

Mind the Ad: Why Qualified Job Seekers May (Not) Apply

Aylin Koçak

Supervisor: Prof. Dr. Eva Derous

Co-supervisor: Prof. Dr. Wouter Duyck

A dissertation submitted to Ghent University in partial
fulfilment of the requirements for the degree of
Doctor of Psychology

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DANKWOORD

Take a minute to face yourself

Deep breath that always helps

(Intergalactic Lovers – Islands)

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I had the time of my life fighting dragons with you

(Taylor Swift – Long Live)

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Met vallen en opstaan

Wordt wel eens gezegd

Maar soms mag je blijven liggen

En dan help ik je wel recht

(SMOOJ)

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*Have you ever looked fear in the face
and said I just don't care?*

(P!nk – Glitter In The Air)

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*Just keep following
the heartlines on your hand*

(Florence + The Machine – Heartlines)

Aylin Koçak

In een koffiebar met zicht op Aula, Gent, 22/06/2022

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CHAPTER 1

GENERAL INTRODUCTION

Recruiting job seekers is crucial for organizational success and an important factor in creating a diverse workforce. In the present dissertation, we contribute to the existing literature on recruitment by considering whether female, older and younger job seekers might self-select out from the applicant pool because of metastereotyped person requirements in job advertisements. Additionally, we examine the cognitive/emotional processes that underly the effects of metastereotyped information in job ads on job seekers' attitudes and behavior. The first chapter includes a general introduction of the literature on recruitment, metastereotypes and possible underlying mechanisms, and presents the research objectives of the present doctoral dissertation.

The process of recruiting job seekers is crucial for organizational success (Chapman et al., 2005) and might be of particular importance when considering the specific labor market challenges of the 21st century. In an ongoing ‘war for talent’ (Kwon & Jang, 2022), organizations struggle to attract the right candidates. Further, the population of Western-European countries has become increasingly diversified in terms of socio-demographical characteristics (European Commission, 2020), yet the translation of these demographic changes in the workforce is lacking. For instance, *older* and *younger* individuals generally face difficulties when trying to enter the workforce compared to prime-aged people (OECD, 2020, 2021). In contrast with the more general underrepresentation of these age groups in the labor market, there is an underrepresentation of *women* on specific levels of organizations and in specific sectors (OECD, 2022; Stoet & Geary, 2018). Many studies on the specific obstacles that women, older or younger-aged people experience focuses on how organizations might select-out candidates that belong to a certain demographic group, for instance based on gender or age-related cues in a resume (Bosak & Sczesny, 2011; Campion et al., 2021; Farber et al., 2019). The present dissertation takes an alternate approach and investigates how female, older and younger job seekers might also select themselves out of the applicant pool by investigating female, older and young job seekers’ experiences during recruitment and promotion procedures. Whereas previous studies have found that stereotypes about female, older and young candidates might shape recruiters’/managers’ decisions during recruitment and promotion (e.g., González et al., 2019), the present dissertation considers job seekers’ perceptions of these stereotypes, i.e., metastereotypes. Research has shown that metastereotypes or “a person's beliefs regarding the stereotype that out-group members hold about his or her own group” (Vorauer et al., 1998, p. 917) can impact behavior such that they might result in avoidance behavior (Fowler & Gasiorek, 2020; Goff et al., 2008; Shelton & Richeson, 2005). Information that one holds negative metastereotypes about might restrain female, older and younger job seekers during

recruitment and promotion procedures. The present dissertation investigates one type of information that might affect job seekers' decisions during recruitment and promotion, namely the person requirements (e.g., the required personality traits or competences) in job ads.

Apart from exploring whether negatively metastereotyped person requirements in job ads affect female, older and younger job seekers (Objectives 1 and 2), we additionally aim to investigate *how* this happens (Objective 3). Previous studies on negative metastereotypes in job ads have suggested possible underlying cognitive/emotional processes, but empirical evidence for the underlying mechanisms is limited (Wille & Derous, 2017). For instance, while ample research showed how negative (meta)stereotypes can threaten people (Steele & Aronson, 1995), negative metastereotype might also *challenge* job seekers in a positive way (Finkelstein et al., 2020; Hehman & Bugental, 2013). These emotional appraisals in terms of threat and challenge might affect job attraction and are therefore investigated as parallel mediators (in Chapter 2). Next, negative metastereotypes can also affect how one sees oneself, since individuals might see themselves more in terms of their social group (e.g., the group of women, older or younger people) and negative stereotypes about that group instead of in terms of their own traits/competences (Turner et al., 1994), which might in turn result in lower application intention. Hence, the mediating effect of job seekers' trait-specific self-efficacy is tested as well (in Chapter 3). Further, negative metastereotypes might lower job attraction and hence application intention (Van Hooft et al., 2006), which is why we also investigate job attraction as a mediator (in Chapter 4). In terms of cognitive processing, negative metastereotypes in job ads might capture people's attention (Kaiser et al., 2006) and might also be better recalled (Kanar et al., 2010), which might hence impairs job seekers' attraction. In Chapter 5, visual attention and recall are therefore tested as serial mediators. Moreover, previous studies have also suggested that the negative effects of negative metastereotypes might be tempered by wording the requirements in the job advertisement in a more behavioral way (e.g., you *behave*

like this) instead of a more dispositional way (e.g., you *are* like this; Semin & Fiedler, 1991), which we investigate in the present dissertation as well (Objective 4; see Chapters 2 and 4). Finally, most research focused on hindering effects of negative metastereotypes, but positive metastereotypes (and their wording) might potentially boost job seekers during promotion procedures (see Chapter 4). The present dissertation investigates the above-mentioned mediating mechanisms, as well as moderating effects of wording of the requirements in job ads. In what follows, we first focus on the key theoretical notions and main objectives, followed by an overview of the empirical studies of this dissertation.

Metastereotypes in Job Ads

Stereotypes are defined as “beliefs about the characteristics, attributes, and behaviors of members of certain groups” (Hilton & von Hippel, 1996, p. 240) and can be both positive or negative. Individuals that belong to a socio-demographic group based on the Big Three of demographics (age, ethnicity and gender), for instance, are subject to stereotypical views about them. Interestingly, group members can be aware of the stereotypes that others might hold about them. These cognitions are called *metastereotypes* (Vorauer et al., 1998) and present a key notion in the present dissertation. Metastereotypes are the beliefs that members of an in-group (e.g., women) have about the stereotypes that the out-group (e.g., men) hold about them. Like stereotypes, metastereotypes can be both negative and positive and can include many, little or no elements of truth. Regardless of their accuracy, metastereotypes can shape group members’ behavior (Fowler & Gasiorek, 2020), even during recruitment procedures (Wille & Derous, 2017, 2018).

In the present dissertation, we aim to disclose female, older or younger job seekers’ metastereotypes about person requirements in job ads. Person requirements in job ads represent those characteristics that the organization is looking for in future employees and can be portrayed in different ways. For instance, job ads might include those *personality traits* that the

organization requires. Building on previous studies on the metastereotypical connotation of personality traits in job ads (Wille & Derous, 2017, 2018), we use the Big Six HEXACO-personality framework that includes the personality traits: Extraversion, Agreeableness, Emotionality, Conscientiousness, Openness to Experience, and Integrity (Ashton & Lee, 2009). While studies showed that ethnic minority job seekers and female job seekers hold specific metastereotypes about HEXACO-personality traits in job ads (Wille & Derous, 2017, 2018), older and younger job seekers' metastereotyped personality traits in job ads have been largely overlooked. Further, requirements in job ads might not only be portrayed through personality traits (e.g., Conscientiousness), but also by means of *competences* with a focus on the necessary skills that future employees should possess (e.g., managing personnel). Women's metastereotypes regarding competences in job ads have not been considered before and are studied in the present dissertation. We thus formulate the first research objective of the present dissertation (see Chapters 2, 3, 4 and 5):

Objective 1: Develop knowledge about those personality traits and competences that female, older and younger job seekers hold metastereotypes about.

Job advertisements inform job seekers about the organization, the job and the requirements that candidates should have (Walker & Hinojosa, 2013). This information in job ads has a signaling function for job seekers. That is, job seekers use this limited information in job ads as signals or cues about what the organization values, which hence affects their attraction to the job (Highhouse et al., 2007). These assumptions from the theory of symbolic attraction (Highhouse et al., 2007) are rooted in social identity theory (Turner et al., 1994) and predict that cues in job ads signal to job seekers whether the job/organization fits their social identity. When female, older or younger job seekers read person requirements in job ads that they hold negative metastereotypes about, this might signal a threat to their social (gender or age) identity, respectively, and hence decrease their job attraction. Positive metastereotypes, on

the other hand, might signal no threat to or even boost job seekers' social identity (Armenta, 2010; Finkelstein et al., 2020; Gaither et al., 2015) and might hence increase their job attraction. Remarkably, the effect of positive metastereotypes tends to be overlooked (Grutterink & Meister, 2021), hence the present study investigates both negative and positive metastereotypes during recruitment/promotion. Further, the goal of recruitment and promotion procedures is two-fold: organizations aim to first attract candidates for a position and additionally want them to decide to actually apply for the position. Job attraction and application intention are two outcomes that represent applicants' attitudes and behavior during recruitment and promotion procedures. By investigating effects of negative/positive metastereotypes on both of these outcomes, we address a call for more research on the applicants' perspective during recruitment and selection procedures (Born et al., 2018; Breugh, 2008). Hence, as a second research objective, we investigate the following research objective (in Chapters 3, 4 and 5):

Objective 2: Develop knowledge about the effect of metastereotypes¹ on job seekers' job attraction and application intention during recruitment and promotion.

Underlying Processes

Previous studies provide evidence for the signaling function that information in job ads can have for job seekers (Carpentier et al., 2019; Celani & Singh, 2011; Ganesan et al., 2018; Younis & Hammad, 2021), as well as the signaling function of metastereotypes in job ads (Wille & Derous, 2017, 2018). However, these studies have not empirically tested the cognitive-emotional processes that underly these effects. The present dissertation aims to investigate *how* metastereotypes in job ads affect job seekers' attraction and application intention and thereby focused on job seekers' appraisal mechanism of negative metastereotypes, their self-efficacy, the indirect effect of metastereotypes on application intention through job

¹ For simplification purposes, we write 'metastereotypes' in Research Objectives 2, 3 and 4. Please note that with 'metastereotypes', we actually mean personality traits and competences in the person requirements that female, older and younger job seekers hold negative or positive metastereotypes about.

attraction, and finally, job seekers' cognitive processing of job ad information in terms of attention and recall.

First, previous studies (Wille & Derous, 2017, 2018) have assumed that negative metastereotypes in job ads may threaten job seekers, in line with research that showed how negatively (meta)stereotyped information can threaten people (Finkelstein et al., 2020; Steele & Aronson, 1995), but have not directly measured this. Moreover, negative metastereotypes in job ads might also, alternatively, *challenge* job seekers (Finkelstein et al., 2020; Hehman & Bugental, 2013). For instance, when younger job seekers believe they are considered as less punctual than older people (i.e., negative metastereotype about punctual), they might also see it as a *challenge* to prove that they are punctual. The present dissertation (Chapter 2) explicitly tests these two possible appraisals of negative metastereotypes (Uphill et al., 2019) and how they affect job seekers' job attraction during recruitment and promotion.

Second, negative metastereotypes can also affect how one sees oneself. That is, negative metastereotypes can be a cue to one's social identity (i.e., being female, being older, being younger) and individuals might see themselves more in terms of their social group and negative stereotypes about that group instead of in terms of their own traits and competences (Turner et al., 1994). This lowered belief in oneself might in turn result in lower application intention among female, older or younger job seekers (Bandura, 1997; Jaidi et al., 2011). While scholars have touched on the idea that negative metastereotypes lower self-beliefs (Gordijn, 2010; Owuamalam & Zagefka, 2014; Vorauer et al., 1998), they have not considered how a negatively metastereotyped personality requirement affects job seekers' self-beliefs regarding that particular personality requirement in the job ad. We therefore investigate job seekers' *trait-specific self-efficacy* or their belief of whether they possess the personality requirement or not as a mediator in Chapter 3 of this dissertation.

Third, negative metastereotypes in job ads might lower job attraction of female, older or younger job seekers, as well as their intention to apply for the job (Wille & Derous, 2017, 2018). While studies have considered direct effects of metastereotypes in job ads on job attraction and application intention separately, we investigated a more complete model and additionally studied the indirect effect of metastereotypes on application intention through job attraction. That is, ample research has shown that, in general, job seekers' job attraction is positively related to their application intention (Carless, 2005 for a longitudinal study; Chapman et al., 2005 for a meta-analysis; Highhouse et al., 2003; Van Hooft et al., 2006). Hence, job attraction might mediate the relationship between metastereotypes in job ads and application intention for female, older or younger job seekers, which we test in Chapter 4 of the present dissertation.

Finally, research has called for more research on the cognitive processes that underly the recruitment process (Breugh, 2013). For instance, little is known about attentional patterns toward information in job ads and working memory processing of job ad information. Negative information, like negative metastereotypes, might capture job seekers' attention more than neutral information (Kaiser et al., 2006) and might also be better recalled (Kanar et al., 2010). This vigilance for negative metastereotypes instead of other relevant job information and the subsequent effect on working memory might lower job seekers' attraction to the job (Breugh, 2013; Pfiffelmann et al., 2020) and is tested in Chapter 5 of the present dissertation.

In sum, by investigating not only the effect of negative versus neutral or positive metastereotypes in job ads on job seeker's attitudes/behavior, but also looking at the mediating effects of threat/challenge, self-efficacy, job attraction, recall through attention, the present dissertation aims to uncover the underlying processes that shape female, older and younger job seeker's self-select out from the applicant pool based on metastereotyped person requirements.

A third research objective of the present dissertation that we study in Chapters 2, 3, 4 and 5, is thus:

Objective 3: Develop knowledge about the cognitive/emotional processes (in terms of threat/challenge appraisal, self-efficacy, job attraction and attention/recall) that underly the effect of metastereotypes on job seekers' job attraction and application intention during recruitment and promotion.

Dispositional versus Behavioral Wording

Job seekers might hold negative/positive metastereotypes about requirements in job ads, which might hence affect their job attraction and application intention. Negative metastereotypes might signal a threat to job seekers' social identity, while positive metastereotypes might signal no threat or a boost of job seekers' social identity. Alternatively, negative metastereotypes might also challenge certain job seekers, such as younger job seekers that know that their social status based on their age will soon disappear (i.e., by growing older). These above-mentioned effects might be intensified by the way in which metastereotyped requirements are worded. That is, requirements in job ads might be formulated/worded in two ways. On the one hand, a dispositional wording of requirements focuses on how someone *is*, e.g., "you are flexible". A behavioral wording, on the other hand, focuses on how someone behaves, e.g., "you easily adapt to change". The linguistic category model (Semin & Fiedler, 1991) predicts that these two wordings of requirements can affect how the information that the organizations aim to portray is perceived by job seekers. Previous research findings have indeed found support for this claim and showed that a dispositional wording of (meta)stereotyped information lowered job attraction of those job seekers that hold the (meta)stereotypes (e.g. female and ethnic minority job seekers; Born & Taris, 2010; Wille & Derous, 2017, 2018). Specifically, a behavioral wording of negative metastereotypes is expected to decrease perceived threat and increase perceived challenge of job seekers and hence increase their job

attraction compared to a dispositional wording of a negative metastereotype. In contrast, a positively metastereotyped requirement is expected to be more attractive when it is worded in a dispositional way compared to a behavioral way. In other words, a wording that emphasizes one's innate nature/disposition is more attractive for those requirements that you are considered to possess, while a more concrete/situational wording that focuses on the tasks that you can take up is more attractive for requirements that you are not considered to possess. Chapters 2 and 4 of the present doctoral dissertation additionally take the wording of requirements on job attraction into account when investigating effects of negatively or positively metastereotyped requirements in job ads. As a fourth and final research objective (see Chapters 2 and 4), we therefore formulate:

Objective 4: Develop knowledge about the effect of the wording (dispositional versus behavioral) of metastereotypes on job seekers' job attraction during recruitment and promotion.

The Present Dissertation

In the present dissertation, we present four empirical chapters, complemented with a general introduction (**Chapter 1**) and a general discussion (**Chapter 6**). The empirical studies presented in Chapters 2, 3, 4 and 5 aim to investigate the research objectives presented in the general introduction and should be read independently from each other. Table 1 presents an overview of the empirical chapters and what they each cover. **Chapter 2**, entitled "Mind the ad: How personality requirements affect older and younger job seekers' job attraction", covers Objectives 1, 3 and 4.

Table 1.*Overview of the Empirical Chapters in the Present Dissertation*

<i>Chapter</i>	<i>Objective</i>	<i>Target group(s)</i>	<i>Procedure type</i>	<i>Study materials</i>	<i>Predictor</i>	<i>Mediator</i>	<i>Dependent variable</i>	<i>Methodology</i>
2	1, 3 and 4	<ul style="list-style-type: none"> ■ Older job seekers ■ Younger job seekers 	Recruitment (i.e., external candidates)	<ul style="list-style-type: none"> ■ Personality requirements (i.e., traits) 	<ul style="list-style-type: none"> ■ Wording of negatively metastereotyped trait (behavioral vs. dispositional) 	Threat and challenge (parallel)	Job attraction	Online lab experiment
3	1, 2 and 3	<ul style="list-style-type: none"> ■ Older job seekers ■ Younger job seekers 	Recruitment (i.e., external candidates)	<ul style="list-style-type: none"> ■ Personality requirements (i.e., traits) 	<ul style="list-style-type: none"> ■ Type of trait (negatively metastereotyped vs. neutral trait) 	Self-efficacy	Application intention	Online lab experiment
4	1, 2, 3 and 4	<ul style="list-style-type: none"> ■ Female job seekers 	Promotion (i.e., internal candidates within the organization)	<ul style="list-style-type: none"> ■ Leadership, behavioral and technical competences 	<ul style="list-style-type: none"> ■ Type of metastereotype (negative vs. positive) ■ Wording of negative and positive metastereotype (behavioral vs. dispositional) 	Job attraction	Application intention	Online experiment in organization
5	1, 2 and 3	<ul style="list-style-type: none"> ■ Older job seekers ■ Younger job seekers 	Recruitment (i.e., external candidates)	<ul style="list-style-type: none"> ■ Personality requirements (i.e., traits) versus other job ad information 	<ul style="list-style-type: none"> ■ Type of trait (negatively metastereotyped vs. neutral trait) 	Attention and recall (serial)	Job attraction	On-campus eye-tracking experiment

Building on the theory of symbolic attraction rooted in social identity theory (Highhouse et al., 2007; Turner et al., 1994) and the linguistic category model (Semin & Fiedler, 1991), Chapter 2 investigates whether a dispositional wording of negatively metastereotyped traits in job ads is less attractive for older (Study 1; $N = 123$) and younger (Study 2; $N = 151$) job seekers than a behavioral wording of such traits and whether threat or challenge (Finkelstein et al., 2015; Steele & Aronson, 1995) mediate this effect. The two experimental lab studies in Chapter 2 both feature a two-condition within-participant multiple mediators design (Montoya & Hayes, 2017) with within-subjects comparisons of wording, perceived threat and perceived challenge as potential parallel mediators and job attraction as the outcome variable. **Chapter 3**, entitled “What (not) to add in your ad: When job ads discourage older or younger job seekers to apply”, covers Objectives 1, 2, and 3 and investigates whether older and younger job seekers’ ($N = 556$) application intention is lower for negatively metastereotyped traits in job ads compared to job ads with not negatively metastereotyped traits, thereby relying on symbolic attraction (Highhouse et al., 2007) and social categorization/social identity theory (Turner et al., 1994). Moreover, the mediating role of self-efficacy regarding the trait is investigated (Bandura, 1997, 2015; Turner et al., 1994). The experimental lab studies among older and younger job seekers feature a two-condition between-participant design in which traits in job ads (negatively metastereotyped vs. not negatively metastereotyped) are manipulated (between-subjects), trait-specific self-efficacy is the potential mediator variable, and application intention (i.e., intention to apply) is the outcome variable. **Chapter 4**, entitled “Women’s attraction to top-level executive positions: An experimental study in a large government organization”, presents data collected among women ($N = 432$) within a large, public organization. In this chapter, Objectives 1, 2, 3 and 4 are investigated. Based on symbolic attraction/social identity theory (Highhouse et al., 2007; Turner et al., 1994), this chapter investigates whether job ads with competences that women have negative metastereotypes about lower their job attraction and in

turn application intention compared to job ads with positive metastereotyped competences for women. Moreover, building on the linguistic category model (Semin & Fiedler, 1991) the moderating role of the competences' wording (behavioral versus dispositional) is also included. This moderated mediation model is tested for leadership, behavioral, and technical competences as defined by the organization. The study employs a 2 (type of metastereotype: negative vs. positive) by 2 (wording: dispositional vs. behavioral) within-subjects design with application intention as dependent variables and job attraction as mediator. The two studies presented in **Chapter 5**, entitled "Older and younger job seekers' attention towards metastereotypes in job ads" cover Objectives 1, 2, and 3. Chapter 5 examines the effect of negatively metastereotyped traits versus not negatively metastereotyped traits in job ads on visual attention, recall, and job attraction of older (Study 1; $N = 54$) and younger (Study 2; $N = 49$) job seekers. Additionally, building on cognitive information processing theories (Baddeley & Hitch, 1974; Kaiser et al., 2006), the serial mediating role of attention to and recall of negatively metastereotyped traits on job attraction is explored as well. Study 1 and Study 2 both feature a two-condition within-participants design, in which traits in job ads (negative metastereotypes vs. not negative metastereotypes), attention and recall are serial mediators (Montoya & Hayes, 2017) and job attraction is the outcome variable. Finally, **Chapter 6** provides a general discussion of the results of the previous chapters and addresses the research objectives. Both theoretical and practical contributions and implications of this doctoral dissertation are discussed, as well as suggestions for future research initiatives.

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CHAPTER 2

MIND THE AD: HOW PERSONALITY REQUIREMENTS AFFECT OLDER AND YOUNGER JOB SEEKERS' JOB ATTRACTION^{2,3}

Age discrimination may explain lower labor market chances of older and younger job seekers. What remains underresearched, however, is how older/younger job seekers might self-select out from early recruitment procedures due to stigmatizing information in job ads. Building on theories of metastereotypes and the linguistic category model, two experimental studies investigated how personality requirements that older/younger job seekers hold negative metastereotypes about and the way in which these requirements are worded (behavioral vs. dispositional) affected their job attraction. Within-participant mediation analyses showed that, as expected, job attraction was higher for older (N = 123, aged 50y or more) and younger (N = 151, 30y or less) job seekers when requirements were worded in a behavioral way (e.g. “You can be flexible”), as compared to a dispositional way (e.g., “You are flexible”). This relation was mediated by perceptions of challenge among younger but not older job seekers. Contrary to expectations, perceptions of threat did not explain effects of negatively metastereotyped personality requirements on job attraction. Understanding how job seekers perceive information in job ads might help recruiters to design age-sensitive recruitment policies.

² This chapter is an exact copy of: Koçak, A., Rooman, C., Duyck, W., & Deros, E. (2022). Mind the ad: How personality requirements affect older and younger job seekers' job attraction. *Journal of Occupational and Organizational Psychology*, 95(3), 718-737. <https://doi.org/10.1111/joop.12396>

³ A previous version of this paper was presented in: Koçak, A., & Deros, E. (2019, February 14–15). *Mind the ad: Age related threats in job ads*. [Paper presentation]. The 1st PhD Working on Work Meeting, WZB Social Science Center, Berlin, Germany; Koçak, A., & Deros, E. (2019, October 18). *When Job Ads Turn You Down*. [Paper presentation]. The 14th Annual Dutch-Flemish Research Meeting on Personnel Recruitment and Selection Meeting, Amsterdam, The Netherlands; and Koçak, A., & Deros, E. (2019, November 7–9). *Mind the ad: When Younger Job Seekers Are Not Attracted To Job Ads*. [Paper presentation]. The 5th Biennial Age In The Workplace Small Group Meeting, St. Gallen, Switzerland.

Despite the war for talent, ample studies still report age discrimination in recruitment. These studies typically consider how implicit/explicit cues to job seekers' age trigger recruiters' stereotypical reactions and affect job chances (e.g., Farber et al., 2019). A less considered perspective is how older/younger job seekers' perceptions of recruitment information affect recruitment outcomes in early recruitment stages (i.e., the interest stage; Evertz & Süß, 2017). Such perceptions may guide job seekers' intentions and self-selection (Born & Taris, 2010; Mirowska, 2020).

Imagine, for instance, a job advertisement that calls for flexible and dynamic employees. Would older job seekers be as attracted to this ad as their younger counterparts? Similarly, how would younger job seekers feel about an ad that calls for responsible and disciplined employees? Older job seekers might believe recruiters perceive them as less dynamic than younger job seekers, while younger job seekers might believe recruiters perceive them as less disciplined than older persons (Finkelstein et al., 2013). These so-called negative metastereotypes are stereotypical, negative beliefs that one thinks other groups hold about their group and might lower job attraction. The present study considered how personality requirements that older/younger job seekers hold negative metastereotypes about affect their job attraction, which –to the best of our knowledge– has not been considered before, but is important for building age-inclusive organizations. That is, job advertisements might also discourage job seekers from applying (Newman & Lyon, 2009) even though they would be qualified for the job, which is problematic for both job seekers and organizations (Ployhart, 2006).

