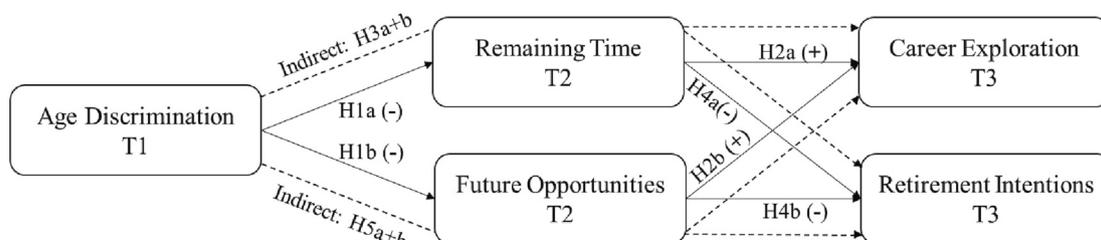

Fig. 1. Conceptual study model.

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 older[1] (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 %).

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 (α = 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." (α = 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." (α = 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 (α = 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 (Schermuly 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 (χ^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 (α = 0.92). In the current study, the reliability was equally high (α = 0.92), further supporting the quality of the new scale.

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[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).

2.3.6. 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 Hooft, et al., 2020) and for gender and educational level because being male and of a higher educational status is positively associated with a lower intend 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-breath and in-depth career exploration on one common factor instead. However, we had no metric invariance, as the CFI value of our configural model ($\chi2(530) = 1800.716, p < .001$, CFI = 0.734, RMSEA = 0.090) differed more than 0.01 to the metric model ($\chi2(550) = 1850.474, p < .001$, CFI = 0.723, ΔCFI = 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 random[2] (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 ($M_{stayers} = 1.78$ (SD = 0.41), $M_{leavers} = 1.64$ (SD = 0.48), ($t(181) = -2.96, p = .007$), unemployment duration

($M_{stayers} = 6.10$ (SD = 3.43), $M_{leavers} = 5.19$ (SD = 3.49), ($t(481) = -2.37, p = .018$), and retirement intentions ($M_{stayers} = 4.17$ (SD = 1.40), $M_{leavers} = 4.52$ (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 % 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 % 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 % 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 % CI [-0.146, 0.179]).

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[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.

[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, $p = .336$).

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	0.04	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	ΔCFI	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	ΔCFI	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-stereotypes[4] 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; $\gamma = -0.087$, $SE = 0.043$, $p = .044$).

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[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-efficacy[6] 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.

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[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 employability[7] 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

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[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 & Göritz, 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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