As a first goal, we examined whether the wording of requirements in job ads affects older and younger job seekers' attraction to the advertised job (Gaucher et al., 2011). The linguistic category model (LC-Model; Semin & Fiedler, 1991) posits that wording may affect how information is perceived and evaluated by others. The use of adjectives ("We expect

flexible candidates”) triggers perceptions of *how one is*, whereas verbal expressions (“We expect candidates *to behave in a flexible way*”) trigger perceptions of *how one can behave* in a certain context. Hence, negatively metastereotyped personality requirements worded in a dispositional way might be perceived as less attractive because of their innate nature than (the same) personality requirements worded in a more behavioral way.

Second, not only *whether*, but also *how* negatively metastereotyped personality requirements in job ads affect job attraction is not well understood. Consistent with stereotype threat literature (Steele & Aronson, 1995), studies suggested –but did not test– whether stereotyped information in job ads might elicit threat, which in turn may lead to a loss of interest in the advertised job (Wille & Derous, 2017, 2018). Alternatively, Finkelstein et al. (2020) recently showed that negative metastereotypes might also trigger perceptions of challenge and possibly result in more positive recruitment outcomes. Specifically, negative metastereotypes could incentivize people to prove they don’t apply to them. Hence, as a second goal, we tested whether job seekers’ perceptions of threat and challenge mediate effects of negatively metastereotyped personality requirements on job attraction.

Finally, research considers employment chances and hiring discrimination of older-aged job seekers more than younger-aged job seekers, despite anti-discrimination legislation prohibiting age discrimination for all ages (Council Directive 2000/78/EC). Therefore –and given that unemployment rates are typically higher among both older and younger workers compared to middle-aged workers (OECD, 2020)– we investigated if the wording of negative metastereotypes in job ads affects older (Study 1) and younger (Study 2) job seekers’ attraction to jobs and how this is perceived in terms of threat or challenge.

Metastereotyped Traits, Recruitment, and Job Ads

Following Hilton and von Hippel (1996)’s definition of stereotypes, *age stereotypes* are beliefs about the characteristics of certain age group members. Young-aged stereotypes, for

example, typically include views that younger individuals are less responsible/reliable/loyal, and more impulsive/lazy/materialistic than older individuals (Finkelstein et al, 2013; Truxillo et al., 2014). Similarly, people may view older people as more grumpy/stubborn, and less agreeable/flexible (Finkelstein et al., 2013; Posthuma & Campion, 2009). Individuals might be aware of existing stereotypes about their own group. These *metastereotypes*, or beliefs about stereotypes that out-group members hold about one's in-group (Vorauer et al., 1998), are formed irrespective of what the out-group *actually* thinks, but shape how older and younger people interact (Fowler & Gasiorek, 2020). Verbal cues during recruitment can activate these age-related metastereotypes among older/younger job seekers (Vorauer et al., 1998).

Building on symbolic attraction (Highhouse et al., 2007), studies also demonstrated the impact of (meta)stereotypes in recruitment: When reading job advertisements, job seekers make assumptions (symbolic inferences) about the advertised job based on information in these ads (like personality requirements or traits), which in turn affects their job attraction (Newman & Lyon, 2009). If candidates believe that the traits in job ads relate to personal characteristics that others think they do not hold, this might negatively affect their job attraction. That is, research showed that activation of negative metastereotypes doesn't only undermine job seekers' general beliefs about their employability chances (e.g., beliefs about how easy it is as a member of one's in-group to find a job; Owuamalam & Zagefka, 2014), but also decreases one's job attraction to that specific job in the job ad (Wille & Derous, 2017, 2018). Relatedly, research showed that job ads with stereotyped language (stereotypically masculine traits, such as "decisive") negatively affected how job seekers perceive the job (job appeal; Gaucher et al., 2011), and even their intention of applying to the job (Born & Taris, 2010). Thus, not only stereotypes, but also job seekers' expectations that recruiters will evaluate them accordingly, might affect their job attraction. While the (meta)stereotyped connotation of personality requirements in job ads might affect job attraction, we argue that the way in which these requirements are formulated

and job seekers' appraisal of these traits (as a threat or challenge), should also be considered. Below, we elaborate on both aspects.

Dispositional Versus Behavioral Wording

According to the symbolic attraction theory (Highhouse et al., 2007), information in job ads, such as personality requirements, may signal whether a job fits job seekers' social identity and whether they want to be affiliated with that job/organization. Not only the type of traits mentioned in job ads but also *how these traits are formulated* may affect job seekers' attraction (Born & Taris, 2010; Wille & Derous, 2017, 2018), since it can signal different things to job seekers. Building on the linguistic category model (LC-Model; Semin & Fiedler, 1991), personality requirements in job ads can be presented as more abstract characteristics (using adjectives, like "This organization expects *flexible* workers"), or as more concrete behaviors (using verbs, like "This organization expects workers *to adapt easily to colleagues*"). Research showed that female job seekers are indeed prone to these subtle linguistic cues in job advertisements: A more concrete, behavioral wording of the personality requirements tempered the negative effect of gender-stereotyped information in job ads on application outcomes for women (Born & Taris, 2010). Studies that empirically tested assumptions from the LC-model relied mostly on gender/ethnicity rather than age to determine the in- and out-group (Wigboldus et al., 2000). While many studies have touched on the idea that organizational communication toward older/younger workers should be deliberative (e.g., Lievens et al., 2012), this has never been tested empirically. This study expected that a dispositional wording (adjectives) of a negatively metastereotyped requirement suggests a more innate nature of personality requirements. Job seekers may therefore get the impression that recruiters' assessments are influenced by negative stereotypes about how older/younger job seekers stereotypically *are* ("one is *flexible*") across situations. A behavioral wording of negative metastereotypes, on the other hand, puts these requirements in a behavioral/situational context and suggests to job

seekers that recruiters may pay more attention to how they *behave* in a concrete situation (“one *behaves in a flexible way*”). Hence, for older and younger job seekers we expected:

Hypothesis 1. Job attraction is higher for a behavioral than dispositional wording of negatively age-related metastereotyped traits in job ads.

Threat Versus Challenge

Cuddy et al. (2007) showed that people may be more affected by stereotype *appraisals* than by the actual stereotypes themselves. According to Blascovich and Tomaka (1996), any goal-relevant situation (like reading job ads) is followed by a cognitive appraisal of either *threat* or *challenge*, based on a comparison between demands and available resources. Finkelstein et al. (2020) indeed found both threat and challenge reactions to age metastereotypes. People may experience more threat in a situation with an activated negative stereotype compared to a situation without such stereotype activation (Schuster & Martiny, 2017). Perceived threat can even impair attitudes and performance (Brubaker & Naveh-Benjamin, 2018). While age-related threat is mostly studied among older people (Lamont et al., 2015), Popham and Hess (2013) showed that younger people’s performance was also impaired by perceived threat. Although previous studies assumed that job ads with negative metastereotypes would be experienced as threatening to certain individuals (Wille & Deros, 2017, 2018), such an underlying mechanism has not been tested before and is considered here.

If (meta)stereotypes or anticipated discrimination can create social identity threat (i.e., a threat to one’s identity that is based on one’s membership of a social category; Steele & Aronson, 1995) in older/younger job seekers, such threat might negatively affect their attraction to these situations. While information that fits one’s social identity may increase job attraction (Highhouse et al., 2007), any perceived threat to job seekers’ social identity might lower overall job attraction (Kristof-Brown et al., 2005). Whereas experimental studies (Bretz & Judge, 1998) indeed showed that negative/threatening information about job characteristics decreased job

attraction, they did not consider personality requirements that job seekers might have negative metastereotypes about.

The present study not only investigated whether older and younger job seekers experience threat upon confrontation with negative metastereotypes in job ads, and whether such threat perceptions negatively affect job attraction, but also whether the way in which the negative metastereotype is worded changes threat and job attraction levels. A dispositional wording of a trait that one holds a negative metastereotype about might be perceived as more threatening because the job seeker expects that the recruiter will attribute the negative trait more to one's dispositional nature ("how one is"). A behavioral wording, on the other hand, is expected to be less threatening because the negative trait is less linked to one's dispositions but more to one's behavior in a certain context ("how one can behave"). For older and younger job seekers we thus expected:

Hypothesis 2. Perceptions of threat are lower for a behavioral wording of negatively metastereotyped traits, compared to dispositional wording (Hypothesis 2a), which in turn results in higher job attraction for a behavioral wording (Hypothesis 2b). Hence perceptions of threat are expected to mediate the effect of a behavioral/dispositional wording on job attraction (Hypothesis 2c).

Alternatively, research suggested that people might also feel challenged when being faced with negative metastereotypes (Finkelstein et al., 2020; Kalokerinos et al., 2014). Moreover, being exposed to a negative age-related prime actually increased participants' performance on a cognitive task (*stereotype challenge effect*; Hehman & Bugental, 2013). If job seekers perceive metastereotypes as a challenge, they might aim to disprove them and thus feel stimulated to conquer such stressors: "*As a younger person, I believe older people think that younger people are not responsible, but this challenges me to prove them I can be responsible*" (Alter et al., 2010; Finkelstein et al., 2020). Experimental findings (Thorsteinson

et al., 2004) showed that this translates into higher levels of attraction, since higher challenge perceptions in job ads led to higher organizational attraction in their study. Applied to the wording of negatively metastereotyped traits in job ads, one can expect a behavioral wording as opposed to a dispositional wording to present these requirements as more situational, such that job seekers may feel more able and challenged to perform accordingly. Hence, behaviorally worded negative metastereotypes may boost perceptions of challenge and in turn increase job attraction of older and younger job seekers, such that:

Hypothesis 3. Perceptions of challenge are higher for a behavioral wording of negatively metastereotyped traits, compared to dispositional wording (Hypothesis 3a), which in turn results in higher job attraction for a behavioral wording (Hypothesis 3b). Hence perceptions of challenge are expected to mediate the effect of a behavioral/dispositional wording on job attraction (Hypothesis 3c).

Study 1

Study 1 investigated whether older job seekers (aged 50y and older) are more attracted to jobs if negatively metastereotyped⁴ personality requirements in job ads are worded in a behavioral way compared to a dispositional way (Hypothesis 1) and whether this effect can be explained by decreased perceptions of threat (Hypothesis 2) and/or increased perceptions of challenge (Hypothesis 3).

Method

Participants

Job seekers ($N = 123$; $M_{\text{age}} = 55.51$ years, $SD_{\text{age}} = 4.90$; 52% women) were recruited via HR professionals and were 50y or more because managers typically consider someone an ‘older’ worker from the age of 50y on (McCarthy et al., 2014), employees may suffer more

⁴ Note that the abovementioned hypotheses consider job ads with negatively metastereotyped traits only. In the absence of such metastereotyped traits, perceptions of threat and challenge are not expected to mediate the relationship between wording and job attraction. Two additionally collected samples, in which this was tested as a robustness check, supported this assumption; results can be consulted in Appendix.

discrimination (Fasbender & Gerpott, 2020) and seem to experience specific (meta)stereotypes from that age on (Finkelstein et al., 2013).

Design and Procedure

An online, experimental study was conducted in which participants had to evaluate that specific part in the job ad where personality requirements are mentioned (the person profile). These profiles included negatively metastereotyped personality requirements, but differed in wording of these requirements. Specifically, the study featured a two-condition within-participant multiple mediators design (Montoya & Hayes, 2017) with within-subjects comparisons of wording (dispositional vs. behavioral), perceived threat and perceived challenge as potential parallel mediators and job attraction as the outcome variable. After signing the informed consent⁵, participants were instructed to carefully read/evaluate two job ads (presented in counterbalanced order) and evaluated perceived threat, challenge, and job attraction, which was followed by manipulation checks and demographics.

Development of Study Materials

Study materials consisted of job ads with personality requirements that older people hold negative metastereotypes about and were developed in two stages using different samples than the main study. In Stage 1, we conducted a literature review to investigate Big Six personality traits (Ashton & Lee, 2009) that older people have negative metastereotypes about. In their review on age metastereotypes at work, Finkelstein et al. (2013, 2015) reported ‘out of touch’/‘technophobic’/‘set in ways’ as the most important negative metastereotypes of older workers, followed by ‘boring’/‘old’/‘stubborn’/‘conservative’/‘negative’/‘grumpy’. In line with these results, more recent studies found ‘old’/‘slow’/‘out of touch’/‘physically declining’ (Weiss & Perry, 2020) and ‘not adaptable’ (Peters et al., 2019) as older-aged negative metastereotypes. Since we were interested in personality requirements that older/younger-aged

⁵ Both studies were approved by the Ethical Commission of Ghent University in accordance with the Helsinki declaration [Special Ethical Protocol no 2020/75].

workers hold metastereotypes about, we analyzed existing metastereotypes on their trait-like nature and compared these to the traits of HEXACO (Ashton & Lee, 2009), a well-known and validated Big Six personality model that includes the traits: Extraversion, Agreeableness, Emotionality, Conscientiousness, Openness to Experience, and Integrity. Older-aged negative metastereotypes mostly corresponded to a certain lack of adaptability and kindness, referring to the trait Agreeableness (Ashton & Lee, 2009). Stage 2 consisted of a pilot study in which we empirically tested HEXACO-traits that older workers hold most negative metastereotypes about to a further extent. Participants ($N = 80$; $M_{age} = 53.91$, $SD_{age} = 3.25$, 100% 50y and older; 55% women; 98.8% Caucasian/White; different from the main study) indicated for each negative item of the HEXACO Personality Inventory Revised (de Vries et al., 2009) whether they believed that *younger* (<50y) workers think that *older* ($\geq 50y$) workers are [adjective], e.g., ‘stubborn’, using a 5-point Likert scale (1= *strongly disagree* to 5= *strongly agree*). A higher score thus indicated more negative metastereotypes for the trait. Results showed the most negative metastereotype about the trait Agreeableness ($M = 2.90$, $SD = 0.57$), compared to the other HEXACO-traits ($M = 2.60$, $SD = 0.46$), $t(42) = 3.42$, $p = .001$ (Table 1). Subsequently, we developed and evaluated pairs of ‘verbs’/‘adjectives’ that represented the highest scoring Agreeableness items in a behavioral and dispositional wording, respectively. The adjectives “obedient” [“volgzaam”], “flexible” [“meegaand”] and “friendly” [“vriendelijk”] and the corresponding behavioral expressions (with verbs) “In the workplace, you can obey and follow orders” [“Je neemt niet graag de leiding op de werkplek en je volgt liever”], “You can easily comply and adapt to colleagues” [“Je past je gemakkelijk aan collega's aan”] and “You create a friendly atmosphere at work” [“Je zorgt voor een aangename werksfeer”] were selected. Subject Matter Experts (SMEs; $N = 9$; Industrial and Organizational Psychologists), blind to the study design/purpose, evaluated adjectives and expressions on their content, wording and

realism. Results showed that adjectives and expressions were perceived as intended and can be consulted in Appendix. No other specific information about other job characteristics (like working conditions or organization type), was mentioned as those characteristics might differentially attract older job seekers (Zacher et al., 2017).

Table 1

Perceptions of Negative Metastereotypes based on HEXACO-items in Study 1 (older-aged job seekers) and Study 2 (younger-aged job seekers)

Trait	Older workers		Younger workers	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Extraversion	2.72	0.55	2.52	0.49
Agreeableness	2.90	0.57	3.05	0.46
Emotionality	2.57	0.53	3.25	0.49
Conscientiousness	2.13	0.49	3.36	0.64
Openness to Experience	2.80	0.63	2.56	0.45
Honesty-Humility	2.66	0.65	3.12	0.52

Note. $N_{\text{Pilot Study 1}} = 80$; $N_{\text{Pilot Study 2}} = 28$. Items were scored on a 5-point Likert-type scale (1= *strongly disagree* to 5= *strongly agree*).

Validation of Study Materials

We additionally investigated the prevalence of selected HEXACO-traits in real job ads and cross-checked whether job seekers hold negative metastereotypes about them in a field study. Older job seekers ($N = 85$; $M_{\text{age}} = 54.06$ years, $SD_{\text{age}} = 3.03$; 100% ≥ 50 years; 57.6% women, different from the developmental stage/main study) were asked to select two ads for a job they were interested in and qualified for. Subsequently, they had to rate the attractiveness of the ads (1= *strongly disagree* to 5= *strongly agree*). Three independent raters ($M_{\text{age}} = 24.67$

, $SD_{age} = 1.15$, I-O psychologists working as recruiters) content-coded the job ads for information that referred to the HEXACO-trait ‘Agreeableness’ through inductive thematic analysis (discussion until agreement; Braun & Clarke, 2006). Results showed that 31.8% of all ads included ‘Agreeableness’. Ads that included ‘Agreeableness’ ($M = 3.56$, $SD = 0.89$), were perceived as less attractive than ads without this trait, ($M = 3.98$, $SD = 0.84$), $F(1, 81) = 3.32$, $p = .04$, $\eta_p^2 = .05$. Finally, older job seekers had to report information from the ads that they believed others held negative old-age stereotypes about. Negatively metastereotyped information was subsequently content-coded on HEXACO-traits based on definitions, scale descriptions and adjectives (de Vries et al., 2009; <https://hexaco.org>). Results showed that 15.0% of the information job seekers held negative stereotypes about explicitly referred to Agreeableness, e.g., ‘flexibility’, ‘capable of working in a team’, ‘sociable/friendly atmosphere’(de Vries et al., 2009, p. 240, <https://hexaco.org>). In sum, through a literature review, pilot study and a field study, we developed, tested and validated study materials that are relevant for older job seekers and increase the ecological validity in the main study.

Measures

Job attraction was measured with three items retrieved from Van Hooft et al. (2006). An example item was “Based on this information in the job ad [i.e., personality requirements], I would feel attracted to the advertised job” (1= *strongly disagree* to 5= *strongly agree*). Principal axis factoring showed 1 factor with an Eigenvalue larger than 1, explaining 91.78% (dispositional wording condition) and 87.95% (behavioral wording condition) of the total variance. Cronbach’s alpha was .93 and .96 for the behavioral wording and dispositional wording condition, respectively.

Perceived threat and challenge were measured with one item each, adapted from job anxiety scales (Muschalla et al., 2010) and Thorsteinson and colleagues' (2004) single item of challenge. The item that measured perceived threat was: “This person profile poses a threat to

people aged 50 or older, like me” (1= *strongly disagree* to 5= *strongly agree*). The item that measured perceived challenge was “This person profile poses a challenge to people aged 50 or older, like me” (1= *strongly disagree* to 5= *strongly agree*). Items were counterbalanced with higher scores indicating that respectively more threat or challenge was experienced based on the metastereotyped personality requirement.

Manipulation checks evaluated whether the type of trait (“The person profile shows that they were looking for an agreeable person”, with 1= *strongly disagree* to 5= *strongly agree*) and its wording (“The person profile shows that they value *how one can behave* (=behavioral)/*how one’s nature is* (=dispositional)”, with 1= *strongly disagree* to 5= *strongly agree*) were perceived as intended. We also checked whether the negatively metastereotyped trait was indeed perceived as a metastereotype with the question “To what extent do you believe that younger (<50y) workers think that older (\geq 50y) workers are [obedient], [flexible] and [friendly]?”, with 1= *strongly disagree* to 5= *strongly agree*. A series of Repeated Measures ANOVA’s showed that participants perceived the job ads looking for agreeable persons as intended for both the behavioral wording ($M = 3.98$, $SD = 0.99$), $F(1, 122) = 156.80$, $p < .001$, $\eta_p^2 = .56$, as well as the dispositional wording ($M = 3.87$, $SD = 0.72$), $F(1, 122) = 112.72$, $p = .004$, $\eta_p^2 = .48$. When adjectives were used, traits were perceived as more dispositional ($M = 4.02$, $SD = 0.74$) than when verbs ($M = 3.81$, $SD = 0.83$) were used, $F(1, 122) = 6.60$, $p = .011$, $\eta_p^2 = .05$. Finally, participants of the main study held negative metastereotypes about the manipulated Agreeableness items ($M = 2.90$, $SD = 0.76$) that were comparable to and not significantly different from participants of the pilot study ($M = 2.90$, $SD = 0.57$), $t(96.70) = 0.02$, $p = .99$. A one sample t-test further showed that participants indeed held more negative metastereotypes about the Agreeableness items in the ads ($M = 2.90$, $SD = 0.76$) when compared to the pilot sample mean of the other five HEXACO-traits ($M = 2.66$, $SD = 0.88$), $t(122) = 3.53$, $p = .001$. These results showed that manipulations were successful.

Demographics included participant age (in years), gender (0 = *man*; 1 = *woman*), ethnicity (0= *Caucasian/White*; 1= *Arab*; 2= *African*; 3= *Asian*, 4= *Latin-American*, 5 = *other*) and education level (0 = *no high school degree*; 1 = *high school degree*; 2 = *professional bachelor's degree*; 3 = *academic bachelor's degree*, 4 = *academic master's degree*, 5 = *other*).

Results

Table 2 presents descriptives, internal consistency reliabilities and correlations among study variables. We performed a within-participant statistical mediation analysis through path analysis (Montoya & Hayes, 2017) using the MEMORE macro (V2.1; Montoya, 2019). This approach allows a test of a two-condition within-subjects design with two parallel mediators, which is required to test the model with a negative metastereotype⁶ among older people (see Figure 1 for regression coefficients).

Hypothesis 1 investigated whether job attraction is higher for negatively metastereotyped personality requirements that were worded in a behavioral rather than a dispositional way, i.e. the total effect of wording on job attraction. In line with our expectations, a behavioral wording, compared to a dispositional one, significantly increased job attraction for job ads with a negatively metastereotyped trait, $b = 0.49$, $SE = .16$, $t(87) = 3.11$, $p = .003$, supporting Hypothesis 1. To further investigate our hypothesized mediators (Hypotheses 2 and 3), we split up this total effect into a direct effect and two indirect effects through perceived threat and perceived challenge. First we investigated whether perceived threat was lower if personality requirements were worded in a behavioral rather than dispositional way (Hypothesis 2a) and whether perceived threat related negatively to job attraction (Hypothesis 2b). We expected perceived threat to mediate the relationship between wording of a negatively metastereotyped trait and job attraction (Hypothesis 2c).

⁶ We additionally investigated older job seekers' ($n = 125$) appraisal of job ads without metastereotyped traits as a robustness check. As expected, no parallel mediation effects were found (see Appendix).

Table 2*Descriptives, Correlations and Internal Consistencies of Study 1 and Study 2*

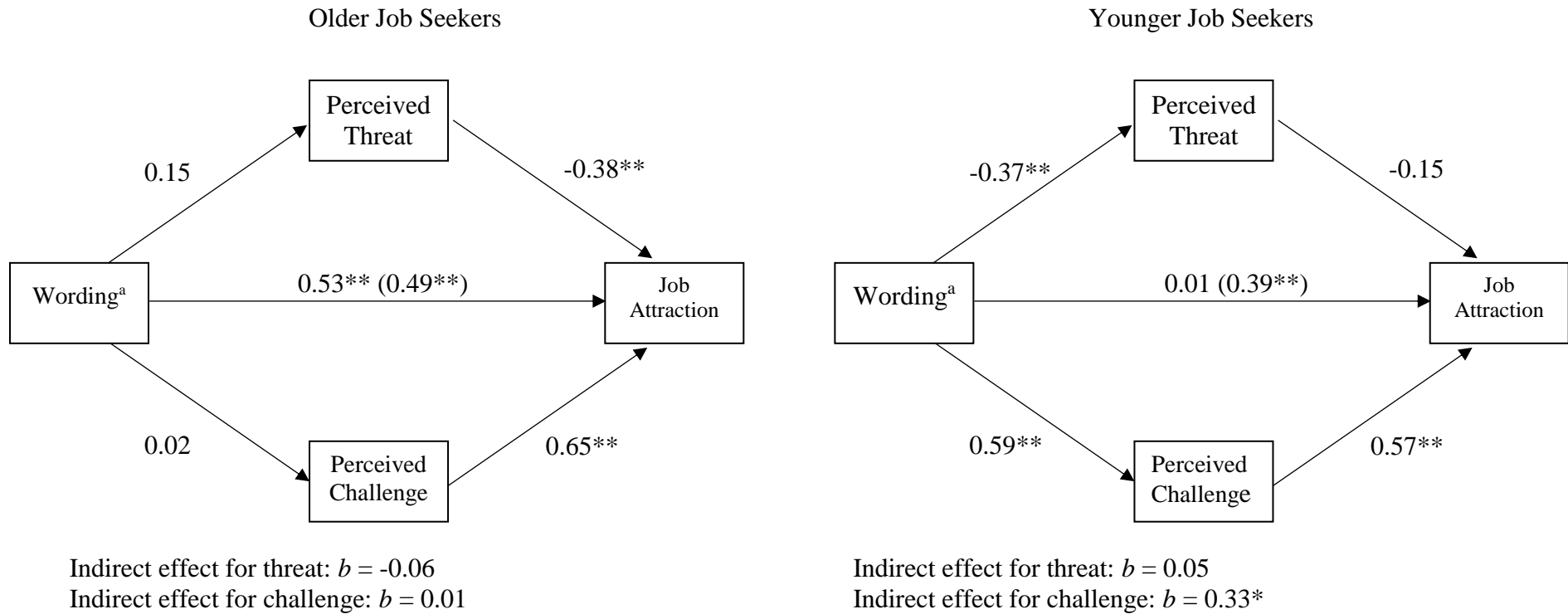
	Study 1		Study 2		1	2	3	4	5	6	7	8	9	10
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>										
1. Job Attraction DW ^a	2.96	1.12	3.08	0.97	(.96)/(.92)	.45**	-.24*	-.15	.60**	.26*	.08	-.04	.09	-.01
2. Job Attraction BW ^b	3.37	1.34	3.45	0.91	.38**	(.93)/(.93)	-.13	-.33**	.14	.59**	.16*	-.11	.05	-.12
3. Threat DW ^a	2.28	1.06	2.21	1.03	-.28**	-.06	(--)	.26**	-.04	.03	.01	-.05	--	-.13
4. Threat BW ^b	2.29	1.02	1.84	0.78	-.14	-.35**	.47**	(--)	-.01	-.10	-.18	.03	--	.03
5. Challenge DW ^{a,d}	2.67	1.08	2.79	1.02	.66**	.27*	-.00	.10	(--)	.37**	.07	-.05	--	.12
6. Challenge BW ^{b,d}	2.69	1.09	3.38	1.00	.47**	.65**	-.07	-.21	.52**	(--)	.24*	-.00	--	.03
7. Gender ^{c,d}	0.52	0.50	0.74	0.44	-.12	.01	.05	.03	-.06	.07	(--)	-.02	.05	.04
8. Age ^e	55.51	4.90	23.49	2.55	.17	.05	.03	.00	.06	.01	-.10	(--)	.01	.03
9. Ethnicity ^{c,f}	0.01	0.09	0.03	0.41	-.11	-.05	-.02	.14	-.07	-.07	.08	-.04	(--)	--
10. Education Level ^{c,g}	1.85	1.25	3.79	1.00	-.06	-.07	-.01	-.01	-.02	-.07	-.05	.00	-.08	(--)

Note. Results for Study 1 are displayed under the diagonal ($n = 123$); Results for Study 2 are displayed above the diagonal ($n = 151$).

^a DW= Dispositional wording. ^b BW= Behavioral wording. ^c Spearman correlation. ^d Gender: 0 = male; 1 = female. ^e Age: all job seekers were 50 years or older in Study 1 and all job seekers were 30 years or younger for Study 2. ^f Ethnicity: 0 = Caucasian/White; 1 = Arab; 2 = African; 3 = Asian, 4 = Latin-American, 5 = other. ^g Education Level 0 = no high school degree; 1 = high school degree; 2 = professional bachelor's degree; 3 = academic bachelor's degree, 4 = academic master's degree, 5 = other. * $p < .05$; ** $p < .01$.

Figure 1

Parallel Mediation Models for Older Job Seekers (Study 1) and Younger Job Seekers (Study 2) for Ads With Negative Metastereotypes



Note. $N_{\text{Study 1}} = 123$; $N_{\text{Study 2}} = 151$; Unstandardized coefficients are reported. The coefficients in parentheses represent the total effect of wording on job attraction, i.e., the direct and indirect effect. ^aWording: 0 = dispositional (adjectives), 1 = behavioral (verbs).

* $p < .05$. ** $p < .01$

Results showed no support for Hypothesis 2a, $b = 0.15$, $SE = .12$, $t(87) = 1.26$, $p = .21$, yet a significant, negative relationship between perceived threat and job attraction was found, $b = -0.38$, $SE = .12$, $t(83) = -3.07$, $p = .003$, supporting Hypothesis 2b. In addition, as the total indirect effect of wording on job attraction through perceived threat was not significant, $b = -0.06$, bootstrapped $SE = .06$, bootstrapped 95% CI = [-0.21, 0.22], Hypothesis 2c could not be supported for older job seekers. In the same way, we proceeded testing whether wording related positively to perceived challenge (Hypothesis 3a), whether perceived challenge related positively to job attraction (Hypothesis 3b) and whether perceived challenge mediated the relation between wording and job attraction (Hypothesis 3c). Wording did not significantly relate to perceived challenge, $b = 0.02$, $SE = .11$, $t(87) = 0.20$, $p = .84$, providing no support for Hypothesis 3a. However, in support of Hypothesis 3b, we observed a significant, positive relationship between perceived challenge and job attraction, $b = 0.65$, $SE = .13$, $t(83) = 5.00$, $p < .001$. Because the total indirect effect of wording on job attraction through perceived challenge was not significant, $b = 0.01$, bootstrapped $SE = .08$, bootstrapped 95% CI = [-0.13, 0.17], Hypothesis 3c could not be supported. Finally, the direct effect of wording on job attraction, while accounting for perceived threat and challenge was significant $b = 0.53$, $SE = .13$, $t(83) = 4.04$, $p = .001$.

Discussion

Study 1 results showed that, when negatively metastereotyped requirements in job ads were worded in a behavioral way, older job seekers considered the job ads more attractive than when the same requirements were worded in a dispositional way. These findings provide support for the LC-model (Semin & Fiedler, 1991) and corroborate with Born and Taris, (2010) and Wille and Derous (2017). Although wording did not affect job seekers' perceptions of threat and challenge, results showed that perceived threat elicited by negatively metastereotyped traits

related negatively to job attraction and that perceived challenge related positively to job attraction.

Study 2

Study 2 tested the same mechanism (hypotheses), namely whether job attraction is higher for a behavioral versus dispositional wording of negatively metastereotyped traits (Hypothesis 1) and whether this effect can be explained by decreased perceptions of threat (Hypothesis 2) and/or increased perceptions of challenge (Hypothesis 3) among younger job seekers (aged 30y and younger). The method used in Study 2 was identical to that of Study 1, unless explicitly stated otherwise.

Method

Participants

Given that life stage transition from emerging adulthood to young adulthood is situated around the age of 30y (Arnett, 2011) and that researchers also found specific metastereotypes for people younger than 30y compared to their older counterparts (Finkelstein et al., 2013), we recruited 151 job seekers aged 30y or younger ($M_{\text{age}} = 23.49$ y, $SD_{\text{age}} = 2.55$; 76.6% women).

Design and Procedure

In an online experiment, younger-aged job seekers rated job ads with negatively metastereotyped personality requirements that were worded in either a behavioral or dispositional way. Study 2 also featured a two-condition within-participant multiple mediators design (Montoya & Hayes, 2017) with wording measured within-subjects, perceived threat and challenge as potential mediators, and job attraction as the outcome.

Development of Study Materials

As in Study 1, we developed personality requirements that younger people hold negative metastereotypes about in two stages. In Stage 1, a review of relevant literature, we found that Harwood and Williams (1998) reported young beliefs that older counterparts see them as

‘irresponsible’/‘reckless’/‘naïve’, which is confirmed by later studies (Finkelstein et al., 2013, 2015) who also listed ‘irresponsible’/‘reckless’/‘naïve’, together with ‘lazy’/‘unmotivated’/‘unreliable’/‘inexperienced’/‘unknowledgeable’/‘rash decision making’, as most important negative metastereotypes of younger workers. In terms of HEXACO-traits (Ashton & Lee, 2008), these listed traits referred to lower levels of Conscientiousness. In a second Stage, we indeed found, through a pilot study (Table 1), that younger-aged workers ($N_{\text{young}} = 28$; 100% 30y or younger; 53.7% women; 96.4% Caucasian/White; different from the main study), held the most negative metastereotype about the HEXACO-trait Conscientiousness ($M = 3.36$, $SD = 0.64$) as compared to the other HEXACO-traits ($M = 2.90$, $SD = 0.33$), $t(27) = 3.79$, $p = .001$. Subsequently, adjectives and verbs representing Conscientiousness were developed. We selected the adjectives “punctual” [“stipt”], “disciplined” [“gedisciplineerd”] and “deliberative” [“bedachtzaam”] and the expressions (with verbs) “You can work punctually” [“Je kan taken en projecten stipt op tijd afwerken”], “You can work in a disciplined way” [“Je kan met veel discipline aan taken werken”] and “You can think deliberatively when working on tasks” [“Je denkt eerst goed na voor je taken begint uit te voeren”]. As in Study 1, SME’s ($N = 9$) evaluated the content, wording and realism of the materials. Results supported that adjectives/expressions were perceived as intended (see Appendix).

Validation of Study Materials

We proceeded in the same way as in Study 1. Through a field study, we evaluated job ads to cross-check findings of the first two stages of the development of the study material. First, 62.5% of job ads that younger job seekers were asked to select (for jobs they were interested in and qualified for) included ‘Conscientiousness’ as a personality requirement. Further, younger job seekers found ads with ‘Conscientiousness’ ($M = 3.18$, $SD = 0.81$) significantly less attractive than ads without this trait, ($M = 3.49$, $SD = 0.56$), $F(1, 89) = 3.85$,

$p = .05$, $\eta_p^2 = .04$. Finally, when specifically asked about negative metastereotypes in the ads, younger job seekers ($N = 100$; $M_{\text{age}} = 24.16$ years, $SD_{\text{age}} = 2.20$; $100\% \leq 30$ years; 66.0% women) mentioned Conscientiousness in 19.0% of all answers. For instance, the answers ‘time management’ and ‘detail oriented’ were both coded as Conscientiousness (de Vries et al., 2009).

Measures

The same measures were used as in Study 1 for job attraction (3 items adapted from Van Hooft et al., 2006; with $\alpha = .93$ and $.92$ for behavioral and dispositional wording, respectively), perceived threat and challenge (1 item each; Muschella et al., 2010; Thornsteinson et al., 2004), and demographics (age, gender, ethnicity, educational level). Through manipulation checks, we evaluated whether the type of trait (metastereotyped or not), its wording (behavioral or dispositional) and the metastereotyped connotation of the traits were perceived as intended, using analogous items to Study 1. For instance, to test whether metastereotyped traits were perceived as intended, we asked “To what extent do you believe that older ($>30y$) workers think that younger ($\leq 30y$) workers are [punctual], [disciplined] and [deliberative]?”, with 1 = *strongly disagree* to 5 = *strongly agree*. Repeated Measures ANOVA’s showed that manipulations were successful. Participants perceived the job ad looking for conscientious persons as intended for both the behavioral wording ($M = 4.04$, $SD = 0.68$), $F(1, 150) = 160.66$, $p < .001$, $\eta_p^2 = .52$, and the dispositional wording ($M = 4.13$, $SD = 0.71$), $F(1, 150) = 350.45$, $p < .001$, $\eta_p^2 = .70$. Traits were indeed perceived as more dispositional when adjectives were used ($M = 4.07$, $SD = 0.70$) than when verbs were used ($M = 3.48$, $SD = 1.06$), $F(1, 150) = 37.37$, $p < .001$, $\eta_p^2 = .20$. Participants of the main study held negative metastereotypes about the Conscientiousness items ($M = 3.39$, $SD = 0.68$) that were comparable to and not significantly different from participants of the pilot study ($M = 3.36$, $SD = 0.64$), $t(177) = 0.22$, $p = .82$. Through a one sample t-test, we found that participants of the main study indeed held more negative metastereotypes about Conscientiousness ($M = 3.39$, $SD = 0.68$)

when compared to the pilot sample mean of the other HEXACO-traits ($M = 2.93$, $SD = 0.92$), $t(150) = 8.28$, $p < .001$.

Results

Descriptives, internal consistency reliabilities and correlations among study variables are displayed in Table 2. Similar to Study 1, a within-participant statistical mediation path analysis was conducted (Montoya & Hayes, 2017) with MEMORE (V2.1; Montoya, 2019). Figure 1 displays the observed regression coefficients of the parallel mediation for younger job seekers in the condition with a negatively metastereotyped⁷ trait in the job ad. In support of Hypothesis 1, job attraction was significantly higher when the negatively metastereotyped personality requirements were worded in a behavioral way than when they were worded in a dispositional way, $b = 0.39$, $SE = .11$, $t(81) = 3.58$, $p = .001$. As regards Hypothesis 2, a behavioral wording significantly lowered levels of perceived threat, $b = -0.37$, $SE = .12$, $t(81) = -2.97$, $p = .004$ (Hypothesis 2a supported). However, perceived threat did not significantly relate to job attraction, $b = -0.15$, $SE = .08$, $t(77) = -1.90$, $p = .06$ (Hypothesis 2b unsupported). Finally, the total indirect effect of wording of a negatively metastereotyped trait on job attraction through threat was not significant, $b = 0.05$, bootstrapped $SE = .05$, bootstrapped 95% CI = [-0.03, 0.16]. Hypothesis 2c could therefore not be supported. Results of Hypothesis 3 showed that, as expected, a behavioral wording of the negatively metastereotyped trait resulted in higher levels of perceived challenge compared to a dispositional wording, $b = 0.59$, $SE = .13$, $t(81) = 4.68$, $p < .001$ (Hypothesis 3a, supported). In support of Hypothesis 3b, perceived challenge significantly increased job attraction, $b = 0.57$, $SE = .07$, $t(77) = 7.84$, $p < .001$. Moreover, the total indirect effect of wording of a negatively metastereotyped trait on job attraction through perceived challenge was significant as well, $b = 0.33$, bootstrapped $SE = .09$,

⁷ As in Study 1, we additionally investigated younger job seekers' ($n = 157$) appraisal of job ads without metastereotyped traits. Results were in line with our expectations (see Appendix).

bootstrapped 95% CI = [0.18, 0.52], providing support for Hypothesis 3c. Additionally, pairwise contrasts showed that the mediation through perceived threat and the mediation through perceived challenge significantly differed from one another, $b = -0.28$, bootstrapped $SE = .10$, bootstrapped 95% CI = [-0.50, -0.09]. Finally, the direct effect of wording on job attraction when accounting for perceived threat and challenge was not significant, $b = 0.01$, $SE = .09$, $t(77) = 4.68$, $p = .94$.

Discussion

In line with findings among older workers and the LC-model (Semin & Fiedler, 1991), results showed that job attraction was higher when negatively metastereotyped personality requirements in job ads were worded in a behavioral way than in a dispositional way. Further, among younger-aged job seekers, the relationship between wording and job attraction was mediated by perceived challenge but not by perceived threat. When negatively metastereotyped traits were worded in a behavioral way, younger-aged job seekers felt more challenged by these personality requirements and were thus more attracted to the job than when requirements were worded in a dispositional way. These findings disconfirm assumptions from stereotype threat models (Steele & Aronson, 1995), but support both theoretical assumptions (Alter et al., 2010; Kalokerinos et al., 2014) and empirical findings (Finkelstein et al., 2020; Hehman & Bugental, 2013; Thorsteinson et al., 2004) on challenge reactions, as further discussed below.

General Discussion

Despite the war for talent and changing age composition of the labor market, older/younger age groups still experience more difficulties in finding jobs as compared to middle-aged job seekers (OECD, 2020, 2021). While human capital factors (e.g., lack of experience and competences/skills) may explain lower labor market outcomes to some extent, hiring discrimination was also suggested, thereby predominantly focusing on recruiters' stereotypes and biased decision-making (e.g., Farber et al., 2019). The present study, however,

considered how job seekers experience information early in the recruitment process. Up until now, job seekers' perspectives have received only limited attention (Highhouse et al., 2007; Russell & Brannan, 2016). Yet, they are equally important to consider, given self-selection processes that might steer recruitment outcomes (Born & Taris, 2010; Mirowska, 2020). Researchers therefore called for a better understanding of job seekers' attitudes and behavior to avoid that talented job seekers would drop out early from recruitment procedures (Casper et al., 2013; Wille & Derous, 2017). Addressing this call, we investigated in two empirical studies *how* negatively metastereotyped personality requirements in job ads affect older and younger job seekers' attraction. Whereas previous studies mostly investigated *whether* stereotyped information in job ads affects recruitment outcomes (Born & Taris, 2010; Wille & Derous, 2017, 2018), they did not consider *how* exactly this might happen. The present study aimed to fill that literature gap by examining perceived threat and perceived challenge as potential mediators.

Key Findings and Contributions

Below, we first discuss two key findings and similarities across both studies, followed by unique contributions of each. A first key finding is that wording of personality requirements in the job ads affected both older and younger job seekers' attraction to the advertised job. In line with assumptions from the LC-model (Semin & Fiedler, 1991), ads that included negatively metastereotyped personality requirements were perceived as more attractive if such traits were worded in a behavioral way compared to a dispositional way. Similar findings were reported among ethnic minority and female job seekers (Wille & Derous, 2017, 2018) and seem to uphold for other groups of job seekers that might suffer from stereotypes and stigmatization on the labor market, like older/younger job seekers.

Second, the few studies that investigated stereotyped information in job ads assumed stereotyped cues in job ads to be ego-threatening. Hence people typically tend to avoid

situations where they anticipate to be negatively evaluated (Fowler & Gasiorek, 2020). We empirically tested this threat mechanism. Our findings, however, illustrate that the relationship between wording of a negatively metastereotyped personality requirement and job attraction might not be explained by perceived threat, for either older nor younger job seekers. While these results are not in line with literature findings on stereotype threat (Steele & Aronson, 1995), they do seem to resemble findings among other demographic groups, such as women and ethnic minorities (Davies et al., 2005; Pennington et al., 2019). Whether participants perceive threat when confronted with negative metastereotypes might depend on their own estimation of personal resources. Core self-evaluations, for instance, might moderate whether one feels threatened or not (Finkelstein et al., 2015). Thus, a high level of general belief in oneself might lower the perceived threat one might experience because of negative metastereotypes. Furthermore, the level of diagnosticity of a task was a moderator for stereotype threat activation (Steele et al., 2002). Evaluating personality requirements in job ads might –overall– evoke less threat than addressing questions on one’s personality in job interviews. Additionally, elements inherent to the study methodology might also have added to low perceived threat levels. First, perceptions of threat might have been suppressed because there was no real job at stake. Second, when faced with a negative stereotype, group members tend to create a vigilance for cues that indicate whether others might view them accordingly. Perceptions of threat might also have been suppressed because the nature of the stimulus (wording of traits in job ads) was rather subtle compared to stimuli that are mostly used in threat research (such as numeric representation of the group at the workplace, selection tests, ambiguous promotion practices and job conditions; Walton et al., 2015). Our study investigated a rather unique and under-explored work-related cue, namely the wording of metastereotyped personality requirements in job ads. This cue might be inherently different from the earlier

mentioned cues. Hence, future research could consider other potential sources in job ads that might trigger threat.

As previously suggested by scholars (Finkelstein et al., 2015; Kalokerinos et al., 2014), one might also feel positively challenged when coming across negative metastereotypes, which –remarkably– has been somewhat overlooked in the area of recruitment and selection. By explicitly testing challenge as an alternative to feeling threatened, Study 2 showed empirical evidence for a stereotype challenge effect (Finkelstein et al., 2020; Hehman & Bugental, 2013) among younger job seekers. Similarly, Hehman and Bugental (2013) observed a positive challenging effect of stereotypes among younger but not among older participants. They attributed these differential effects to the dynamic nature of age-related stereotypes, meaning that reactions to age-stereotypes are life stage-specific and depend on participants' current age. Similarly, the present study only found evidence for a mediating role of challenge among younger (Study 2) but not older (Study 1) job seekers. Following Hehman and Bugental (2013)'s idea of life stage-specific reactions to stereotypes, younger people know that, as they grow older, they will come closer to the 'prime-aged' group. Therefore, their age-based status will improve over time. This prospect could make younger job seekers more resistant to negative age (meta)stereotypes. Older people, on the other hand, do not only experience older-aged stereotypes, but they additionally know that –by growing older– their older-aged status will not change, which might make them more alert/vulnerable to negative stereotypes against their age group. Life stage-specific reactions to stereotypes might thus provide a possible explanation as to why we did not find identical pathways for older and younger job seekers. These findings also highlight the added value of targeting different age groups and their unique experiences.

In sum, building on theories of (meta)stereotypes and the LC-model, the present paper adds to studies on age-based hiring discrimination by focusing on job seekers' reactions to

negative metastereotypes in the early recruitment stage. Results provide important insights for future research and targeted recruitment initiatives by showing that (1) job ads might include person requirements that people have negative metastereotypes about, (2) the wording of such requirements should be considered and (3) threat/challenge reactions on these negatively metastereotyped requirements might be different for older/younger job seekers. These topics have typically received little attention up until now.

Limitations and Directions for Future Research

The present study answered a call for more recruitment research that takes a micro-perspective (Highhouse & Hoffman, 2001) by considering job seekers' perceptions of job ads. By focusing on the wording of metastereotyped personality requirements in job ads and the perceived threat/challenge they may trigger, we provide scholars and organizations with knowledge on how older/younger job seekers appraise job ad information and the benefits of employing a behavioral wording. However, as with any study, potential limitations and ideas for further research need to be mentioned. For instance, when developing study materials, we started in a 'top down' manner by identifying/testing personality requirements from the literature. Despite the fact that study materials were developed/validated very carefully through a literature review, lab and field studies, and that manipulation checks were successful, different personality requirements may still carry different meanings even *within* older and younger-aged groups of job seekers. Similar to stereotypes, metastereotypes include generalizations and their conceptualization in the present study might not hold for all older/younger people. Given this potential individual variability, future research might generate personality requirements in a more 'bottom-up'/individual way to engender even stronger effects. Relatedly, as negative metastereotypes may also lead to challenge reactions, more research could investigate how exactly job seekers experience this 'challenge' emotionally and what it means for them. This might be an interesting addition to the existing literature that predominantly focuses on

stereotype threat mechanisms. Moreover, one might argue that people with higher qualifications on the requested trait might not be equally affected by metastereotypes and effects of wording, threat and challenge (Newman & Lyon, 2009). Therefore, as a robustness check (see Appendix), additional analyses showed that findings hold for older/younger participants who were highly qualified for the requested trait (i.e., who scored higher than the population mean score for their educational level as reported by de Vries et al., 2009). Future research might additionally check how older job seekers react to negative metastereotypes for younger job seekers, and vice versa. Further, since stereotypical ideas do not only exist about older/younger people but also about jobs and organizations (Truxillo et al., 2012), we controlled for job/organizational characteristics in order not to confound study results (Bhargava & Theunissen, 2019). Interactive effects of personality requirements with job/organizational characteristics could be considered in future research, as well as how job ad information other than the person profile relates to perceived threat and/or challenge. Another interesting research direction that can add to the generalizability of our findings, is evaluating findings among older/younger samples with different ethnicities. In terms of gender, additional analyses showed that participants' gender did not significantly moderate findings between men and women for both the older and younger sample. Further, although participants were actual job seekers, research could further investigate whether our results hold/amplify in field settings with real job ads and jobs at stake. Finally, while challenge was indeed a mediator between the wording of a negative metastereotype and job attraction for younger job seekers, nor threat or challenge mechanisms were mediators for older job seekers. Therefore, future research could investigate alternative, potential mediating mechanisms, such as one's perceived person-job fit. This fit represents a link between how the negative metastereotypes relate to one's own needs and skills and how this affects one's attraction to the job (Kristof-Brown et al., 2005). Another potential mediator might be the general employability beliefs that might be lowered because of negative

metastereotypes and might affect job attraction (Owuamalam & Zagefka, 2014). This mechanism might be particularly interesting to investigate among older workers, since older worker's employability beliefs tend to be lower because of their age. Finally, it might be interesting to investigate whether job seekers' perceived age discrimination might also be a mediator between the wording of negative metastereotypes and job attraction mechanism (Snape & Redman, 2003).

Practical Implications

Strategic diversity recruitment is crucial to mitigate bias. Job advertisements are frequently used recruitment sources that organizations seldom/never evaluate on the disparate impact they may have on demographic subgroups. Research on this topic recently initiated in the area of gender and ethnicity: just a few words can increase female and ethnic minority job applicants by more than 20% (Andrews, 2017; Hamidi et al., 2018). Yet, as shown in this study, job ads may also send subtle age cues to older/younger job seekers based on deep-level characteristics (like negatively metastereotyped personality requirements) that can attract or dissuade them from applying. First, although individual variability should be acknowledged, the present study's insights provide practitioners with initial guidance on the *type of personality traits* that older/younger job seekers have *negative metastereotypes* about. Second, findings suggest that practitioners might reach older/younger job seekers more effectively by communicating those traits in job ads in a behavioral way (how one can *behave*) instead of a dispositional way (how one *is*). This adaptation offers recruiters a relatively simple and cost-effective strategy to improve recruitment procedures' outcomes. Third, and especially for younger job seekers, it might be useful to not only focus on how organizations can decrease perceptions of threat through cues (e.g., creating identity safety; Davies et al., 2005), but also on how certain cues can increase perceptions of challenge (e.g., signaling available resources; Blascovich & Tomaka, 1996) to become the employer of choice. While these key findings

indicate that recruiters could benefit from decision-making aids that guide toward creating bias-free and challenging job ads, job seekers might also benefit from learning how to interpret requirements in job ads (Deros & Ryan, 2019) and how to focus on challenges instead of threats. Finally, like automatic gender recognitions (AGR, like <https://textio.com/>) watch the gender tone in job descriptions/ads, specific age recognition programs could be developed to evaluate/design bias-free ads as related to age. As such, not only more diverse applicants can be attracted toward applying, but job vacancies might also be filled faster (Halloran, 2017). In sum, our study findings plead for strategic diversity recruitment initiatives that also consider age-related cues and may inspire practitioners to efficiently draft job ads in a more considerate way. With such micro-level perspective organizations can optimize targeted recruitment initiatives and prevent older/younger job seekers from self-selecting out even before the actual selection phase is initiated.

Conclusion

The present study uncovered how older/younger job seekers perceive age-based metastereotyped personality requirements in job advertisements. Findings can inspire practitioners to communicate in a more sensitive and behavior-like way, given that a behavioral wording of personality requirements in job advertisements results in higher job attraction than a dispositional wording among older and younger job seekers. Perceived challenge might explain these effects among younger job seekers. Study insights extend the limited understanding of older/younger job seekers' recruitment experiences and provide organizations with clear and effective suggestions for successful age-diverse recruitment.

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Appendix

The Appendix presents additional information about the development of study materials⁸, results of two additional samples that were collected (using traits that older/younger job seekers have no negatively metastereotypes about) and finally, results of additional analyses where we accounted for job seekers' qualifications as robustness checks.

Additional Information on the Development of Study Materials

In order to check how the expressions (with verbs) and adjectives that we developed as study materials of Study 1 and Study 2 were perceived, Subject Matter Experts ($N = 9$; $M_{\text{age}} = 33.56$ years, $SD_{\text{age}} = 15.57$ years; all Industrial and Organizational Psychologists) evaluated these materials on content (do they represent the correct traits?), wording (do they represent a behavioral or dispositional wording of the trait?) and realism (is it realistic that such expressions/adjectives would occur in a job ad?). First, whereas the goal was to qualitatively discuss materials, the SME's first independently rated these three aspects of the expressions/adjectives on 5-point Likert-type scales (1 = *strongly disagree* to 5 = *strongly agree*) to facilitate reflection and discussion. The aspect 'content' was measured with the items "This requirement reflects the trait *Agreeableness*" and "This requirement reflects the trait *Conscientiousness*", the aspect 'wording' was measured with the items "This requirement reflects *how one can behave*" and "This requirement reflects *how one's nature is*". Finally, the aspect of 'realism' was measured with the item: "This requirement is *realistic*, i.e., it could be found in real job ads". Next, the SMEs further discussed the materials through focus groups. The focus group discussions (as well as mean ratings) revealed that Agreeableness was perceived as intended when worded in a behavioral way ($M = 4.27$, $SD = 0.24$) as well as in a dispositional way ($M = 4.90$, $SD = 0.14$). Requirements that we developed for

⁸ Note that the original study materials were in Dutch and were chosen based on the adjectives reported in de Vries et al. (2009). In the current paper, we translated the Dutch adjectives into English with respect to the true Dutch meaning of the word. Yet, we acknowledge that the translation process might therefore include a certain loss of nuance/meaning.

Conscientiousness were also perceived as such when worded in a behavioral ($M = 4.60$, $SD = 0.53$) and dispositional ($M = 4.85$, $SD = 0.07$) way. Further, not only the content, but also the way in which requirements were worded was perceived as intended. That is, results showed that when a behavioral wording was used, requirements were perceived as more behavioral ($M = 4.02$, $SD = 0.44$) than dispositional in nature ($M = 3.28$, $SD = 0.46$) and when a dispositional wording was used, requirements were seen as more dispositional ($M = 3.58$, $SD = 0.18$) than behavioral in nature ($M = 2.83$, $SD = 0.24$). Finally, both the behavioral requirements ($M = 4.20$, $SD = 0.14$) and the dispositional requirements ($M = 4.20$, $SD = 0.07$) were perceived as realistic. In sum, SME's perceived the content, wording and realism of our study materials as intended.

Robustness Checks

Absence of Negatively Metastereotyped Traits

The studies' aim was to investigate job seekers' reactions towards job ads that included negatively metastereotyped personality requirements. In the absence of such requirements, perceptions of threat and challenge are not expected to mediate the relationship between wording and job attraction. Results of two other, additionally collected samples, in which this was tested as robustness checks, supported this assumption. First, we investigated older job seekers' ($n = 125$) appraisal of job ads without negatively metastereotyped person requirements (i.e., Conscientiousness, perceived as not negatively metastereotyped when pilot studied and successfully manipulated). As expected, no parallel mediation effects were found when participants held no negative metastereotype about the person requirements, $b = .06$, bootstrapped $SE = .05$, bootstrapped 95% $CI = [-0.03, 0.17]$). Secondly, we also investigated younger job seekers' ($n = 157$) appraisal of job ads without negatively metastereotyped person requirements (i.e., Openness to Experience, perceived as a not negatively metastereotyped trait requirement when pilot studied and successfully manipulated). As expected, no mediation

effects were found for threat, $b = .06$, bootstrapped $SE = .03$, bootstrapped 95% CI = [-0.004, 0.12], as the trait did not elicit any threat. For challenge, we found partial mediation of wording on job attraction (indirect effect of challenge: $b = .19$, bootstrapped $SE = .05$, bootstrapped 95% CI = [0.10, 0.30]).

Job Seekers' Qualifications

Finally, it could be argued that people with higher qualifications on the requested trait (i.e., who scored higher than the population mean score for their educational level as reported by de Vries et al., 2009) might not be equally affected by metastereotypes and effects of wording, threat and challenge (Newman & Lyon, 2009). Therefore, as a robustness check, we conducted additional analyses. For older participants who scored high on the trait Agreeableness ($n = 61$), no mediation was found for threat, $b = -0.06$, bootstrapped $SE = .08$, bootstrapped 95% CI = [-0.28, 0.02] and challenge, $b = -0.04$, bootstrapped $SE = .10$, bootstrapped 95% CI = [-0.25, 0.19]. Among younger people that scored high on the metastereotyped trait Conscientiousness ($n = 57$), we found that, again, threat was not a mediator, $b = 0.03$, bootstrapped $SE = .07$, bootstrapped 95% CI = [-0.12, 0.15], but challenge was a mediator in the relationship between wording and job attraction, $b = .43$, bootstrapped $SE = .10$, bootstrapped 95% CI = [0.24, 0.64]. These additional findings show that results still hold, even if older/younger job seekers are more qualified on the requested trait.

CHAPTER 3

WHAT (NOT) TO ADD IN YOUR AD: WHEN JOB ADS DISCOURAGE OLDER OR YOUNGER JOB SEEKERS TO APPLY^{9,10}.

Both older and younger job seekers face difficulties when entering the workforce. Qualification-based targeted recruitment (QBTR) might be used to attract older/younger job seekers, yet how this strategy is perceived by older/younger job seekers has not been considered before. The present study fills this gap and investigated effects of negatively metastereotyped information in job ads (i.e. personality requirements or traits) on application intention and self-efficacy of both older and younger job seekers. An experimental study ($N_{total} = 556$; 44.6% aged 50 or older, 55.4% aged 30 or younger) showed that negatively metastereotyped traits in job ads (e.g., “flexible”) lowered older job seekers’ application intention and that this effect was mediated by older job seekers’ self-efficacy regarding that trait. No such effects were found among younger job seekers. Results showed that organizations can fail to attract older candidates because of the traits mentioned in job ads, which is particularly alarming when aiming to target age-diverse applicants. Suggestions for practitioners and future research are formulated.

⁹ This chapter is an exact copy of: Koçak, A., Deros, E., Born, M. P., & Duyck, W. (2022). What (not) to add in your ad: When job ads discourage older or younger job seekers to apply. *International Journal of Selection and Assessment*, 1–13. <https://doi.org/10.1111/ijsa.12385>

¹⁰ A previous version of this paper was presented in: Koçak, A., Deros, E., & Born, M. Ph. (2021, April 14). *Too old or too young? When job ads discourage job seekers to apply* [Poster presentation]. The 36th Annual Conference of the Society of Industrial and Organizational Psychology (SIOP), New Orleans, LA, United States (Virtually attended); and Koçak, A., Deros, E., & Born, M. Ph. (2021, August 31 – September 2). *When job ads turn older and younger candidates down: Evidence from two experimental studies*. [Paper presentation]. The 6th biennial European Network of Selection Research (ENESER)/European Association of Work and Organizational Psychology (EAWOP) Small Group Meeting, Zurich, Switzerland (Virtually Attended).

Organizations may use a wide variety of channels in their hunt for talented workers. These channels or recruitment sources can be directed to either internal or external job seekers and they can range from informal to more formal ways of recruitment (Griffeth et al., 2014). Among the most common sources are job advertisements, a formal and frequently used recruitment source with information about organizational and job characteristics, as well as the necessary personality requirements for that job (Walker & Hinojosa, 2013). The information in job ads is limited, yet crucial for job seekers to build an image about the organization, to consider whether they fit the job requirements, and to decide whether to apply for this position or not. Job ad information, like personality requirements, signals to job seekers whether the job is consistent with their social identity and affects application intentions (Highhouse et al., 2007). Typically, people who believe that they possess the personality requirements mentioned in a job ad are more inclined to apply for that job (Carless, 2005). However, what if these requirements signal an incongruity with job seekers' social identity?

When older job seekers read requirements like “you are *flexible*”, they might anticipate that recruiters will hold the age-stereotype that “older people are less flexible”, and hence become reluctant to apply. Similarly, younger job seekers can read the requirement “you are *hard-working*” and might expect that recruiters could hold the age-stereotype that “younger people are less hard-working”. In other words, job seekers might be vigilant about how recruiters will perceive them. These so-called *metastereotypes* (Vorauer et al., 1998) might trigger older/younger job seekers' intention to apply or not, as well as how older/younger job seekers perceive themselves. Hence, older or younger job seekers may self-select out early in recruitment procedures because of unwanted stereotyped information in job ads. This not only harms the age-diversity of the applicant pool, but it can also undermine recruitment strategies specifically aimed to create a more age-diverse and qualified applicant pool. One such recruitment strategy, for instance, is qualification-based targeted recruitment, which is typically

used by organizations to target job seekers from certain (underrepresented) demographic groups with certain qualifications (Newman et al., 2013). Yet, research in this area mostly focused on ethnic minority or female job seekers (Casper et al., 2013; Wille & Derous, 2017, 2018), while age is often overlooked as a demographic diversity variable. The present study fills this gap by focusing on job seekers from two specific age groups with lower job chances, i.e., older (50y or more; McCarthy et al., 2014) and younger (30y or less; Arnett, 2011) job seekers. Older and younger job seekers experience difficulties in entering the workforce compared to prime-aged job seekers (OECD, 2020, 2021).

Previous research has already explored age-related differences in human capital factors as well as hiring discrimination against older and younger candidates (e.g., Farber et al., 2019; Zaniboni et al., 2019). Yet, though such clear problems are being tackled by targeted measures and legislation that are relatively easy to apply and monitor, diversity might also be threatened by more subtle, unwanted mechanisms. More specifically, scholars called for more research on how job seekers perceive personality requirements in job ads and how they might self-select out (Bhargava & Theunissen, 2019; Wille & Derous, 2017). Thus, the first aim of this study is to investigate whether negatively metastereotyped personality requirements (i.e., traits) in job ads affect older/younger job seekers' application intentions (i.e., whether job seekers have the intention to apply or not). Second, whereas studies have already investigated recruitment outcomes for ads with negative metastereotypes (Wille & Derous, 2017, 2018), the effect of negative metastereotypes on job seekers' self-beliefs and how these beliefs relate to recruitment outcomes has, to the best of our knowledge, not been explored within the context of recruitment. However, scholars did find that negative metastereotypes can lower the extent to which people belief in themselves (i.e., self-efficacy beliefs; Gordijn, 2010; Owuamalam & Zagefka, 2014). Addressing this gap in recruitment, the present study investigates whether negatively metastereotyped personality requirements in job ads decrease older/younger job seekers' self-

beliefs regarding these specific requirements. These beliefs about whether or not one possesses certain traits (i.e., trait-specific self-efficacy) can in turn affect one's application intention. Consequently, a third aim of this study is to test whether trait-specific self-efficacy mediates the relationship between negatively metastereotyped personality requirements in job ads and application intentions of older/younger job seekers. Below, we first discuss relevant theoretical frameworks before moving on to the hypotheses.

Job Ads and Metastereotypes

Job advertisements are a widely used recruitment technique that can represent a crucial first step in the contact between organizations and job seekers (Walker & Hinojosa, 2013). Remarkably, organizations hardly ever evaluate how information in these job ads is perceived by different job seekers. For instance, do members of different demographical groups (e.g., older versus younger people) perceive all information in job ads in the same way? While all organizations can benefit from knowing how their job ads are perceived by different job seekers, this information is particularly useful for organizations that use qualification-based targeted recruitment (QBTR; Newman et al., 2013; Newman & Lyon, 2009). That is, when targeting specific groups of job seekers through QBTR, it is crucial to know which qualifications *attract* certain groups of job seekers and which qualifications might also *discourage* certain groups of job seekers, for instance, because of existing stereotypes about those group members.

Stereotypes exist about members of different socio-demographic groups (e.g., based on one of the Big Three demographics: age, ethnicity and gender). For example, older people are stereotypically viewed as unadaptable, inflexible and stubborn, whereas younger aged people are stereotypically perceived as inexperienced, irresponsible and lazy (Finkelstein et al., 2013; Kleissner & Jahn, 2020; Posthuma & Campion, 2009). Interestingly, group members may also contemplate which stereotypes others hold about them. This is referred to as *metastereotypes*

or “beliefs regarding the stereotype that out-group members hold about his or her own group” (Vorauer et al., 1998, p. 917). Whereas related constructs such as stereotype threat focus on the implications of such beliefs for performance outcomes (such as avoidance behavior and decremental performance; Voyles et al., 2014), metastereotypes represent cognitions on how one group thinks it is viewed by others. One’s belief that some colleagues think that one is not very committed because of one’s age is an example of an age-related negative metastereotype (Voyles et al., 2014). Research has shown that older and younger people indeed think this way about their own age group (Finkelstein et al., 2013; Fowler & Gasiorek, 2020). For instance, Finkelstein et al. (2013) showed that in the workplace, older workers (older than 50) and younger workers (younger than 30) reported specific stereotypes that they believed the other age group holds about them, such as being set in ways/stubborn for older workers and being lazy/irresponsible for younger workers (Finkelstein et al., 2013). In job ads, the required qualifications or traits might activate these negative age-related metastereotypes in older or younger job seekers and in turn affect their intention to apply. That is, traits in job ads represent signals that inform job seekers about the organization. When interpreting these signals (i.e., making symbolic inferences), job seekers may consider whether the job and company fit their social identity and whether they want to be affiliated with that organization or not (Highhouse et al., 2007). Thus, through certain cognitive/emotional processes (Steele et al., 2002), negative metastereotypes in job ads might affect whether older/younger job seekers apply or not. Typically, when negative metastereotypes are activated, individuals do not only feel negative emotion toward intergroup interaction (Vorauer et al., 1998), they also tend to avoid interactions with the out-group (Goff et al., 2008; Shelton & Richeson, 2005). For instance, experimental studies have established that stereotypical cues can restrain women academically and professionally (Davies et al., 2002; Schuster & Martiny, 2017). Moreover, Wille and Deros (2017, 2018) found that female job seekers and ethnic minority job seekers applied significantly

less often for a job ad with a negatively metastereotyped trait than male job seekers and ethnic majority job seekers, respectively. We thus expected:

Hypothesis 1a. Older job seekers' intention to apply will be lower for job ads with traits that older job seekers hold negative metastereotypes about than for job ads with traits they hold no negative metastereotypes about (H1a).

Hypothesis 1b. Younger job seekers' intention to apply will be lower for job ads with traits that younger job seekers hold negative metastereotypes about than for job ads with traits they hold no negative metastereotypes about (H1b).

Meta-stereotypes, Self-efficacy and Application Intention

While previous studies have established that negative metastereotypes in job ads negatively affect female/ethnic minority job seekers' application intention, they did not consider why that is. The present study adds to the recruitment literature by investigating a possible explanation of this effect in older and younger job seekers, namely decreased self-efficacy. Indeed, studies on metastereotypes and their potential consequences established that negative metastereotypes can lower self-beliefs (Gordijn, 2010; Owuamalam & Zagefka, 2014; Vorauer et al., 1998). For instance, Vorauer et al. (1998) found that activation of a negative metastereotype lowered individuals' self-esteem and self-concept clarity (i.e., whether one has a clear and concise idea about who one is). Later, Gordijn (2010) found similar results and showed that women activated negative weight-related metastereotypes when they anticipated to be judged on their appearance, and those negative metastereotypes were in turn negatively related to their self-evaluation. Finally, in a work-related context, Owuamalam and Zagefka (2014) found that activation of negative metastereotypes decreased self-esteem in stigmatized female and ethnic minority individuals, which in turn, lowered employability beliefs. Similarly, work-related personality requirements (like traits) in job ads that one holds negative metastereotypes about make one's social category (e.g., age group) more salient such that an

individual becomes more aware of the social group one belongs to (e.g., older job seekers). As a consequence, individuals may perceive themselves more in terms of that social group and related stereotypes (i.e., social self) instead of their individual and unique capabilities (i.e., personal self). This social categorization process (Turner et al., 1994), where one defines one's personal identity more in terms of one's social category (e.g., older-aged job seeker), can thus affect one's perceived self-efficacy or the extent to which one believes/is confident that they possess the required traits for the advertised job.

We thus expand on existing literature that studied the effect of metastereotyped personality requirements in job ads on recruitment outcomes such as job attraction and application intention (Ashforth & Mael, 1989; Highhouse et al., 2007; Wille & Derous, 2017, 2018) by also considering the effect of personality requirements on job seekers' self-efficacy regarding those traits, i.e., their *trait-specific self-efficacy*. While self-efficacy refers to a general belief in one's capabilities (Bandura, 1997), Bandura (2015) has more recently called for using *specific* forms of self-efficacy rather than a general belief. Addressing this call, we build on previous research and use a more specific form of self-efficacy regarding one particular capability/trait. We thereby extend research on self-efficacy regarding specific capabilities (such as job search self-efficacy; Van Hove et al., 2015) and traits (such as creativity, friendliness, extraversion, etc.; Moon et al., 2020; Tierney & Farmer, 2002) by studying job seekers' perceived self-efficacy or the degree they feel they possess the specific traits as required in the job ads. Hence, we expected:

Hypothesis 2a. Older job seekers' trait-specific self-efficacy will be lower for negatively metastereotyped traits in job ads, compared to not negatively metastereotyped traits (H2a).

Hypothesis 2b. Younger job seekers' trait-specific self-efficacy will be lower for negatively metastereotyped traits in job ads, compared to not negatively metastereotyped traits (H2b).

A person's belief in oneself (like self-efficacy about personality requirements) shapes one's behavior (Bandura, 1997). Related to job search, research has found that job seekers' self-beliefs predicted their job pursuit intentions (Arnold et al., 2006) and application behavior (Jaidi et al., 2011). Moreover, job seekers' belief that one's abilities/values match those required for the job (i.e., P-J fit Kristof-Brown et al., 2005) was related to their job acceptance intentions (Carless, 2005). In the present study, we incorporate this estimation of one's abilities in light of the personality requirements portrayed in job ads. We specifically test how older/younger job seekers see themselves in terms of the required traits in job ads, i.e. their *trait-specific self-efficacy* and how this relates to their application intentions:

Hypothesis 3a. Older job seekers' trait-specific self-efficacy will be positively related to their intention to apply (H3a).

Hypothesis 3b. Younger job seekers' trait-specific self-efficacy will be positively related to their intention to apply (H3b).

Taken together, given that personality requirements that older/younger job seekers have negative metastereotypes about might lower their trait-specific self-efficacy (Bandura, 1997; Turner et al., 1994), which in turn might affect their intention to apply for the job (Arnold et al., 2006; Carless, 2005; Jaidi et al., 2011), we expected that:

Hypothesis 4a. Older job seekers' trait-specific self-efficacy will mediate the relationship between negative metastereotypes in job ads and their intention to apply, such that negative metastereotypes will decrease older/younger job seekers' trait-specific self-efficacy, which will in turn lower their intention to apply (H4a).

Hypothesis 4b. Younger job seekers' trait-specific self-efficacy will mediate the relationship between negative metastereotypes in job ads and their intention to apply, such that negative metastereotypes will decrease older/younger job seekers' trait-specific self-efficacy, which will in turn lower their intention to apply (H4b).

Method

Sample

We recruited job seekers aged 50 and older and aged 30 and younger. In total, 556 job seekers were recruited through HR professionals who contacted participants through their professional network, so that we would be able to obtain more participants with labor market experience. All participants were informed that they were recruited based on their age. Of those 556 job seekers, 44.6% ($M_{\text{age}} = 55.35$ years, $SD_{\text{age}} = 4.59$; 52.8% women; 99.6% Caucasian/White) were “older job seekers” which we defined as people older than 50 years, since a study by McCarthy et al. (2014), showed that organizational decision-makers consider someone an ‘older’ worker from 50 years old. Moreover, employees from 50 years or more may experience more discrimination (Fasbender & Gerpott, 2020) and encounter specific (meta)stereotypes (Finkelstein et al., 2013). The remaining 55.4% of participants were “younger job seekers” ($M_{\text{age}} = 23.25$ y, $SD_{\text{age}} = 2.28$; 76.6% women; 99.4% Caucasian/White ethnic background). We recruited job seekers aged 30 or younger as Arnett (2011) describes that the age of 30 encompasses a new life stage (i.e., young adulthood), and people younger than 30 hold specific and different age-related metastereotypes compared to their older counterparts (e.g., Finkelstein et al., 2013). Participants were recruited in Belgium, 8.5% of the older job sample was unemployed, and 97.2% of the younger sample was unemployed. All older participants had prior labor market experience: 77.0% was an active (i.e., actively searching for a job) or a passive (i.e., in need of a job, without actively searching at the moment) job seeker at the moment of the study, and 23.0% had recent job seeking experience. 97.7% of

the younger job seekers was an active or a passive job seeker at the moment of the study and 2.3% of the younger job seekers had recent job seeking experience (e.g., for student side jobs or internships).

Design and Procedure

The study featured a two-condition between-participant design in which personality requirements in job ads (trait: negatively metastereotyped vs. not negatively metastereotyped) were manipulated (between-subjects), trait-specific self-efficacy was the potential mediator variable, and application intention (i.e., intention to apply) was the outcome variable. Specifically, in an online experiment, participants had to indicate whether they would apply for job ads based on personality requirements that did or did not include negative age-metastereotypes. Participants gave their informed consent and were randomly assigned to the condition with or without negative metastereotypes. They were instructed to imagine that they were actively applying for a job and that they had to evaluate a profile from a selected job ad. Participants also had to imagine that the parts of the job ads that were not displayed would suit their interest. Measures on trait-specific self-efficacy and intention to apply were completed. Finally, participants' negative metastereotypes and their qualification on the required personality trait were measured (as control variables), which was followed by the manipulation checks and demographics.

Study Materials

Study materials were "person profile" segments of job ads with traits that older/younger job seekers held (no) negative metastereotypes about. The profiles were developed and pilot tested for older and younger job seekers separately in a previous study of this research project. First, a literature review (Finkelstein et al., 2013; Harwood et al., 2013; Peters et al., 2019; Weiss & Perry, 2020) was conducted to search for older and younger-aged negative metastereotypes regarding traits. Next, results were validated through an empirical pilot study.

We presented older and younger participants negative adjectives from the HEXACO Personality Inventory Revised (Ashton & Lee, 2009; de Vries et al., 2009), the validated Big Six personality model that contains the following six traits: Extraversion, Agreeableness, Emotionality, Conscientiousness, Openness to Experience, and Integrity. Older participants ($N = 80$; $M_{age} = 53.91$, $SD_{age} = 3.25$, 100% 50y and older; 55% women; 98.8% Caucasian/White; different from the main study) indicated for each of these items whether they believed that *younger* (<50y) workers think that *older* ($\geq 50y$) workers were e.g., inflexible, using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Traits that receive a higher score were thus perceived as a more negative metastereotype. Younger participants ($N_{young} = 28$; 100% 30y or younger; 53.7% women; 96.4% Caucasian/White; different from the main study) indicated whether they believed that *older* (>30y) workers think that *younger* ($\leq 30y$) workers were e.g., unpunctual, using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Higher scores indicated more negative metastereotypes for a trait. Results showed that older workers held the most negative metastereotype about the trait Agreeableness ($M = 2.90$, $SD = 0.57$), compared to the other HEXACO-traits ($M = 2.60$, $SD = 0.46$), $t(42) = 3.42$, $p = .001$ and the least negative metastereotype about the trait Conscientiousness ($M = 2.13$, $SD = 0.49$), compared to the other HEXACO-traits ($M = 2.79$, $SD = 0.51$), $t(59) = -10.74$, $p < .001$. For younger workers, we found that the most negative metastereotype was the trait Conscientiousness ($M = 3.36$, $SD = 0.64$) as compared to the other HEXACO-traits ($M = 2.90$, $SD = 0.33$), $t(27) = 3.79$, $p = .001$. Younger-aged job seekers held no negative metastereotypes about Openness to Experience ($M = 2.56$, $SD = 0.45$) compared to the other traits ($M = 3.06$, $SD = 0.37$), $t(27) = -5.89$, $p < .001$.

Subsequently, as in Wille and Derous (2018), we selected those adjectives that were perceived as the most negatively metastereotyped for the condition with negative metastereotype and the least negatively metastereotyped for the condition without negative

metastereotype. We carefully constructed profiles using the back translation method and building on dictionary entries for synonyms and antonyms. Expressions were adapted to fit the positive and work-related context typical for job advertisements (e.g., using positive antonyms and adding “workers”/“at work”). For older workers, the adjectives “obedient”, “flexible” and “friendly” were selected for the condition with negative metastereotype (Agreeableness) and “punctual”, “perfectionistic” and “orderly” for the condition without negative metastereotype (Conscientiousness). For younger workers, we chose the adjectives “punctual”, “disciplined” and “deliberative” for the condition with negative metastereotype (Conscientiousness) and “inventive”, “sharp-witted” and “critical” for the condition without negative metastereotype (Openness to Experience). Additionally, the adjectives were presented to nine independent raters who evaluated their content (i.e., whether the adjectives accurately represented the trait in question) and their realism (i.e., to what degree would the adjectives/expressions fit in real job ads?). Results showed that materials were perceived as we intended. Metastereotyped personality requirements were then placed in the job ads and were labeled as the “person profile” (i.e., that part that includes traits that are required for that job). The negatively metastereotyped trait was supplemented with other person requirements that were held constant across job ads (i.e., required language proficiency and relevant educational degree for the advertised job). Apart from the person profile, no specific information about other job characteristics, like working conditions or organization type, was mentioned (“*Organization X is looking for Job Y...*”) as those characteristics might differentially attract older job seekers (Truxillo et al., 2012).

Measures

Trait-specific Self-efficacy

Bandura (1997) describes self-efficacy as a judgement of one’s own personal capability to perform a specific action or produce a certain effect. Following Bandura (2015)’s call to use

more specific forms of self-efficacy, one item was adapted from Bandura (1997) and previous measures on specific self-efficacy (Moon et al., 2020; Tierney & Farmer, 2002; Van Hoye et al., 2015) for each of the investigated HEXACO-traits (Ashton & Lee, 2009): Agreeableness, Conscientiousness and Openness to Experience (see Study Materials). The items were measured on a 5-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*). An example item for the trait Conscientiousness is “I feel confident that I can act in a conscientious way (i.e., punctual, disciplined and deliberative)”.

Application Intention

Participants’ application intention was measured with a single item adapted from Roberson and Collins (2005). Specifically, participants answered the item “Would you apply for this job ad?” with either yes or no after they were specifically instructed to imagine that they were actively applying for a job and that the parts of the job ads that were not displayed would suit their interest.

Control Variables and Manipulation Checks

Research on qualification-based targeted recruitment has established that qualified job seekers apply more for job ads that specifically mention the needed traits/qualifications (Casper et al., 2013; Newman et al., 2013). The present study aimed to uncover how older/younger job seekers perceive these qualifications in job ads and how this relates to their trait-specific self-efficacy and application intention. Considering the basic premise of QBTR, we hence controlled for participants’ actual qualifications on the traits in the job ads when doing so. Therefore, older-aged job seekers completed ten items for the trait Agreeableness and ten items for the trait Conscientiousness from the HEXACO Personality Inventory Revised (Ashton & Lee, 2009; de Vries et al., 2009). Similarly, younger-aged job seekers filled-out ten items for the trait Conscientiousness and ten for Openness to Experience from the HEXACO Personality Inventory. We considered whether job seekers reached a cut-off on these scales, in order to be

considered as qualified (following Wille & Derous, 2017). This cut-off was based on HEXACO population mean scores¹¹ that were tailored to participants' education level (de Vries et al., 2009). We further controlled for whether participants held negative metastereotypes (yes – no) about traits that were placed in job ads by asking older participants whether they believe that younger people think they are [obedient], [flexible] and [friendly]. For younger participants, we asked whether they believed that older younger people found them [punctual], [disciplined] and [deliberative]. Finally, as manipulation checks, we evaluated whether the type of traits used in the profiles were perceived as intended, that is, as Agreeable, Conscientiousness and Openness to Experience (e.g., “The person profile shows that they were looking for an agreeable person”, with 1 = *strongly disagree* to 5 = *strongly agree*).

Demographics

Finally, participants reported their age (in years), gender (0 = *man*; 1 = *woman*), ethnicity (0 = *Caucasian/White*; 1 = *Arab*; 2 = *African*; 3 = *Asian*, 4 = *Latin-American*, 5 = *other*) and education level (0 = *no high school degree*; 1 = *high school degree*; 2 = *professional bachelor's degree*; 3 = *academic bachelor's degree*, 4 = *academic master's degree*, 5 = *other*).

Results

Table 1 presents descriptives and correlations among study variables. First, preliminary analyses showed that manipulations of the HEXACO-traits were successful. First, older participants perceived the ads with the requirement “Agreeableness” more as ads requiring an agreeable ($M = 4.00$, $SD = 0.91$) than a conscientious ($M = 2.66$, $SD = 1.09$) person, $F(1,87) = 71.04$, $p < .001$, $\eta_p^2 = .45$, and the ads with the requirement “Conscientiousness” more as ads requiring a conscientious ($M = 4.15$, $SD = 0.72$) than an agreeable ($M = 2.53$, $SD = 1.03$) person, $F(1,88) = 125.78$, $p < .001$, $\eta_p^2 = .59$.

¹¹ For the trait Agreeableness, we used the cut-offs 3.12 for lowest education level, 3.07 for the middle education level and 3.09 for the highest education level. For Conscientiousness, we used 3.43, 3.47 and 3.49, and for Openness to Experience, we used 2.92, 3.16 and 3.40, respectively.

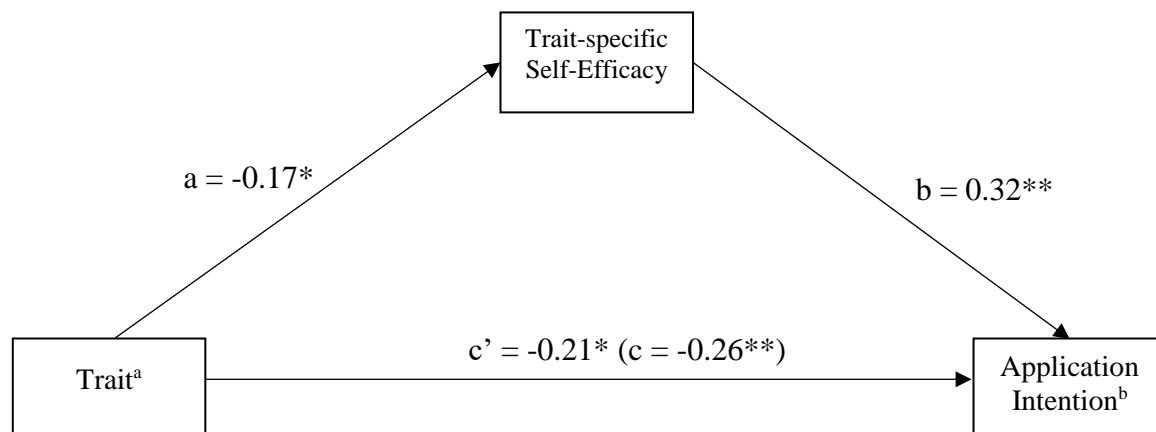
Table 1*Descriptives and Correlations of Study Variables*

	Older		Younger		1	2	3	4	5	6	7	8	9
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>									
1. Trait-specific Self-Efficacy	3.60	0.70	3.77	0.63	(--)	.04	.12	.47**	-.11	.04	.16*	--	.07
2. Application Intention ^{a, b}	.63	0.49	.60	0.49	.37**	(--)	-.06	.13*	-.05	.03	.03	.07	.07
3. Type of Trait ^{a, c}	.50	0.50	.49	0.50	-.21**	-.21	(--)	.29**	.63**	-.06	.06	.00	-.03
4. Qualification ^{a, d}	.73	0.44	.50	0.50	.26**	.18**	.02	(--)	.11	.04	.09	-.08	.04
5. Metastereotype ^{a, e}	.42	0.49	.48	0.50	-.33**	-.15*	.27**	-.11	(--)	-.10	-.02	.00	-.06
6. Gender ^{a, f}	.53	0.50	.77	0.42	-.03	-.08	-.02	.03	.02	(--)	-.04	.05	.04
7. Age ^g	55.35	4.59	23.25	2.28	-.04	-.01	.01	-.07	-.04	-.18**	(--)	.04	.09
8. Ethnicity ^{a, h}	0.00	0.06	.02	0.31	.00	-.08	.06	.03	-.05	.06	-.03	(--)	-.06
9. Education Level ^{a, i}	1.99	1.31	3.80	0.98	-.04	-.08	-.11	.03	.02	-.05	.05	-.08	(--)

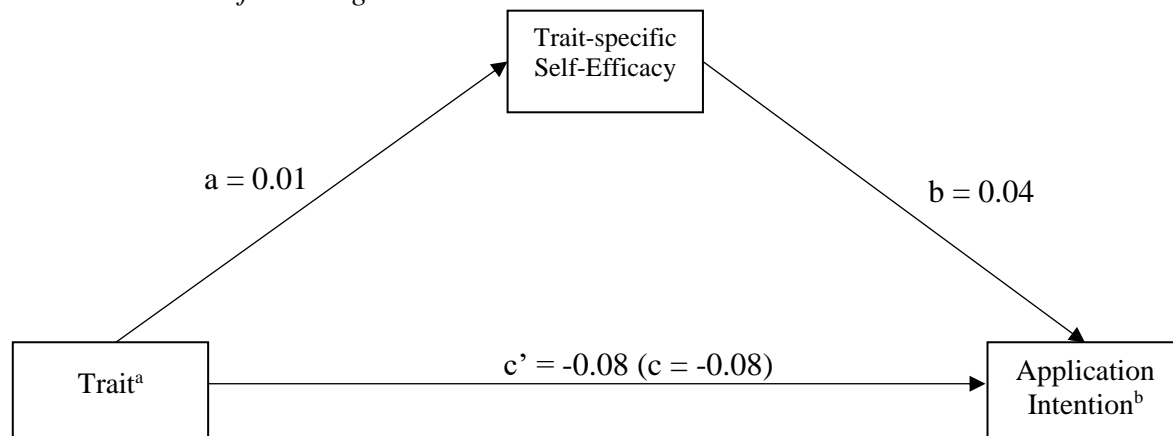
Note. $N_{total} = 556$; $N = 352$ after listwise deletion for missing variables. Correlations are based on the smallest sample size. Results for older job seekers are displayed below the diagonal ($n = 248$); Results for younger job seekers are displayed above the diagonal ($n = 308$). ^aSpearman correlation. ^bApplication Intention: 0 = no; 1 = yes. ^cType of trait: 0 = not negatively metastereotyped (Conscientiousness for older and Openness to Experience for younger sample); 1 = negatively metastereotyped trait (Agreeable for older and Conscientiousness for younger sample). ^dQualification: 0 = not qualified for required trait; 1 = qualified for required trait. ^eMetastereotype: 0 = no negative metastereotype about the trait, 1 = negative metastereotype about the trait. ^fGender: 0 = male; 1 = female. ^gAge: all job seekers were 50 years or older in the older sample and all job seekers were 30 years or younger in the younger sample. ^hEthnicity: 0 = Caucasian/White; 1 = Arab; 2 = African; 3 = Asian, 4 = Latin-American, 5 = other. ⁱEducation Level: 0 = no high school degree; 1 = high school degree; 2 = professional bachelor's degree; 3 = academic bachelor's degree, 4 = academic bachelor. * $p \leq .05$; ** $p \leq .01$.

Similarly, younger participants perceived the ads with the requirement “Conscientiousness” more as ads requiring a conscientious ($M = 4.15$, $SD = 0.72$) person than an open ($M = 2.35$, $SD = 1.02$) person, $F(1,82) = 159.92$, $p < .001$, $\eta_p^2 = .66$, and ads with the requirement “Openness to Experience” more as ads requiring an open ($M = 3.84$, $SD = 1.08$) than a conscientious ($M = 2.96$, $SD = 1.13$) person, $F(1,92) = 25.22$, $p < .001$, $\eta_p^2 = .22$.

We subsequently tested the hypotheses for older (Figure 1; Table 2) and younger (Figure 2; Table 2) job seekers. Path analyses in R (Lavaan-package for SEM, v.0.6-5; Rosseel, 2012) were performed that explored the hypothesized model and controlled for participants’ qualifications on the personality traits and participants’ negative metastereotypes. First, results supported Hypothesis 1a, namely that older people’ application intention was lower for job ads with negatively metastereotyped traits, $\beta = -0.26$, $SE = 0.20$, $p = .005$, but not Hypothesis 1b, $\beta = -0.08$, $SE = 0.25$, $p = .50$. That is, younger job seekers’ application intention was not significantly lower for job ads with negatively metastereotyped traits. Second, Hypothesis 2 investigated whether negatively metastereotyped traits in job ads were negatively related to trait-specific self-efficacy of older (H2a) and younger job (H2b) seekers. For older job seekers, Hypothesis 2a was supported, $\beta = -0.17$, $SE = 0.10$, $p = .016$. For younger job seekers, Hypothesis 2b, was not supported, $\beta = 0.01$, $SE = 0.11$, $p = .885$. Further, support was found for Hypothesis 3a, which stated that higher trait-specific self-efficacy is related to more application intention, for older, $\beta = 0.32$, $SE = 0.13$, $p < .001$ (H3a supported), but not for younger participants, $\beta = 0.04$, $SE = 0.17$, $p = .734$ (H3b unsupported). Finally, Hypothesis 4 expected trait-specific self-efficacy to mediate the negative relation between negatively metastereotyped traits and application intention among older (H4a) and younger (H4b) job seekers.

Figure 1*Mediation Model for Older Job Seekers*

Note. $n_{old} = 248$. Standardized regression coefficients are displayed. We controlled for job seekers' actual qualification on the traits, as well as whether they held a negative metastereotype about the trait or not. Older job seekers' qualifications were significantly related to trait-specific self-efficacy, $\beta = 0.23$, $SE = 0.12$, $p = .001$, and application intention, $\beta = 0.23$, $SE = 0.24$, $p = .01$. Whether they held the negative metastereotype or not was negatively related to trait-specific self-efficacy, $\beta = -0.27$, $SE = 0.10$, $p < .001$, but not to application intention, $\beta = -0.01$, $SE = 0.20$, $p = .959$. The standardized coefficient in parentheses represent the effect of trait on application intention (controlled for participants' qualifications and metastereotypes) prior to the inclusion of trait-specific self-efficacy in the analysis. ^aTrait: 0 = Conscientiousness (no negative metastereotype), 1 = Agreeableness (negative metastereotype). ^bApplication Intention: 0 = no; 1 = yes. * $p \leq .05$. ** $p \leq .01$.

Figure 2*Mediation Model for Younger Job Seekers*

Note. $n_{young} = 308$. Standardized regression coefficients are displayed. We controlled for job seekers' actual qualification on the traits, as well as whether they held a negative metastereotype about the trait or not. Younger job seekers' qualifications were positively related to trait-specific self-efficacy, $\beta = 0.49$, $SE = 0.09$, $p < .001$, but not to application intention, $\beta = 0.12$, $SE = 0.24$, $p = .334$. Whether they held the negative metastereotype or not was negatively related to trait-specific self-efficacy, $\beta = -0.18$, $SE = 0.10$, $p = .02$, but not to application intention, $\beta = 0.02$, $SE = 0.23$, $p = .868$. The standardized coefficient in parentheses represent the effect of trait on application intention (controlled for participants' qualifications and metastereotypes) prior to the inclusion of trait-specific self-efficacy in the analysis. ^aTrait: 0 = Openness to Experience (no negative metastereotype), 1 = Conscientiousness (negative metastereotype). ^bApplication Intention: 0 = no; 1 = yes. * $p \leq .05$. ** $p \leq .01$.

Table 2

Standardized Estimates and Wald Tests for Estimated Coefficients for Older and Younger Sample

Mediation	Older Job seekers (N = 248)			Younger Job Seekers (N = 308)		
	<i>Standardized Estimate</i>	<i>z-value</i>	<i>p</i>	<i>Standardized Estimate</i>	<i>z-value</i>	<i>p</i>
a-path (Trait -> Trait-Specific SE ^a)	-.17	-2.40	.02*	.01	0.15	.89
b-path (Trait-Specific SE ^a -> AI ^b)	.32	3.99	.001**	.04	0.34	.73
ab-path (indirect effect Trait -> AI ^b)	-.05	-2.03	.04*	.00	0.13	.90
c'-path (direct effect Trait -> AI ^b)	-.21	-2.21	.03*	-.08	-0.68	.50
c-path (total effect Trait -> AI ^b)	-.26	-2.82	.005**	-.08	-0.68	.50
	Older Job seekers (N = 248)			Younger Job Seekers (N = 308)		
R^2 Trait-Specific SE ^a	0.184			0.251		
R^2 AI ^b	0.263			0.017		

Note. McFadden's R^2 is reported for the dichotomous outcome Application Intention. ^aSE = Self-efficacy. ^b AI= Application Intention.

* $p \leq .05$. ** $p \leq .01$.

This hypothesis was supported for older participants, $\beta = -0.05$, $SE = 0.06$, $p = .042$ (H4a supported) but not for younger participants, $\beta = 0.00$, $SE = 0.01$, $p = .894$ (H4b unsupported). In the above-mentioned path analyses, we controlled for older/younger job seekers' actual qualification on the traits, as well as whether they held a negative metastereotype about the trait or not. Older job seekers' qualifications were significantly related to trait-specific self-efficacy, $\beta = 0.23$, $SE = 0.12$, $p = .001$, and application intention, $\beta = 0.23$, $SE = 0.24$, $p = .01$. Whether they held the negative metastereotype or not was negatively related to trait-specific self-efficacy, $\beta = -0.27$, $SE = 0.10$, $p < .001$, but not to application intention, $\beta = -0.01$, $SE = 0.20$, $p = .959$. Younger job seekers' qualifications were positively related to trait-specific self-efficacy, $\beta = 0.49$, $SE = 0.09$, $p < .001$, but not to application intention, $\beta = 0.12$, $SE = 0.24$, $p = .334$. Whether they held the negative metastereotype or not was negatively related to trait-specific self-efficacy, $\beta = -0.18$, $SE = 0.10$, $p = .02$, but not to application intention, $\beta = 0.02$, $SE = 0.23$, $p = .868$.

Discussion

Compared to prime-aged job seekers, older and younger job seekers experience obstacles when trying to enter the workforce (OECD, 2020, 2021). According to qualification-based targeted recruitment, organizations can overcome these obstacles and target more diverse applicants with certain qualifications in job ads (Newman & Lyon, 2009). However, how job seekers from specific age groups perceive qualifications in job ads and their possible stereotypical connotation has been largely overlooked and was therefore studied here. Results of the present experimental study showed that job ads displaying negatively metastereotyped traits discouraged older, but not younger job seekers to apply. For older job seekers, these results are in line with previous findings

among female job seekers (Wille & Derous, 2018) and ethnic minority job seekers (Wille & Derous, 2017) and indicate that organizations can fail to attract age-diverse candidates because of the qualifications mentioned in job ads. This can be particularly problematic when the organization aims to target older job seekers as a recruitment strategy, e.g., in qualification-based targeted recruitment. In that sense, our findings indicate that the success of these initiatives might depend on the type of requested traits and the age group that organizations wish to target. Job ads that mention personality requirements that older job seekers hold negative meta-stereotypes about, might at the same time make them reluctant to apply because of decreased trait-specific self-efficacy and may thus limit the effectiveness of QBTR-strategies. These findings thus add to the recruitment literature by disclosing how job advertisements are perceived by certain job seekers and showed that even those groups that the organization initially wanted to target, can be discouraged by certain cues during recruitment.

In line with self-efficacy (Bandura, 1997) and self-categorization theory (Turner et al., 1994), the self-efficacy that older-aged job seekers had about personality requirements mediated the type of trait in job ads (negatively metastereotyped or not) and their application intention, even when controlled for their *actual* qualifications and whether they held the negative metastereotype or not. These findings provide more evidence in line with earlier findings on how negative metastereotypes can negatively affects one's self-beliefs (Gordijn, 2010; Owuamalam & Zagefka, 2014; Vorauer et al., 1998). It also supports Bandura (1997)'s notion of self-efficacy as a driver of behavior and more specifically, the importance of self-efficacy during the application process (Arnold et al., 2006; Carless, 2005; Jaidi et al., 2011). Moreover, our findings support assumptions from the self-categorization theory (Turner et al., 1994) and demonstrate how certain information in job advertisements can stress job seekers' social age identity. In line with Ashforth and Mael (1989), our results suggest that one's social (age) identity can be activated even without an *actual*

physical interaction between (age) groups. Research has indeed established that activation of negative metastereotypes can cause intergroup anxiety among older job seekers when *anticipating* an interaction with other age-groups (Fowler & Gasiorek, 2020). Our results also showed that negative metastereotype activation led to lower application intention, which supports previous findings on the link between the activation of negative stereotypes and out-group avoidance intentions and behavior (Goff et al., 2008; Shelton & Richeson, 2005). Further, the current findings provide more insight into the specific nature of cues related to one's social age identity (i.e., negatively metastereotyped traits in job ads) and support earlier studies on stereotypes as triggers of one's social identity (Purdie-Vaughns et al., 2008; Steele et al., 2002). Finally, the current findings also corroborate previous findings on older workers' employability beliefs. Peters et al., (2019) found that having negative old-age metastereotypes was related with lower self-perceived employability among older workers, which in turn discouraged them to proactively enter/remain in the labor market. Similarly, the present study established that, for older job seekers, there is a link between negative metastereotypes, self-efficacy and application intention.

Among younger job seekers, negative metastereotypes did not decrease self-efficacy, nor did they affect application intentions, even though we controlled for whether participants held negative metastereotypes about the traits. These findings support the notion of "life stage-specific" reactions to stereotypes (Von Hippel et al., 2019). That is, younger people who face young-age stereotypes will eventually grow older, which implies that the stereotypes will no longer hold for them in the future. Hence, younger job seekers might be less threatened by such stereotypes because of the prospect that they still have a whole future career ahead of them to prove themselves. Studies have indeed suggested that metastereotypes might not only result in threat, but might alternatively result in feelings of challenge (Finkelstein et al., 2020; Kalokerinos et al., 2014). Translated into the current situation: when younger job seekers are confronted with traits in job ads, such as

“punctual”, they might hold the negative metastereotype “*Older people will probably think that younger people are not punctual...*”. However, instead of posing a threat to younger job seekers’ social identity, this might also activate a challenge within younger job seekers, such as “*..., but I see this as a challenge to prove to them that not all young people are like that*”. Future research initiatives could test whether negative metastereotypes affect trait-specific self-efficacy via perceptions of stereotype threat (or stereotype challenge).

Theoretical and Practical Implications

We believe this study adds value to theory in several ways. First, previous studies typically focused on ethnic minority job seekers or female job seekers (Casper et al., 2013; Wille & Derous, 2017, 2018) and have not considered age as an important demographic variable. A unique contribution of the current study is that we considered *both older and younger* job seekers, while research on job seekers from specific age groups tends to focus on older job seekers alone. We argue that a focus on both age groups is needed, because not only older, but also younger job seekers might experience negative age metastereotypes (Finkelstein et al., 2013) and might face hiring discrimination (Farber et al., 2019), while they are also protected from discrimination by European/American legislation (ADEA, 1967; *Establishing a general framework for equal treatment in employment and occupation*, Council Directive 2000/78/EC). Second, we supplemented a mere focus on organizational outcomes, such as application intention, with an outcome reflecting how job seekers see themselves in relation to personality requirements in job ads (i.e., trait-specific self-efficacy). In particular, we examined a rather under-researched age-related cue in job ads, namely stereotyped personality requirements. This contrast with earlier research that often considers job (e.g., task characteristics or working conditions) or organizational characteristics (e.g., values). Additionally, we examined one potential mechanism through which negative metastereotypes may affect application behavior, or in other words, the extent to which

older/younger job seekers may internalize negative metastereotypes into their own perception about their abilities. This has – to the best of our knowledge – not been considered before.

Our study findings are also valuable for practitioners. When investigating why certain age groups have lower labor market participation, scholars have mostly focused on how organizations might unintentionally select-out older age groups, for instance through tests with an adverse impact or recruiters' biases (Farber et al., 2019; Fisher et al., 2017). The current study takes a different perspective and addresses whether older/younger job seekers might also select themselves out of the applicant pool. In doing so, we acknowledge that recruitment is a two-way street, and that both attitudes/decisions at the organizations' side and attitudes/decisions at the applicants' side should be considered to achieve successful recruitment practices (Born et al., 2018; Johnson et al., 2008).

Furthermore, age biases in recruitment processes are more subtle than age biases in other employment stages (e.g., workforce exit). Yet, they should not be underestimated (Earl et al., 2015). The present study showed that organizations that aim to attract age-diverse candidates must be aware of the (existence of) various age-related stereotypes, but also of age *metastereotypes*. Ample research exists on age-related stereotypes (e.g., Posthuma & Campion, 2009) and how recruiters might be biased in their decision-making because of these stereotypes (Farber et al., 2019). As an organization, being aware of these existing stereotypes and training recruiters to mitigate biases is an important first step towards more age-diverse employees. However, the present study adds to such initiatives in stressing the importance of metastereotypes within job seekers. Organizations that fail to consider these metastereotypes might lose valuable and qualified job seekers from specific age groups during early recruitment stages.

Specifically, recruiters should carefully construct job ads in such a way that they avoid that older or younger job seekers would select themselves out of the applicant pool. First, organizations should avoid using words in job ads that might be negative age-metastereotypes. The present study,

together with reviews on age-metastereotypes at work (Finkelstein et al., 2013) provides organizations with traits that older or younger job seekers might have negative metastereotypes about. Moreover, recruiters could consult older and younger employees who can help identify personality requirements or other job ad information (e.g., working conditions) that might also contain negative age metastereotypes. Additionally, when trying to avoid using negatively metastereotyped information, machine learning techniques can be developed and used to help identify negative age metastereotypes in job advertisements (Burn et al., 2020). Second, apart from eliminating possible threatening words in job ads, organizations could also focus on including cues or statements that stress identity safety (Davies et al., 2005) and might avoid that older and younger job seekers would be discouraged from applying. Davies and colleagues (2005) provided an example of such an identity safe statement during test taking, a similar statement could also be used during the recruitment stage (e.g., a statement describing that despite controversial beliefs, evidence shows that there are no significant age differences in job performance relevant for this job). Future research is needed to investigate whether cues that stress identity safety might temper negative effects of negative metastereotypes in job ads. Finally, job coaches or career counselors can boost metastereotype awareness aimed to mitigate these biases within older job seekers. Interventions aimed to encourage older applicants to apply for jobs might focus on their self-efficacy to increase their application intention. Previous studies have shown that self-efficacy training may indeed be valuable for job seekers (Eden & Aviram, 1993; Wanberg et al., 2020). Similar to Dello Russo et al. (2020), we argue that the responsibility for the above mentioned interventions is shared between both older job seekers that can proactively seek out career counseling, as well as organizations that can provide counseling on mitigating bias, increasing self-efficacy and adjusting the organizational culture to a more age accepting one –if needed.

Limitations and Future Research Directions

As with any study, some limitations and future research directions should be acknowledged. Given that research has shown that job seekers' age moderates how certain job elements (e.g., task variety or job autonomy) relate to job attraction (Zacher et al., 2017), we decided to include only the person profile with the required traits in our study materials, so that we could investigate effects of negatively metastereotyped traits versus not negatively metastereotyped traits on older/younger job seekers' application intention. However, future research might investigate effects of negatively metastereotyped traits in job ads together with effects of other job information (see Zacher et al., 2017, for examples) – while controlling for job seekers' age. Second, research has suggested that organizational familiarity, i.e., the degree to which one knows the organization, influences job seekers' application intention (Ganesan et al., 2018). Hence, we deliberately choose not to use an existing organization in our job advertisements ("Organization X"). Now that the present study unveiled effects of negatively metastereotyped traits in job ads, further research could use real job ads that belong to existing organizations and explore effects of metastereotypes in combination with organizational familiarity on application intention. This might imply interesting interactions with corporate images that are associated with metastereotypes. For instance, (metastereotypes in) job ads from Google may be perceived differently by older participants than (the same) ads by General Electric. Third, we retrieved negative metastereotypes for older and younger job seekers in a rather "top-down" way by using metastereotypes from pilot tests and a literature review. Although manipulation checks were successful for both older and younger job seekers and we controlled for negative metastereotypes in our analyses, future research can generate traits more tailored to the individual level (in a more "bottom-up" way), since effects might be larger for those traits that individuals have stronger metastereotypes about (Owuamalam & Zagefka, 2014). Of course, such individual, particular sensitivities may be more difficult to consider in actual

recruitment practice. Next, middle-aged job seekers (around 40-50 years old) were not included in the current study, future research initiatives that are interested in labor market experiences of middle-aged workers might also investigate their perception of job ads with negative metastereotypes (Finkelstein et al., 2013). Finally, while we used traits that older or younger job seeker had negative or no negative metastereotypes about, scholars could also look into positive age metastereotypes and their effects, since they might generate different reactions (e.g., challenge; Finkelstein et al., 2020).

Conclusion

An experiment in a large sample of 556 older and younger job seekers investigated effects of negative age metastereotypes in job ads on application intention. Job seekers' trait-specific self-efficacy was tested as a mediator. Results were in line with expectations for older, but not younger job seekers and can help organizations construct better job ads. Career coaches might also use the current findings to better coach older job seekers towards employment and can focus on self-efficacy within older job seekers. The present study contributes to insights on recruitment of older/younger job seekers and provides clear suggestions for practice, as well as future research.

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CHAPTER 4

WOMEN'S ATTRACTION TO TOP-LEVEL EXECUTIVE POSITIONS:

AN EXPERIMENTAL STUDY IN A LARGE GOVERNMENT ORGANIZATION¹²

Women are still underrepresented at the highest levels of organizations. Specific obstacles that might hinder women in their climb to the top have been proposed, yet these studies have largely overlooked women's own perceptions during promotion processes. In the present study, we investigated the effect of negatively versus positively metastereotyped person requirements in job ads for top-level executive positions on female candidates' application intention, as well as the mediating effect of job attraction. An experimental study (N = 432; 100% women) found that compared to positively metastereotyped person requirements, negatively metastereotyped person requirements lowered female candidates' job attraction and in turn, application intention for top-level executive positions. How person requirements are worded might also affect women's job attraction, yet this might depend on the type of requirement that is used. Implications for both scholars and practitioners are provided.

¹² This chapter is based on: Koçak, A., & Derous, E. (in preparation). *Women's attraction to top-level executive positions: An experimental study in a large government organization.*

Women generally demonstrate academic success during secondary and tertiary education (OECD, 2021b), and might even outperform men in terms of general academic performance in college (e.g., CGPA; Dayioğlu & Türüt-Aşık, 2007) and in particular subjects in high school (e.g., reading and science; OECD, 2019). Nowadays, women also make up a big proportion of the labor market (OECD, 2021a) and even dominate certain industries (e.g., education; OECD, 2021c). However, women are still underrepresented at the top executive levels of many European and North American organizations (European Commission, 2019; Warner & Corley, 2018). Reasons for this underrepresentation at the top and the specific obstacles that women might face during their career have concerned both scholars and practitioners in the past. These obstacles or specific barriers are often referred to as a ‘glass ceiling’ (e.g., Babic & Hansez, 2021) that prevents women to advance on the organizational ladder and that exists “regardless of their qualifications or achievements” (Commission, 1995, p. 4). Indeed, research has established that in general, male and female executives do not significantly differ in their leadership skills (Paustian-Underdahl et al., 2014; Wille et al., 2018).

The glass ceiling phenomenon has been investigated within both private and public organizations (e.g., Lyness & Thompson, 1997; Powell & Butterfield, 1994). While most studies focus on those obstacles that reflect organizational processes and managers’ decisions about hiring, compensating or promoting women versus men, little research considered how women’s own perceptions during the promotion process can be an obstacle as well. Hence, a first goal of this study was to shift the focus from the organization/managers to the female candidates themselves. A particular group of candidates that is –surprisingly– overlooked in research on applicants’ perspectives is internal candidates, i.e. candidates that are already employed in the organization and wish to make a vertical or horizontal career change. Effects of perceptions of internal candidates

during promotion processes might be very impactful given internal candidates' greater investment in the organization and the negative experiences/emotions they might be left with in their current job after an unsuccessful procedure (Anderson, 2011; McCarthy et al., 2017). Therefore, scholars called for more research on the perceptions and experiences of internal candidates and how they affect their attitude toward the organization (McCarthy et al., 2017). Addressing this call, we investigated women's perceptions of the promotion process to top-level positions.

Second, stereotypical beliefs about women's leadership abilities are one important explanation for the glass ceiling and might, for instance, underly hiring discrimination against women for top-level positions (Bosak & Szesny, 2011). However, whereas studies typically investigated managers' gender stereotypes about women, we investigated whether women believe others will hold stereotypes about them. Indeed, women's metastereotypes (i.e., women's beliefs about the stereotypes others hold about them; Vorauer et al., 1998) remain under researched to date, but can already be activated very early in the job seeking process, i.e., when candidates read a job advertisement for a position. Some person requirements in job ads might trigger negative metastereotypes for women and hence negatively affect female candidates' attractiveness to job ads and their intention to apply for the job (Wille & Derous, 2018). In that way, negatively metastereotyped person requirements in job ads for top-level positions might represent obstacles for women in their climb to the top. Yet, person requirements in job ads might also trigger *positive* metastereotypes for women, which might positively affect recruitment outcomes (like job attraction and intention to apply). Hence, positively metastereotyped person requirements in job ads might not be an obstacle for women but provide a possible way to break through the glass ceiling for women. Scholars have called for more research on the effects of positive metastereotypes in the workplace, which is often overlooked (Grutterink & Meister, 2021). This study answered this call

and thus adds to the literature by investigating effects of both negative and positive metastereotypes on women's application intention for top-level positions. Furthermore, the present study also considered how women experienced the exact way in which person requirements in job ads are worded and how this might amplify or attenuate effects of negative or positive metastereotyped requirements (Semin & Fiedler, 1991). Interestingly, studies showed that when person requirements in job ads that women hold negative metastereotypes about are worded in a behavioral way ('you can ...'), this can decrease the perceived threat to one's social identity and increase job attraction compared to when they are worded in a dispositional way ('you are ...'; Wille & Derous, 2017, 2018). Remarkably, while research has investigated how different wordings of negative metastereotypes are perceived by candidates, effects of the wording of positive metastereotypes have –to the best of our knowledge– not been considered before. When women hold positive metastereotypes about person requirements in job ads, it is expected that a dispositional wording increases the boost of one's social identity and hence increases job attraction compared to when they are worded in a behavioral way. By investigating the effect of negative and positive metastereotypes and how they are worded in job ads on women's perception of top-level positions, we examined effects of more subtle cues that might already discourage women to apply for top-level positions very early in the process.

Third, studies that investigated the effect of metastereotyped person requirements in job ads on job seekers have focused on one type of person requirements, i.e., personality traits (e.g., extravert, calm, reliable; Wille & Derous, 2017, 2018). However, organizations might not only portray person requirements by means of personality traits, but also in terms of competences (e.g., coaching competences, customer service competences, ICT-competences). Therefore, as a third goal, we considered women's perceptions of person requirements that represent specific

competences that the organization requires. We thus investigated person requirements in job ads that might discourage and/or encourage women to join the candidate pool for a promotion and therefore studied a rather unique possible mechanism of the glass ceiling phenomenon, as well as a potential way to overcome it. To this end, we conducted an experimental study among women of a large public organization that faced an underrepresentation of women at the top-level, despite more equal men-women proportions at the lower levels. This approach allowed us to investigate actual female employees' perceptions of real job ads with person requirements that represent required competences for that organization, hence adding to the ecological validity of the study.

Glass Ceiling and Metastereotypes

In the present study we contribute to the literature by testing an alternative –yet overlooked– explanation for women's representation in organizations. For decades, scholars have aimed to uncover possible causes of the underrepresentation of women at the highest executive levels of organizations, compared to men. Various potential mechanisms, each with their own respective research fundaments, have been proposed throughout the years. For instance, human capital theory (Schultz, 1962) discusses whether women might invest less resources in themselves compared to men, because of differential anticipations about the work and life (Ciminelli & Schwellnus, 2021). Differential preferences between men and women in terms of promotion to the top-level have also been suggested as explanation of female underrepresentation at the top. Yet, while studies showed that men and women weigh certain job characteristics differently (Chapman et al., 2005), there is no clear consensus about the exact role of preferences in women's upward career paths ('preference theory', see Campion et al., 2021). Role congruity theory (Eagly & Karau, 2002), however, posits that stereotypes about the roles that men and women (should) play in society might influence how female leaders are evaluated compared to their male counterparts and whether women are perceived

as suitable for promotions and high-level positions in general (Eagly & Karau, 2002; Hoffmann & Musch, 2019; Johnson et al., 2008).

While stereotypical ideas can affect those who evaluate/select women (Williams, 2005), they can also shape female candidates' own attitudes and behavior. That is, women can be mindful about the stereotypes others hold about them. Research showed that these perceptions about stereotypes are even more important to consider when investigating intergroup behavior than the actual stereotypes themselves (Fowler & Gasiorek, 2020; Vorauer et al., 1998). Those perceptions are referred to as metastereotypes, or "a person's beliefs regarding the stereotype that out-group members hold about his or her own group" (Vorauer et al., 1998, p. 917) and can be positive or negative. Negative metastereotypes for women in a work-related context (like being 'shy', 'insecure' or 'moody', Owuamalam & Zagefka, 2014) might be activated by certain cues during promotion procedures, for instance, when reading job advertisements for a higher-level position. Person requirements in job advertisements might portray qualities that women have negative metastereotypes about. For example, when a job ad states that one is looking for a confident person (i.e., the opposite of being insecure), this might trigger women's negative metastereotype that women are typically perceived as less confident, which might in turn affect their intention to apply. Studies indeed showed that activation of negative metastereotypes can impact individuals' attitudes and behavior, and might lead to avoiding behavior toward situations that trigger negative metastereotypes (Fowler & Gasiorek, 2020; Goff et al., 2008; Shelton & Richeson, 2005). This avoiding behavior can take many forms, such as women in a professional or academic context that are restrained because of stereotypical cues (Davies et al., 2002; Schuster & Martiny, 2017). Davies et al. (2002), for instance, found that when women were exposed to gender-stereotyped commercials, they experienced feelings of threat, they avoided math-related items compared to

verbal items on a subsequent test and they were less interested in more quantitative educational/vocational options compared to more verbal domains. In the context of application intentions, Wille and Derous (2018) found that negative metastereotypes in job ads lowered women's intention to apply for those jobs.

Surprisingly, most studies only considered effects of negative metastereotypes on application intention. However, not all metastereotypes are negative in nature. For example, Owuamalam and Zagefka (2011) found that women hold positive metastereotypes about being affectionate. Remarkably, the effect that these positive metastereotypes might have in the workplace and during recruitment and selection procedures has been overlooked (Grutterink & Meister, 2021). Research showed that, in general, activation of positive metastereotypes can have positive effects for individuals, asymmetric to the effects of negative metastereotypes. That is, positive metastereotypes might activate a feeling that one matters to others (Matera et al., 2020) and lead to positive attitudes about the out-group (Gómez, 2002). Moreover, research found that, in contrast with avoidance behavior that might follow negative metastereotypes, activation of positive metastereotypes can be beneficial for interactions with the out-group (Fowler & Gasiorek, 2020; Matera & Catania, 2021; Vezzali, 2017), we hence expected:

Hypothesis 1. Women's intention to apply will be lower for job ads with person requirements that women hold negative metastereotypes about than those they hold positive metastereotypes about.

How internal candidates' positive and negative metastereotypes affect their intention to apply can be explained by social identity theory (Turner et al., 1994). Specifically, job advertisements contain limited, yet crucial information that informs candidates about the job and the person requirements (Walker & Hinojosa, 2013). These person requirements in job ads represent

signals for candidates. The process of interpreting these signals, i.e., making symbolic inferences, determines how attractive the job in the job ad is for candidates. That is, candidates try to detect whether the job/organization fit their social identity (Turner et al., 1994) and whether they want to be affiliated with that organization or not (Highhouse et al., 2007). When person requirements in work settings (like job ads) activate negative metastereotypes for women, female candidates might feel that their social identity, i.e., ‘being female’, might be threatened (Steele & Aronson, 1995) which can –in turn– affect their attraction to the job.

There is ample evidence that shows how negative gender stereotypes can engender identity threat for women in organizations (see Walton et al., 2015 for a review). Less attention, however, has been paid to effects of positive stereotypes. In contrast, positive metastereotypes might signal that the job does fit women’s social identity and hence not threaten but even *boost* candidates (Armenta, 2010; Finkelstein et al., 2020; Gaither et al., 2015). Indeed, while stereotype threat (Steele & Aronson, 1995) posits that negative stereotypes might be threatening and hence results in negative reactions (like impairment of performance), positive stereotypes might indicate a lack of threat or even provide a boost to one’s ego and result in more positive reactions, like feeling pride, happy or excitement (Finkelstein et al., 2015; Shih et al., 2012). In line with this prediction, Wille and Derous (2018) found that person requirements in job ads that external female candidates held negative metastereotypes about indeed lowered their job attraction to the portrayed job compared to person requirements they hold positive metastereotypes about. Similarly we expected for internal candidates that:

Hypothesis 2. Women will be less attracted to a job when the job ad contains person requirements that women hold negative metastereotypes about than when the job ad contains person requirements they hold positive metastereotypes about.

Attitudes are expected to influence behavioral intentions and, in turn, behavior (Ajzen & Fishbein, 1980). Translated to a recruitment context, one's attraction to the job/organization is expected to affect one's intention to apply for that job. Studies have indeed found that attraction was related to one's intention to apply for the job (Carless, 2005 for a longitudinal study; Chapman et al., 2005 for a meta-analysis; Highhouse et al., 2003; Van Hooft et al., 2006). Since job ads with person requirements that women hold negative metastereotypes about might lower their attraction to the job compared to positive metastereotypes (Wille & Derous, 2018), which in turn might affect their intention to apply for the job (Carless, 2005), we expected that:

Hypothesis 3. Women's job attraction will mediate the effect of metastereotyped requirements in job ads on intention to apply, such that job ads with negative metastereotypes will decrease women's job attraction compared to job ads with positive metastereotypes, which will in turn lower their intention to apply.

Behavioral versus Dispositional Wording

Not only the metastereotyped nature of person requirements, but also the way in which they are worded should be considered. Indeed, another signal for candidates in job advertisements is the exact way in which person requirements are worded. According to the linguistic category model (Semin & Fiedler, 1991), the wording of information predicts how it will be received by the reader. Requirements can be worded in an ontological/dispositional way with a focus on how someone *is*. An example of such a *dispositional wording* is 'you are a manager'. Alternatively, requirements can be worded in a more concrete/behavioral way with a focus on how someone *behaves*. An example of such a *behavioral wording* is 'you can manage'.

Based on social identity theory (Turner et al., 1994) it is expected that person requirements that women hold negative metastereotypes about (e.g., leading) will be less attractive for women.

However, if that requirement is worded in a concrete, behavioral way (e.g., ‘one *can lead*’), this might be less ego-threatening for women compared to a dispositional wording (e.g., ‘one *is a leader*’). A behavioral wording suggests that the organization is looking for someone who can take up certain tasks, e.g., leadership tasks, which might be perceived as less threatening in case of negatively metastereotyped requirements. A dispositional wording of such metastereotypes, on the other hand, might strengthen the negative personal attributes, i.e., being a leader, and even induce threat to one’s social identity. It is thus expected that a dispositional wording of negatively metastereotyped requirements is less attractive for women than a behavioral wording of such requirements. In line with this, research already showed that women were less inclined to apply for job ads with negatively gender stereotyped information worded in a dispositional way, compared to a behavioral way (Born & Taris, 2010) and women’s application behavior was lower for a dispositional wording of a negative metastereotype in job ads than a behavioral wording (Wille & Deros, 2018).

However, women may hold positive metastereotypes about requirements (like being sensitive, understanding or affectionate) if they believe others feel positive about these person requirements (Owuamalam & Zagefka, 2011). How the wording of such positively metastereotyped requirements affects recruitment outcomes has – to the best of our knowledge – not been considered yet. The present study aimed to fill this gap and explored how the wording of positive metastereotypes relates to women’s job attraction. The opposite effect as for negatively metastereotyped requirements is expected. Specifically, a person requirement one holds a positive metastereotype about (e.g., coaching) is expected to be more attractive when formulated in a dispositional way (e.g., ‘one *is a coach*’) than in a behavioral way (e.g., ‘one *can coach*’). In other words, a job ad requiring candidates to *be* something that they hold positive metastereotypes might

confirm positive personal attributes and even boost one's social identity than when the same requirements are formulated in a behavioral and more conditional way (i.e., as what candidates *can do*). Taken together, we thus hypothesize an interaction effect between the type of metastereotype (positive/negative) and its wording such that:

Hypothesis 4. Person requirements that women hold negative metastereotypes about will be less attractive when worded in a dispositional way compared to a behavioral way (**H4a**), while person requirements that women hold positive metastereotypes about will be more attractive for women when worded in a dispositional way compared to a behavioral way (**H4b**).

Method

To test the effect of metastereotypes and their wording on recruitment outcomes (job attraction and intention to apply), we conducted an experimental study among internal, female job candidates at a large public organization that features an underrepresentation of women at the highest executive levels, but not at lower organizational levels. Specifically, the organization's target of 40% female executives on the top executive level and middle executive level was not yet achieved on either the top executive level (29.7%), or the middle executive level (39.4%) at the moment of the study.

Sample

As we were interested in female employees' perceptions of job ads for the top executive level (N), we contacted women at three different levels of the organization, i.e., the middle executive level (N-1), the lowest executive level (N-2) and the level right below, that requires a Master's degree (A-level), since only women at these levels are able to advance to top-level positions in the future. Of this group, a total of 432 women participated (response rate = 5.23%) with an average

age of 43.32 years ($SD = 9.76$; min = 23 years; max = 64 years); an average organizational tenure of 13.33 years ($SD = 9.32$), and on average 13.99 years of leadership experience ($SD = 9.53$). 22.5% was situated on the middle executive level (N-1), 26.1% on the lowest executive level (N-2), and 51.4% worked on the A-level (master's degree) in the organization.

Design and Procedure

An online experiment was conducted in which female employees evaluated job ads for top-level executive positions. The study featured a 2 (*type of metastereotyped requirements*: negative vs. positive) by 2 (*wording*: dispositional vs. behavioral) within-subjects design. Dependent variables were *job attraction* and *application intention*. Participants were invited through e-mail to participate in an online survey. After reading and signing the informed consent, they were presented four job ads in a counterbalanced order and instructed to carefully read the job ads and imagine that the department the position was situated in, suited their interests. After having rated job attraction and application intention for the ads, participants completed control variables (i.e., specific self-efficacy regarding the person requirement in the job ad, whether they held the metastereotypes, leadership experience, personal ambition to climb the organizational ladder, age and seniority), and manipulation checks. The current study was approved by the Ethical Commission of Ghent University in accordance with the Helsinki declaration [Special Ethical Protocol no 2019/102].

Study Materials

To test the hypotheses we first developed study materials, namely the job ads including the person requirements (i.e., competences) that women hold negative or positive metastereotypes about. Three types of competences were included, based on the three categories of competences that are originally mentioned in job ads for top-level positions in the organization: leadership competences, behavioral competences and technical competences. These competences are part of

the organization's competence framework that was developed in cooperation with a large HR consulting office and based on the Big-Five Personality framework (Costa & McCrae, 2008), as well as on research on leadership in the public sector (Fernandez et al., 2010). The *leadership competence* cluster includes the following leadership competences: 'leading', 'coaching', 'entrepreneurial', and 'managing'. As for the cluster of *behavioral competences*, the organization mentioned the following requirements needed for a top-level executive position: 'cooperating', 'making decisions', 'presenting a vision', 'taking responsibility', 'giving direction', and 'customer service'. The cluster of *technical competences* included 'finance and budgeting', 'managing personnel', 'ICT', 'managing/using regulations', 'decision making in the public context', and 'supporting diversity'. Theoretically, the leadership and behavioral competences broadly correspond to the 'Great Eight Competences' as described by Bartram (2005), while the technical competences refer more to specific, technical competences that are in general more specific to the government context.

Pilot Study to Develop Study Materials

We conducted a pilot study with a verbal protocol analysis (Barber & Roehling, 1993) to investigate female employees' perceptions about these three types of competences in job ads. The aim of this pilot study was three-fold: first, we aimed to uncover those competences required by the organization that women held negative or positive metastereotypes about; second, we aimed to uncover whether women had a preferred type of wording of these competences (i.e., dispositional vs. behavioral); finally, we aimed to investigate whether women regarded one type of competences (i.e., leadership competences, behavioral competences or technical competences) as more important than the other competences or other job ad information. In semi-structured interviews, female executives ($N = 19$, $M_{age} = 48.22$ years, $SD_{age} = 7.20$ years; 100% women) were presented job ads

for a top-level position at the organization that included leadership, behavioral, and technical competences¹³ that were worded in either a dispositional or behavioral ways (Semin & Fiedler, 1991; see Hypothesis 4a and 4b). Participants were then instructed to *think aloud* while evaluating the job ads. Interview content was analyzed by means of verbal protocol analysis (i.e., VPA), a process-tracking technique used to study judgement and decision-making processes. Similarly, we used VPA to investigate how candidates evaluated job advertisement characteristics and decided whether to apply for the position or not. A detailed description of the procedure and analyses of the VPA can be found in Appendix. Below we discuss the themes that we identified among the 19 female executives, which we contextualize with anonymous quotes and frequencies, where N_{person} = the amount of women out of 19 that mentioned this theme and N_{total} = the total amount of times this theme was mentioned across participants. When $N_{\text{total}} > N_{\text{person}}$ this thus means that this theme was mentioned more than once by the participants.

Positive and Negative Metastereotypes. Participants (all females) held a positive metastereotype about ‘soft’ competences ($N_{\text{person}} = 18$; $N_{\text{total}} = 57$). That is, women had a positive metastereotype about the leadership competences ‘coaching’, the behavioral competences ‘cooperating’ and ‘customer service’ and the technical competences ‘personnel management’ and ‘diversity’. Women thus believed that interpersonal and ‘soft’ elements are more attributed to women. Participant 15, for instance, mentioned “Regarding social skills, the more soft aspects, I think men are more inclined to think that women are better in those and the majority of men is better in the hard management tasks.” (participant 15). Further, women had negative metastereotypes about ‘hard’ competences ($N_{\text{person}} = 18$; $N_{\text{total}} = 56$) like the leadership competences ‘leader’ and

¹³ Job ads included additional information such as the offer and required leadership experience, yet no specific information about the department in which the position was situated was mentioned in order to not distract participants.

'entrepreneur', the behavioral competences 'decision making' and 'presenting a vision' and the technical competences 'ICT' and 'finance'. For instance, Participant 6 mentioned "Generally, men will definitely think they are better leaders than women (...) because they might think that women are too emotional to be a good leader." (Participant 6). Women believed that women are expected to do worse on those competences that require 'hard actions' and additionally mentioned that these metastereotypes might be due to a lack of female representation at the top.

Wording of Competences. Women preferred a behavioral wording of leadership competences (e.g., you can lead) and behavioral competences (e.g., you can make decisions; $N_{\text{person}} = 17$; $N_{\text{total}} = 41$) and reported that a behavioral wording allows more growth, while a dispositional wording assumes that one already possesses all competences: " 'you are cooperative' is more passive and compliant, while 'you can cooperate and create partnerships' represents a more active role, which better suits me and makes the job more interesting. " (participant 2). Interestingly, participants did not prefer a behavioral wording for the technical competences, because for these type of competences, there is less room for growth, you either know how to do it or you don't: "Technical competences, in my opinion, are about 'can you do that, yes or no?', and not about 'do you do that'. So I prefer 'you are...', because this better captures those competences." (participant 16).

Importance of the Different Job Ad Sections. Not all competences were considered as equally important at the top executive level. Participants mentioned that certain 'hard' competences were less crucial for a job on the highest executive level, because one can rely on trained experts and cooperate with them ($N_{\text{person}} = 10$; $N_{\text{total}} = 11$): "I will never be an IT-person, but I think it is more important that you can rely on some people that can advise you on these matters (..) you have a lot of experts for this" (Participant no 6). This clear distinction corresponds with the notion of

‘nice to have’ versus ‘must have’ requirements originally used by software engineers for requirements that a certain product should have versus could have (Van Vliet, 2007). Without ‘must have’ requirements the product does not succeed, the ‘nice to have’s’ or ‘could have’s’ are appreciated, but not necessary. Participants thus perceived the technical competences more as ‘nice to have’ requirements, while leadership and behavioral competences were perceived more as ‘must have’s’. The preferred wording of requirements in job ads might depend on whether requirements are perceived as ‘must have’s’ or ‘nice to have’. These results corroborate with the VPA-scores that raters calculated based on the mentions of job ad elements (see Appendix). Results showed that the highest sum score was the behavioral competences ($M = 5.70$, $SD = 0.42$), followed by the technical competences ($M = 4.65$, $SD = 0.33$), the offer ($M = 3.90$, $SD = 0.26$), and leadership competences ($M = 2.20$, $SD = 0.16$), finally, leadership experience ($M = 0.90$, $SD = 0.17$) received the lowest score. These results indicated that female executives in the organization attributed the most weight to behavioral competences when reading and evaluating job ads.

Conclusion. Women’s positive metastereotypes for the more communal or ‘soft’ requirements and negative metastereotypes about the more agentic or ‘hard’ requirements are in line with positive and negative metastereotypes for women that are reported in the literature (Owuamalam & Zagefka, 2011) and the gender stereotypes that women are more communal and less agentic than men (Eagly et al., 2019). Leadership and behavioral competences were more appealing when worded in a behavioral way. Based on the above-mentioned results, we finalized the study materials (i.e., requirements) in 4 different conditions (see Table 1): negatively metastereotyped competences with a dispositional wording (condition 1), negatively metastereotyped competences with a behavioral wording (condition 2); positively metastereotyped competence with a dispositional wording (condition 3); positively metastereotyped competence

Table 1.*Experimental Conditions of the Experimental Study*

	Negative metastereotype			Positive metastereotype		
<i>Competences</i>	Leadership	Behavioral	Technical	Leadership	Behavioral	Technical
Dispositional wording	You are a leader	You are someone who makes decisions in situations where the risks aren't always easy to predict	You are someone who develops ICT-strategies through experience with projects in which ICT played an important role	You are a coach	You are customer oriented and you are someone who optimizes services to stakeholders through structural actions	You are someone who manages personnel as an instrument to realize strategical options
Behavioral wording	You can lead	You can make decisions in situations in situations where the risks aren't always easy to predict	You can develop ICT-strategies through experience with projects in which ICT played an important role	You can coach	You can optimize services to stakeholders through structural actions	You can manage personnel as an instrument to realize strategical options

with a behavioral wording (condition 4). For instance, for the negatively metastereotyped leadership competence, we developed the requirements ‘You are a leader’ (dispositional wording) versus ‘You can lead’ (behavioral wording).

Measures

Job Attraction

Job attraction was measured for each of the requirements separately. Each of these measures included 3 items based on Van Hooft et al. (2006), an example item is: “Based on the leadership competences in the job ad, I would feel attracted to the advertised job”, with 1 = *strongly disagree* to 5 = *strongly agree*. Cronbach’s alpha was .90 for the leadership competences, .92 for the behavioral competences and .93 for the technical competences.

Application Intention

For each type of requirement, we asked participants through one item adapted from Roberson and Collins (2005) whether they would apply for this job ad or not.

Specific Self-efficacy

In all analyses, we controlled for whether women believed they possess the required competences in the ads. That is, research found that women’s specific self-efficacy regarding leadership qualities predicted whether women would take on leadership-related tasks (Dickerson & Taylor, 2000). While someone’s general self-efficacy refers to the general belief that one can perform (Bandura, 1997), specific forms of self-efficacy are often used in research to refer to the belief that one can perform specific tasks (Bandura, 2015; Tierney & Farmer, 2002; Van Hooft et al., 2015;). Building on these examples, we measured participants’ specific self-efficacy regarding the person requirements. One item for person requirement each was formulated, an example is: An example item for the requirement ‘being a leader’ is: “I feel confident that I can be a good leader”,

measured on a 5-point Likert-type scale (with 1 = *strongly disagree* to 5 = *strongly agree*).

Metastereotypes

While a pilot study was conducted to establish person requirements in job ads that women in the organization hold negative or positive metastereotypes about, we measured these metastereotypes in the main study as well. In that way, we could control for whether participants indeed held the metastereotype or not. On example item was: “To what extent do you believe that male workers think that female workers are [a good leader]” or “[a good coach]” with 1 = *strongly disagree* to 5 = *strongly agree*.

Manipulation Checks

Manipulation checks were used to verify whether materials were perceived as intended by participants. First, we checked if the person requirements were perceived as intended (i.e., leading vs. coaching; decision making vs. customer service; ICT-skills vs. personnel management). Example items are “The person profile shows that they were looking for a leader or someone who can lead”, and “The person profile shows that they were looking for a coach or someone who can coach, with 1 = *strongly disagree* to 5 = *strongly agree*. The wording of the requirements (i.e., dispositional vs. behavioral) was tested as well, e.g., “The person profile shows that they value how one can behave”, and “The person profile shows that they value how one’s nature is, with 1 = *strongly disagree* to 5 = *strongly agree*.

Demographics

Finally, we measured participants’ age (in years), gender identity (0 = *male*; 1 = *female*), their seniority in the organization (in years), their leadership experience within or outside the organization (in years), their current employment level in the organization (0 = *middle executive*

level ; 1 = lowest executive level; 2 = A-level), and whether they had the ambition to one day climb up to the highest executive level (0 = no; 1 = yes).

Results

Preliminary Analysis

Table 2 and 3 show means, standard deviations and frequencies for job attraction and intention to apply for the experimental conditions. Table 4, 5 and 6 contain correlations between the different variables, displayed for each type of requirement separately.

Results of a series of Repeated Measures ANOVA's showed that our manipulations of the three requirements and their wording were successful. First, we found that participants perceived the leadership competences in the job ads as intended: the manipulations of 'leader' was successful for both the behavioral wording, $M = 4.15$, $SD = 0.69$, $F(1,396) = 1482.35$, $p < .001$, $\eta_p^2 = .80$, and the dispositional wording, $M = 4.02$, $SD = 0.83$, $F(1,396) = 1317.95$, $p < .001$, $\eta_p^2 = .77$, as were the manipulations of 'coach' for both the behavioral, $M = 4.21$, $SD = 0.73$, $F(1,396) = 875.98$, $p < .001$, $\eta_p^2 = .63$, and dispositional wording, $M = 4.26$, $SD = 0.67$, $F(1,394) = 672.38$, $p < .001$, $\eta_p^2 = .69$. Further, manipulations of the behavioral requirements were also successful: participants interpreted the requirement 'making decisions' as expected for the behavioral, $M = 4.24$, $SD = 0.65$, $F(1,396) = 1690.51$, $p < .001$, $\eta_p^2 = .81$, and dispositional wording, $M = 4.25$, $SD = 0.66$, $F(1,396) = 1317.95$, $p < .001$, $\eta_p^2 = .80$, and perceptions of 'customer service' were also as expected for both the behavioral, $M = 4.08$, $SD = 0.80$, $F(1,396) = 875.98$, $p < .001$, $\eta_p^2 = .71$, and dispositional wording ($M = 4.19$, $SD = 0.76$), $F(1,394) = 672.38$, $p < .001$, $\eta_p^2 = .71$.

Table 2.*Means and Standard Deviations for Job Attraction for Experimental Conditions (N = 432)*

	Leadership Competences		Behavioral Competences		Technical Competences	
	Dispositional	Behavioral	Dispositional	Behavioral	Dispositional	Behavioral
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Negative MS ^a	2.94 (0.94)	2.98 (0.97)	3.11 (1.01)	3.18 (0.98)	2.78 (1.02)	2.78 (1.01)
Positive MS ^a	3.36 (0.97)	3.31 (0.96)	3.59 (0.88)	3.33(0.99)	2.88 (1.07)	2.90 (1.07)

Note. ^aMS = metastereotype**Table 3.***Frequencies for Application Intention for Experimental Conditions (N = 432)*

	Leadership Competences				Behavioral Competences				Technical Competences			
	Dispositional		Behavioral		Dispositional		Behavioral		Dispositional		Behavioral	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Negative MS ^a	194	217	203	210	221	190	241	172	161	250	163	250
Positive MS ^a	276	143	265	150	315	104	274	141	195	224	200	215

Note. ^aMS = metastereotype

Table 4.*Correlations for Leadership Competences*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. JA ^a NMS ^b DW ^c	(--)														
2. JA ^a NMS ^b BW ^d	.70**	(--)													
3. JA ^a PMS ^e DW ^c	.28**	.33**	(--)												
4. JA ^a PMS ^e BW ^d	.31**	.30**	.72**	(--)											
5. AI ^f NMS ^b DW ^c	.72**	.52**	.17**	.17**	(--)										
6. AI ^f NMS ^b BW ^d	.55**	.68**	.20**	.21**	.70**	(--)									
7. AI ^f PMS ^e DW ^c	.23**	.22**	.68**	.53**	.34**	.37**	(--)								
8. AI ^f PMS ^e BW ^d	.25**	.22**	.50**	.70**	.32**	.35**	.76**	(--)							
9. SSE ^g NMS ^b	.33**	.29**	.14**	.17**	.32**	.30**	.18**	.15**	(--)						
10. SSE ^g PMS ^e	.06	.04	.23**	.27**	.13**	.17**	.32**	.30**	.42**	(--)					
11. Age	.06	-.07	.03	-.01	-.04	-.10	-.06	-.04	.11	.16**	(--)				
12. Seniority	.05	-.01	.01	-.01	-.08	-.08	-.05	.01	.06	.04	.70**	(--)			
13. Employment Level	-.23**	-.17**	-.17**	-.20**	.21**	.20**	.18**	.18**	-.32**	-.24**	-.29**	-.25**	(--)		
14. Leadership Experience	.14	.09	.13	.08	.01	.01	.03	-.10	.08	.01	.62**	.34**	-.27**	(--)	
15. Ambition or not	.19**	.19**	.18**	.21**	.18**	.19**	.17**	.21**	.30**	.13**	-.22**	-.22**	-.10*	-.17*	(--)

Note. *N* = 432. ^aJA = Job attraction. ^bNMS = negative metastereotype (i.e., leading). ^cDW = dispositional wording. ^dBW = behavioral wording. ^e

PMS = positive metastereotype (i.e., coaching). ^fAI = Application Intention (0 = no; 1 = yes). ^gSSE = specific self-efficacy.

Table 5.*Correlations for Behavioral Competences*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. JA ^a NMS ^b	(--)														
DW ^c															
2. JA ^a NMS ^b	.80**	(--)													
BW ^d															
3. JA ^a PMS ^e	.12**	.19**	(--)												
DW ^c															
4. JA ^a PMS ^e	.18**	.24**	.59**	(--)											
BW ^d															
5. AI ^f NMS ^b	.75**	.60**	.04	.06	(--)										
DW ^c															
6. AI ^f NMS ^b	.60**	.70**	.06	.07	.72**	(--)									
BW ^d															
7. AI ^f PMS ^e	.05	.09	.62**	.39**	.17**	.20**	(--)								
DW ^c															
8. AI ^f PMS ^e	.13**	.15**	.40**	.65**	.25**	.26**	.62**	(--)							
BW ^d															
9. SSE ^g NMS ^b	.50**	.47**	-.06	.02	.50**	.44**	-.06	.01	(--)						
10. SSE ^g PMS ^e	-.04	-.00	.16**	.08	-.00	-.02	.10	.05	.06	(--)					
11. Age	.08	.04	.03	-.01	.01	-.01	-.05	-.07	.18**	.05	(--)				
12. Seniority	.04	.02	-.01	-.04	.01	-.06	-.07	-.04	.09	-.02	.70**	(--)			
13. Employment Level	-.17**	-.16**	-.19**	-.13**	.14**	.11**	.18**	.10	-.19**	.04	-.29**	-.25**	(--)		
14. Leadership Experience	-.04	-.02	.12	.03	-.00	-.07	-.01	-.09	.27**	.18*	.62**	.34**	-.27**	(--)	
15. Ambition or not	.17**	.20**	.04	.15**	.13**	.17**	.12*	.15**	.21**	.09	-.22**	-.22**	-.10*	-.17*	(--)

Note. *N* = 432. ^aJA = Job attraction. ^bNMS = negative metastereotype (i.e., making decisions). ^cDW = dispositional wording. ^dBW = behavioral

wording. ^ePMS = positive metastereotype (i.e., customer service). ^fAI = Application Intention (0 = no; 1 = yes). ^gSSE = specific self-efficacy.

Table 6.*Correlations for Technical Competences*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16. JA ^a NMS ^b DW ^c	(--)														
17. JA ^a NMS ^b BW ^d	.74**	(--)													
18. JA ^a PMS ^e DW ^c	-.05	-.05	(--)												
19. JA ^a PMS ^e BW ^d	-.03	-.05	.66**	(--)											
20. AI ^f NMS ^b DW ^c	.75**	.51**	-.08	-.07	(--)										
21. AI ^f NMS ^b BW ^d	.59**	.73**	-.06	-.05	.67**	(--)									
22. AI ^f PMS ^e DW ^c	-.08	-.08	-.71**	.48**	.02	.01	(--)								
23. AI ^f PMS ^e BW ^d	-.04	-.03	.54**	.70**	.04	.08	.66**	(--)							
24. SSE ^g NMS ^b	.44**	.43**	.08	.05	.29**	.30**	.11*	.04	(--)						
25. SSE ^g PMS ^e	-.02	-.04	.30**	.30**	-.05	-.01	.32**	.30**	.14**	(--)					
26. Age	.12*	-.18**	.04	.09	-.13*	-.16**	-.07	.01	-.08	.17**	(--)				
27. Seniority	-.05	-.11*	.00	.03	-.05	-.09	-.04	.00	-.07	.12	.70**	(--)			
28. Employment Level	.06	.09	-.16**	-.18**	-.08	-.08	.14**	.16**	-.02	-.37**	-.29**	-.25**	(--)		
29. Leadership Experience	-.12	-.02	.15	.07	-.19*	-.06	.03	.01	.07	.02	.62**	.34**	-.27**	(--)	
30. Ambition or not	.17**	.20**	.04	.15**	.10	.15**	.16**	.20**	.13**	.29**	-.22**	-.22**	-.10*	-.17*	(--)

Note. $N = 432$. ^aJA = Job attraction. ^bNMS = negative metastereotype (i.e., ICT). ^cDW = dispositional wording. ^dBW = behavioral wording. ^e

PMS = positive metastereotype (i.e., managing personnel). ^fAI = Application Intention (0 = no; 1 = yes). ^gSSE = specific self-efficacy.

Finally, 'ICT-skills' were viewed as intended for the behavioral, $M = 4.25$, $SD = 0.60$, $F(1,396) = 1231.86$, $p < .001$, $\eta_p^2 = .76$, and dispositional wording, $M = 4.28$, $SD = 0.60$, $F(1,396) = 1383.65$, $p < .001$, $\eta_p^2 = .78$, as well as 'personnel management' for a behavioral $M = 4.10$, $SD = 0.77$, $F(1,396) = 1090.58$, $p < .001$, $\eta_p^2 = .76$ and dispositional wording, $M = 4.08$, $SD = 0.77$, $F(1,394) = 1252.45$, $p < .001$, $\eta_p^2 = .74$, indicating that manipulations of the technical requirements were successful as well.

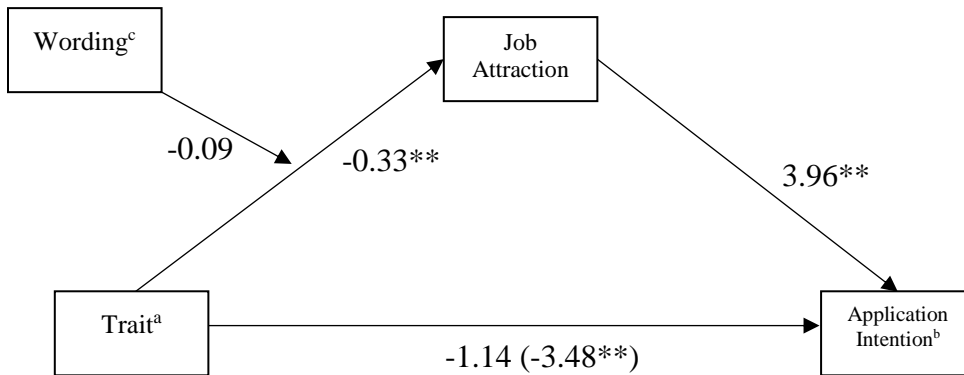
Second, the three types of negatively metastereotyped requirements¹⁴ were perceived as more behavioral, $M = 3.87$, $SD = 0.87$, $F(1,396) = 169.52$, $p < .001$, $\eta_p^2 = .30$, and dispositional, $M = 3.72$, $SD = 0.94$, $F(1,396) = 54.33$, $p < .001$, $\eta_p^2 = .12$, when they were worded behaviorally and dispositionally, respectively. Positively metastereotyped requirements were also seen as more behavioral, $M = 3.96$, $SD = 0.80$, $F(1,396) = 65.04$, $p < .001$, $\eta_p^2 = .29$, and dispositional, $M = 3.92$, $SD = 0.84$, $F(1,394) = 162.72$, $p < .001$, $\eta_p^2 = .14$, in the respected conditions.

Hypothesis Testing

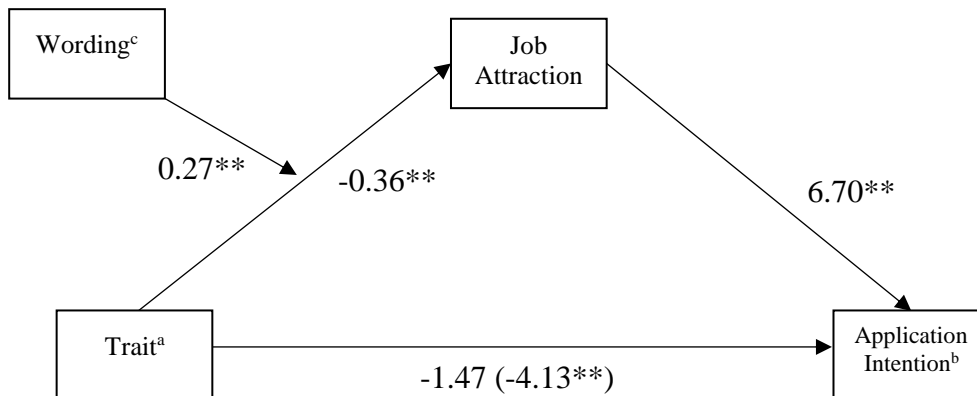
To test Hypothesis 1 through 4, we conducted mediation analyses in R (version 4.1.1) with the nlme package (v3.1-152; Pinheiro et al., 2021) where we combined a linear mixed model and a generalized linear mixed model to respect the multilevel nature of the repeated measures within participants¹⁵. Results for the person requirements are displayed in Figure 1 (i.e., leadership competences), Figure 2 (i.e., behavioral competences), and Figure 3 (i.e., technical competences). Hypothesis 1 stated that women's intention to apply would be lower for job ads with negatively metastereotyped person requirement compared to positively metastereotyped requirements.

¹⁴ Manipulations checks for the wording of person requirements were completed for each job ad individually, and referred to the wording of all three requirements.

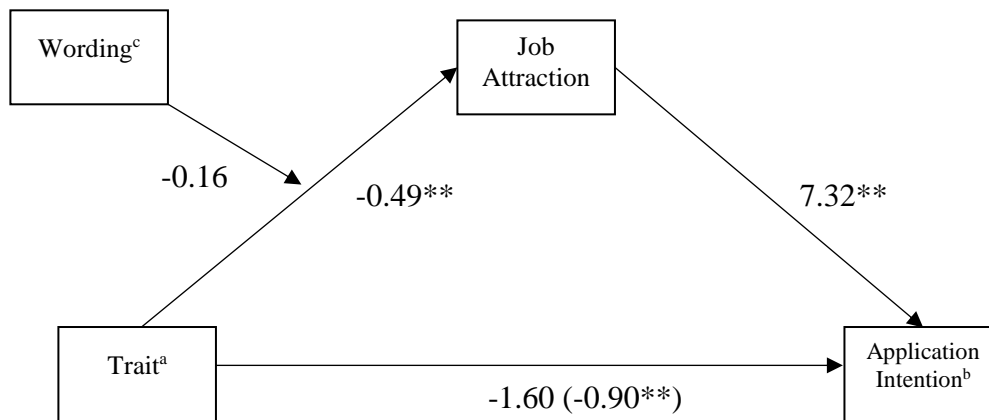
¹⁵ This approach was discussed with and approved by a scholar with expertise in multilevel analysis in R (Personal communication with Yves Rosseel, October, 11, 2021)

Figure 1*Mediation Model for Leadership Competences*

Note. The coefficient in parentheses represent the total effect of trait on application intention. ^aTrait: 0 = Coaching (positive metastereotype), 1 = Leading (negative metastereotype). ^bApplication Intention: 0 = no; 1 = yes. ^cWording: 0 = dispositional, 1 = behavioral. * $p \leq .05$. ** $p \leq .01$.

Figure 2*Mediation Model for Behavioral Competences*

Note. The coefficient in parentheses represent the total effect of trait on application intention. ^aTrait: 0 = customer service (positive metastereotype), 1 = decision making (negative metastereotype). ^bApplication Intention: 0 = no; 1 = yes. ^cWording: 0 = dispositional, 1 = behavioral. * $p \leq .05$. ** $p \leq .01$.

Figure 3*Mediation Model for Technical Competences*

Note. The coefficient in parentheses represent the total effect of trait on application intention. ^aTrait: 0 = personnel management (positive metastereotype), 1 = ICT-skills (negative metastereotype). ^bApplication Intention: 0 = no; 1 = yes. ^cWording: 0 = dispositional, 1 = behavioral. * $p \leq .05$. ** $p \leq .01$.

This hypothesis was supported for leadership competences, $b = -6.17$, $SE = 1.63$, $p < .001$, behavioral competences, $b = -4.12$, $SE = 0.79$, $p < .001$, and technical competences, $b = -0.90$, $SE = 0.39$, $p = .02$. Hypothesis 2, which stated that women would be less attracted to job ads with person requirements that women hold negative metastereotypes about than to those they hold positive metastereotypes about, was also supported for the leadership competences, $b = -0.33$, $SE = 0.12$, $p = .005$, the behavioral competences, $b = -0.36$, $SE = 0.11$, $p = .001$, and the technical competences, $b = -0.49$, $SE = 0.14$, $p = .001$. Hypothesis 3 proposed that job attraction would be a mediator between type of metastereotype (negative vs. positive) in job ads and women's intention to apply. As women's job attraction was positively related to their intention to apply for the leadership competences, $b = 3.96$, $SE = 0.66$, $p < .001$, the behavioral competences, $b = 6.70$, $SE = 1.22$, $p < .001$, and the technical competences, $b = 7.32$, $SE = 1.45$, $p < .001$, we proceeded testing the mediation hypothesis. As expected, mediation was supported, as shown by the significant indirect effects of type of metastereotype on application intention through job attraction for

leadership competences, $b = -2.50$, $SE = 0.53$, $p = .01$, behavioral competences, $b = -2.81$, $SE = 0.86$, $p = .01$, and technical competences, $b = -2.88$, $SE = 1.25$, $p = .004$.

Hypothesis 4a and 4b regarding the interaction between type of metastereotype and their wording expected that negatively metastereotyped person requirements would be less attractive for women when worded in a dispositional way (H4a), while positively metastereotyped person requirements would be more attractive for women when worded in a dispositional way (H4b). First, for the leadership competences, no interaction was found between wording and type of metastereotype on job attraction, $b = -0.09$, $SE = 0.10$, $p = .324$, Hypothesis 4a and 4b could therefore not be supported for these requirements. Second, for the behavioral competences, there was a significant interaction between wording and trait on job attraction, $b = 0.27$, $SE = 0.09$, $p = .003$. Contrary to our expectations, negatively metastereotyped behavioral requirements were not significantly less attractive for women when worded in a dispositional way, $b = 0.04$, $SE = 0.05$, $p = .41$ (H4a unsupported). As expected, positively metastereotyped behavioral requirements were significantly less attractive for women when worded in a behavioral way compared to a dispositional way, $b = -0.23$, $SE = 0.08$, $p = .004$ (H4b supported). Finally, for the technical competences, no significant interaction was found between wording and trait on job attraction, $b = -0.16$, $SE = .011$, $p = .147$, providing no support for Hypothesis 4a and 4b.

Discussion

Women are still underrepresented at the top levels of organizations (European Commission, 2019; Warner & Corley, 2018). The present study investigated this issue in a large public organization that also suffers from female underrepresentation at the very top. Through an experimental study, we uncovered how women perceive person requirements in promotion procedures for top-level positions. Particularly, we considered how negative metastereotyped requirements in job ads might cause and/or cultivate the underrepresentation of women at the top,

but also how positively metastereotyped requirements might help breaking this glass ceiling for women.

First, a verbal protocol analysis indicated that women held negative metastereotypes about 'hard' competences' (i.e., leading, making decisions and ICT skills) and positive metastereotypes about 'soft' competences (i.e., coaching, customer service and personnel management) which corresponds to earlier research on metastereotype for women (Owuamalam & Zagefka, 2011) and was supported by manipulation checks. In line with social identity theory (Turner et al., 1994), results of the experimental study further indicated that job attraction was lower for negatively metastereotyped person requirements in job ads (like leading), compared to positively metastereotypes person requirements (like coaching), which in turn lowered women's application intention. These findings corroborate with previous research on external job applicants' perceptions of metastereotyped person requirements in ads (Wille & Deros, 2018) and seemed to generalize to internal job candidates' perceptions in a promotion context.

Second, the way in which requirements were formulated seemed to matter as well. Based on the linguistic category model (Semin & Fiedler, 1991) we further expected that person requirements that women hold negative metastereotypes about would be more attractive when worded in a behavioral way (e.g., 'You can lead') compared to a dispositional way (e.g., 'You are a leader'), while positively metastereotyped person requirements would be more attractive for women when worded in a dispositional way. While previous studies investigated the effect of a dispositional versus behavioral wording of personality traits in the person requirements (Wille & Deros, 2017, 2018), the present study investigated the wording of another type of requirements, namely competences (i.e., leadership competences, behavioral competences and technical competences), showing that effects of wording might depend on the type of requirement that is studied. For instance, contrary to results from Wille and Deros (2018), interaction effects between

wording and type of metastereotype were not found for all competences studied in the present study. Results showed that, although job attraction levels were in line with expectations based on the linguistic category model (Semin & Fiedler, 1991) for the leadership and behavioral competences (see Table 2), no significant effects of wording were found for leadership and technical competences. Interestingly, these findings are in line with the VPA, where female executives (different from the experiment) indicated that technical person requirements are ‘nice to have’ (Van Vliet, 2007), compared to the behavioral requirements that one ‘must have’. Additionally, the calculated scores (see Appendix) in the verbal protocol analysis indeed showed that leadership and technical competences were mentioned as less important compared to behavioral competences.

For behavioral competences, the experimental study did find effects of the wording of requirements on job attraction, so that a positively metastereotyped person requirement, contrary to a negatively metastereotyped requirement, was indeed more attractive when worded in a dispositional way than a behavioral way. For negatively metastereotyped behavioral competences, we expected that a negative requirement that you think others attribute to you (i.e., negative metastereotype) threatens one’s social identity more when formulated in a dispositional way (how the person *is*) than in a behavioral way (how you can *behave*). Although Table 2 shows that participants’ job attraction was higher for a behavioral competence that was worded in a behavioral way versus a dispositional way, no significant effect of wording on job attraction was found. Results could therefore provide no evidence for the above-mentioned expectations for negative metastereotypes. For positively metastereotyped behavioral competences, results suggest that, as expected, a positive requirement that one thinks others attribute to them (i.e., positive metastereotype) may boost one’s social identity more when formulated in a dispositional way (how the person *is*) compared to a behavioral way (how one can *behave*). Hence, person requirements in

job ads that candidates have positive metastereotypes about were more attractive for candidates when they stressed a required disposition compared to a required behavior. Additionally, participants mentioned that a dispositional wording triggers the idea that there is no room for growth, compared to a behavioral wording. For positively metastereotypes requirements, no room for growth is needed, since women are expected to already possess these qualifications. Therefore, women might experience more boost when a requirement that they think that others believe they have is worded in a dispositional way. The limited research on effects of the wording of requirements in job advertisements only investigated effects of the wording of negatively metastereotyped requirements on application intention (Wille & Derous, 2018), whereas in the present study, we found that the wording of positively metastereotyped requirements affected female candidates as well. These findings highlight the importance of considering the wording of positive metastereotypes on top of the wording of negative metastereotypes and thereby provide a better understanding of not only what threatens women but also what boosts them in their climb to the top.

Contributions and Future Research Ideas

Our study adds to the literature in several ways. First, we deliberately recruited female executives and employees in an existing organization, so that we could explore how they perceived the underrepresentation of women at the top-level. Research established the importance of external candidates' perspectives during recruitment (Born et al., 2018) and selection (Hausknecht & Thomas, 2004). The present study therefore included these perspectives and thereby focused on those candidates that are often overlooked in research: internal candidates (Anderson, 2011; McCarthy et al., 2017).

Second, the present study considered an important first step that is often overlooked in studies on gender underrepresentation in organizations, namely: job advertisements. Job ads

represent an important first contact between a candidate and a new position. Internal candidates that want to climb-up to a higher position also come across job advertisements for those positions. Studies on women's promotion experiences focused on more tangible outcomes later in the promotion process (e.g., women versus men's promotion probabilities; e.g., Saridakis et al., 2022), and looked mostly at women's general preferences (e.g., Campion et al., 2021) to explain these gender differences. However, women's more subtle preferences regarding job ad information has –to the best of our knowledge– not been considered in a promotion context before. The present study investigated how women perceive information in job advertisements and thereby focused on subtle cues such as person requirements and the way they are worded early in the promotion process. Results showed that even these subtle cues can have influential consequences for organizations. For instance, negatively metastereotyped person requirement discouraged women to apply for top-level positions, even when controlling for whether they believed they possessed these requirements (i.e., specific self-efficacy). Particularly alarming are VPA results showing that some of these requirements that are unattractive for women, are perceived as not even important for the job, e.g., ICT-skills. However, our experimental findings showed that this requirement in job ads indeed discouraged women to apply. Further, studies have overlooked how the wording of positive metastereotypes affects internal or external candidates. The present study results showed that how positively metastereotyped behavioral requirements are worded in job ad is another important signal for candidates that affects job attraction. In that way, the present study adds to the literature in that it investigated positive cues that might positively affect female candidates and hence break the glass ceiling instead of solely investigating negative cues that hinder female candidates.

Third, study findings showed that effects of the wording of person requirements do not only depend on the type of metastereotype (negative versus positive), but also on the type of requirement

that was studied. Previous studies considered personality traits and their wording (Wille & Derous, 2017, 2018), yet a unique contribution of the present study is that another type of requirements was investigated. That is, organizations do not always word person requirements by means of personality traits, the present study adds to the literature in that we studied person requirements as they originally appear in existing job ads, namely as leadership competences, behavioral competences and technical competences. Finally, our mixed-methodology approach allowed for a unique and rich combination of qualitative and quantitative information. While the qualitative pilot study provided a broad understanding of perceptions of job ad information of those women that are in the position to possibly climb-up to the highest executive level, the experimental study presented a deeper investigation into the effects of job ad information among a large number of women within the organization.

Future research could explicitly test whether a threat or boost mechanism indeed underlies the effects of (the wording of) negative and positive metastereotypes in job ads on candidates' job attraction, as we assumed based on previous research (Shih et al., 2012; Steele & Aronson, 1995) but did not test these mechanisms in a direct way. Additionally, future research might investigate whether negative metastereotypes might also receive positive appraisals and whether positive metastereotypes might result in negative appraisals (Voyles et al., 2014). Moreover, we tested how female, internal candidates perceived person requirements and did so in one large organization. Our results showed promising patterns, but further research could test whether findings generalize to other organizational settings, such as small organizations with potentially a different organizational culture and different promotion procedures. Next, while the present study focused on women, given their underrepresentation at the top level of the organization, research has shown that metastereotypes also exist for different demographical groups such as older people, younger people, people with an ethnic minority background, etc (e.g., Finkelstein et al., 2015; Wille &

Derous, 2017). Scholars could therefore also consider intersectionality in research on candidates' perceptions and look at the specific negative versus positive metastereotypes that women of particular ages and ethnic backgrounds hold, as well as the effect of those metastereotypes on recruitment and promotion outcomes. Further, the present study only included people that identified more as a women than as a man, given that people might also identify as non-binary, future research might look into the specific metastereotypes and recruitment/selection experiences of those individuals. Finally, while we deliberately chose to study women's *perceptions* of promotion procedures and mechanisms in the organization, future research might also study women's actual promotion in this particular organization, and whether they indeed applied for such higher level positions.

Practical Implications

Study results not only provide interesting implications for the organization in the study, they can also be valuable for practitioners/organizations in general. While all promotion procedures can benefit from our research findings, they may be of particular interest to those organizations that aim to attract more women, for instance, at certain levels of the organization. For example, qualification based targeted recruitment (Newman & Lyon, 2009) is a strategy that aims to attract more women to organizations. The present findings showed that this strategy can in fact backfire and women can be discouraged to apply by negative metastereotyped qualifications in job ads. Therefore, as a first implication, job advertisements for higher-level positions should be carefully examined on information that may trigger negative metastereotypes for women. Additionally, results showed that positive metastereotypes in job ads for top-level positions might increase women's job attraction and application intention. Hence, they might be used by organizations that aim to attract women through qualification based targeted recruitment strategies (Newman & Lyon, 2009). Similarly, organizations that face underrepresentation of women at top-levels and might

benefit from portraying requirements in job ads that women have positive metastereotypes about to break the glass ceiling. Moreover, regardless of whether the organization employs a targeted recruitment strategy or not, organizations can benefit from a thorough evaluation of job advertisements and information that might signal a threat or boost to female candidates' social identity. The current study, together with previous studies (Owuamalam & Zagefka, 2011; Wille & Derous, 2018) report requirements that women might have positive/negative metastereotypes about and can be used as a starting point for this. Tools such as automatic gender recognition software (AGR, like <https://textio.com/>) can be used and developed to facilitate the process of analyzing job ads.

In terms of the exact wording of person requirements, study results showed that effects of wording on women's attraction levels depended on the type of requirement in the job ad (i.e., leadership competences, behavioral competences or technical competences) and their metastereotyped connotation (i.e., positive or negative). While job ad optimization might include using a dispositional wording ('you are ...') of positively metastereotyped requirements, this type of wording is only more attractive for women if they indeed hold positive metastereotypes about the requirements. It might thus be better for organizations to choose a strategy that minimizes the risk that women do hold negative metastereotypes about certain requirements and use a behavioral wording of requirements, especially when considering promotion of internal candidates, for whom effects of negative job ad information might be even larger than for external candidates (Anderson, 2011). Finally, those requirements that are not very crucial for the job should be avoided since they could wrongly discourage women to apply. Alternatively, requirements could be labeled as 'must haves' and 'nice to haves' (Van Vliet, 2007) to explicitly stress this difference in importance. Investigating the negatively or positively metastereotyped connotation of requirement for women, changing the wording of requirements into a more behavioral wording, and removing or labelling

the ‘nice to have’ requirements are relatively cost-effective ways of improving job advertisements and provide a first step in obtaining a more gender-diverse candidate pool.

Conclusion

Through an experimental study among 432 women at a large, public organization, we showed that negatively metastereotyped person requirements were less attractive for women and in turn lowered their application intention compared to positively metastereotyped requirements. Moreover, the exact wording of these requirements affected women’s job attraction such that job attraction was higher for positively metastereotyped requirements that were worded in a dispositional way compared to a behavioral way, but only for those competences that were perceived as the most important (i.e., behavioral competences). We thus studied an alternative and innovative aspect of the glass ceiling and considered both subtle glass ceiling mechanisms and ways to overcome the glass ceiling. This has – to the best of our knowledge – not been studied before and presents a promising insight for both the literature and practitioners

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Appendix

Pilot Study

We conducted a pilot study using verbal protocol analysis, in which we interviewed female executives at the organization to uncover the positive and negative metastereotypes they hold about the three types of competences required by the organization, their preferences regarding the wording of these competences (dispositional versus behavioral) and whether the relative importance they attributed the three types of competences (i.e., leadership competences, behavioral competences or technical competences).

Sample

We contacted women working at the two highest executive levels of the organization as these female executives are familiar with (job ads for) top-level positions. Of the 19 women that we interviewed, one was situated at the top executive level in the organization (N-level) and the other 18 were situated on the middle executive level (N-1- level) and hence potential internal candidates for a promotion to the top-level. Participants' age ranged from 38 to 62 years old with an average of 48.22 years ($SD = 7.20$), they all identified as female and were of Caucasian/White origin.

Materials and Procedure

Study materials of the pilot study were job ads for a top-level position at the organization that included three categories of person requirements that each refer to specific competences: leadership, behavioral and technical competences. The job ads also included additional information such as the offer and required leadership experience, but no specific information about the department in which the position was situated (i.e., participants were instructed to imagine that the department suited their interests). Although the original person requirements were displayed, we

worded them either in a dispositional way or in a behavioral way (Semin & Fiedler, 1991; see Hypothesis 4a and 4b).

Semi-structured interviews ($M_{duration} = 78.88$ minutes, $SD = 13.08$ minutes) were conducted online through MS Teams¹⁶. At the start of the interview participants signed an informed consent. With participants' permission, each interview was audio-recorded and transcriptions were made with help of the speech-to-text software Trint (<https://trint.com>). During the interview, participants were presented job ads for a top-level position at the organization and were instructed to *think aloud* while evaluating the job ads. This allowed us to analyze interview content by means of verbal protocol analysis (i.e., VPA), a process-tracking technique where participants have to think aloud to uncover their judgment and decision-making processes (Barber & Roehling, 1993). Similarly, we used VPA to investigate how candidates evaluated job advertisement characteristics and decided whether to apply for the position or not. Additionally, we further questioned participants about positive and negative metastereotypes and their wording if this information was not spontaneously provided (for metastereotypes: "We like you to think about how most men view women, which of these competences do you believe that men generally think women are good at?"; for wording: "Which of these two ways of wording competences do you prefer and why?"; derived from Finkelstein et al., 2013 and Owuamalam & Zagefka, 2011). Participants' verbal protocols and answers to the additional questions were subsequently content-coded by three independent raters (Rater 1 was a 26 year old doctoral candidate of Caucasian/White origin; Raters 2 and 3 were 23 year old students of Caucasian/White origin). After the data were coded independently, the theme structures were compared and differences were elaborately discussed among raters until agreement was reached. To answer the final research question regarding the importance of the three types of

¹⁶ Interviews were conducted in March – April 2020, during the first lockdown of the COVID-19 pandemic and were therefore conducted through MS Teams.

competences for women in their decision to apply for the position or not, the three coders additionally calculated participants' mentions of the different job ad elements in the verbal protocols. Specifically, the job ads consisted of five different sections or elements, i.e., [1] the leadership competences, [2] behavioral competences, [3] technical competences, [4] the required leadership experience, and [5] what the organization had to offer. Based on Barber and Roehling (1993), a sum score was calculated for each of the job ads sections based on (a) how many times the section was mentioned, (b) how many positive or negative evaluations the section received and finally, (c) whether the section was mentioned first or not.

CHAPTER 5

OLDER AND YOUNGER JOB SEEKERS' ATTENTION TOWARDS METASTEREOTYPES IN JOB ADS^{17,18}

Building on social identity theory and cognitive models on information processing, the present paper considered whether and how stereotyped information in job ads impairs older/younger job seekers' job attraction. Two eye-tracking experiments among 54 older job seekers (Study 1) and 49 younger job seekers (Study 2), investigated effects of negatively metastereotyped personality requirements (i.e., traits) on job attraction and whether attention to and memory for negative information mediated these effects. Within-participants serial mediation analyses showed that job attraction was lower when ads included negatively metastereotyped personality requirements and that more attention was allocated towards these requirements. It is concluded that organizations better avoid negatively metastereotyped personality requirements in job ads that capture older/younger job seekers' attention and lower job attraction. Research could further explore the social-cognitive mechanisms that might explain these findings given that attention and recall of negative information did not mediate effects of negative metastereotyped information in job ads on job seekers' job attraction.

¹⁷ This chapter is based on: Koçak, A., & Deros, E. (in preparation). *Older and younger job seekers' attention towards metastereotypes in job ads.*

¹⁸ A previous version of this paper was presented in: Koçak, A., & Deros, E., & Schellaert, M. (2021, October 15). *What are they looking at? Older job seekers' attention patterns to metastereotypes in job ads.* [Paper presentation]. The 15th Annual Dutch-Flemish Research Meeting on Personnel Recruitment and Selection, Groningen, The Netherlands; and Koçak, A., & Deros, E., & Schellaert, M. (2021, October, 27–29). *What are they looking at? Older job seekers' attention to metastereotypes in job ads.* [Poster presentation]. The 6th Biennial Age In The Workplace Small Group Meeting, Groningen, The Netherlands.

Recruiting job seekers is crucial for organizational success (Chapman et al., 2005), especially given specific challenges of the 21st century such as an ongoing ‘war for talent’ (Kwon & Jang, 2022 for a review; McDonnell, 2011; Schaarschmidt et al., 2021) and an increasingly diversified population (European Commission, 2020). To this day, not all socio-demographic group members are equally represented in the work force. Job seekers that are particularly older and younger than the prime-aged group still experience specific difficulties when entering the work force compared to prime-aged individuals (OECD, 2020, 2021). While most studies investigate hiring discrimination of these two age-group members (i.e., select-out; Farber et al., 2019; Zaniboni et al., 2019), the present study investigates whether older and younger job seekers might also self-select out based on stigmatizing information in job ads. We thus shift a focus on hiring decision by the organization (e.g., selecting-out older job seekers) to a focus on attitudes/decisions by job seekers (i.e. older job seekers self-selecting out from selection procedures) and thereby address a call for more research on job seekers’ perceptions and experiences during recruitment (Born et al., 2018; Breugh, 2013).

One of the most frequently used recruitment sources to attract job seekers’ attention, is the job advertisement with information about the organization, the job, and the personality requirements for that job (Walker & Hinojosa, 2013). A crucial function of job advertisements is to attract job seekers’ attention and evoke their interest (Breugh, 2008; Evertz & Süß, 2017). To that end, research has established how information about the job/organization should be conveyed to job seekers in job ads to attract job seekers for a position (e.g., how specific or realistic the information should be; see Breugh, 2013 for a review). However, some information in job ads might also capture job seekers’ attention in a negative way and lower their attraction to the advertised job. Surprisingly, this has been investigated to a lesser extent and is considered here.

This study particularly investigates whether and how negative metastereotyped information in job ads affect older and younger job seekers' attraction to the advertised job. Imagine, for instance, a job advertisement that includes the trait 'flexible' in the personality requirements section. Older job seekers might attribute more attention to those traits in job ads that they think others (like recruiters) have negative stereotypes about. When reading 'we are looking for *flexible* candidates', older job seekers might believe that others think that older workers are *not flexible*. Similarly, younger job seekers' attention might be captured by traits such as 'we are looking for *punctual* candidates', when they believe that others think that younger workers are not punctual. These stereotypes that group members think that out-group members hold about them are called 'metastereotypes' (Vorauer et al., 1998) and might negatively affect job seekers' job attraction when displayed in job ads (Wille & Derous, 2017, 2018). Therefore, as a first goal, we investigated whether negatively metastereotyped personality requirements (i.e., traits) in job ads are less attractive for older and younger job seekers than not negatively metastereotyped personality requirements.

While Wille and Derous (2017, 2018) showed these effects for ethnicity and gender, the present study considered job seekers' age and additionally investigated the underlying cognitive processing of negative metastereotypes in job ads that has –to the best of our knowledge– not been considered before. Typically, negative and threatening information captures a reader's early attention more (Kaiser et al., 2006) and is better recalled (Kanar et al., 2010) than non-threatening information. Hence and based on social identity theory (Turner et al., 1994), we investigated whether negatively metastereotyped personality requirements in job ads might capture job seekers' attention more and are better recalled than not negatively metastereotyped personality requirements in job ads. Therefore, as a second goal, we not only investigate whether, but also *how* negatively metastereotyped personality requirements in job ads affect

older and younger job seekers' job attraction by investigating whether this effect is mediated by attention and recall.

To investigate the two research goals, we conducted two eye-tracking experiments, in which job seekers' eye-movements and fixations were studied to uncover visual attention patterns toward (not) negatively metastereotyped personality requirements in job ads for two specific groups of job seekers, namely older job seekers (i.e., aged 50 or more; McCarthy et al., 2014; Study 1) and younger job seekers (i.e., aged 30 or less; Arnett, 2011; Study 2). Below we first discuss effects of metastereotyped information on job seekers' job attraction, followed by a discussion on cognitive mechanisms that might explain this.

Metastereotypes in Job Ads

Stereotypes are defined as beliefs about the characteristics of members of a certain group (Hilton & von Hippel, 1996). These groups can be based on socio-demographic variables such as one's gender, one's ethnicity, or one's age. Age stereotypes, for example, include the idea that younger people are typically more irresponsible and lazy, while older people are typically less flexible and less agreeable (Finkelstein et al., 2013; Posthuma & Campion, 2009; Truxillo et al., 2014). Interestingly, older and younger people might be *aware* of these age stereotypes and might believe that other people hold these about their age group. This is referred to as metastereotypes, or "beliefs regarding the stereotype that out-group members hold about his or her own group" (Vorauer et al., 1998, p. 917). For instance, research showed that older workers believed that younger workers find them stubborn, while younger workers believed that older workers find them irresponsible (Finkelstein et al., 2013). Note that these cognitions can shape individuals' attitudes toward and interactions with out-group members, regardless of whether they are true or not.

During recruitment procedures, job seekers can activate negative age-related metastereotypes about information in job ads, which might affect their attraction to the job and

organization. That is, building on social identity theory (Turner et al., 1994), when reading job ads, job seekers use certain cues in job ads as signals that inform them about the organization to evaluate whether these organizational characteristics fit with their social identity, for example, based on their age. Traits in job ads that one holds negative metastereotypes about might signal a threat to job seekers' social age identity and hence lower their job attraction (Koçak et al., 2022). Indeed, research has shown that negative age metastereotypes might pose a threat to older workers and might hence negatively affect their attitudes toward the organization (Oliveira & Cabral Cardoso, 2018). In the context of job advertisements, evidence for this idea was shown for women and ethnic minority job seekers. First, negative metastereotypes in job ads lowered women's job attraction compared to job ads without negative metastereotypes (Wille & Derous, 2018). Second, stereotyped language in job ads lowered women's job appeal (i.e., positive perception of the job; Gaucher et al., 2011) and their intention to apply for the job (Born & Taris, 2010). Finally, for ethnic minority job seekers, it was shown that negative metastereotypes in job ads also decreased their job attraction (Wille & Derous, 2017). Similarly, for older and younger job seekers who were shown to each hold specific negative age metastereotypes related to their own age group (Finkelstein et al., 2013), we expected:

Hypothesis 1. Job seekers' job attraction is lower for job ads with negatively metastereotyped traits than for those without negatively metastereotyped traits.

Early Attention

Research showed that people have a vigilance for cues that are negative or threatening (Veerapa et al., 2020). This vigilance implies that *early* in one's cognitive processing of information, there might be an attention/detection bias toward negative, threatening information (i.e., 'early attention'; Skinner et al., 2018). While this early attention bias towards negative information is often investigated as a mechanism underlying anxiety symptoms, it is expected

among healthy individuals as well, stemming from the historic survival value of threatening information (Mathews & Mackintosh, 1998). Evidence for this attention bias was shown for different types of threatening cues such as: pictures of death/suffering (Veerapa et al., 2020), pain cues (Crombez et al., 2013), angry faces (Fox et al., 2000; Ohman, Lundqvist, et al., 2001), threatening animals (Ohman, Flykt, et al., 2001; Tipples et al., 2002), and even visual stimuli that signal an aversive white noise (Koster et al., 2004). Interestingly, vigilance for negative information has also been shown for threats to one's social identity, for instance for words that activated sexism for women (e.g., *ho, bitch*; Kaiser et al., 2006). The present study aimed to investigate an attention bias toward social-identity threatening words in a recruitment context, i.e., when recruiting job seekers. Studies have reported that stigmatizing information (e.g., facial stigma) has an attention-grabbing effect for recruiters during the interview stage and can hence hurt candidates' chances (Buijsrogge et al., 2021; Madera & Hebl, 2012). In the current study, we investigated whether *job seekers'* attention toward stereotyped cues in stages prior to the interview stage can hinder their chances through self-selection processes (Born & Taris, 2010; Gaucher et al., 2011; Wille & Derous, 2017, 2018).

While different methods and tasks can be used to measure one's attention to stimuli (e.g., attentional search task; Posner cueing tasks and modifications; Koster et al., 2004), the current study measured participants' eye-movements and fixations by means of eye-tracking technology. Eye-tracking is often used in a marketing context to study people's visual attention toward information in advertisements, as well as in more fundamental research on reading tasks (e.g., Dirix & Duyck, 2017; Duchowski, 2017). In the context of job-seeking, we only know of a few studies that investigated attention toward job ads through eye-tracking methodology. First, Pfiffelmann et al. (2020) investigated potential job seeker's attention patterns toward personalized (with participants' name and picture) versus not-personalized information in online Linked-in job advertisements. Second, an unpublished manuscript (Kalk et al., 2018)

also employed eye-tracking technology to measure eye-movements toward job ads on different job posting sites. Finally, Hilberink-Schulpen et al. (2016) investigated visual attention patterns toward a foreign language (i.e., English) in job ads written in a native language (i.e., Dutch) by means of eye-tracking. Surprisingly, no study investigated attention towards negative information in job ads. Hence, we employed eye-tracking technology to measure older and younger job seeker's early attention patterns toward job ads with and without negatively metastereotyped traits. Specifically, we expected more early attention toward the former job ads, as negative age metastereotypes might threaten older/younger job seekers' social identity (Kaiser et al., 2006; Oliveira & Cabral Cardoso, 2018). For older and younger job seekers, we thus expected:

Hypothesis 2a. Job seekers allocate more early attention toward negatively metastereotyped traits than not negatively metastereotyped traits in job ads.

Because job seekers have limited information about the job/organization during recruitment, they use cues in job ads as signals about what the organization values, which in turn affects job seekers' attraction to the advertised job (Highhouse et al., 2007). Negatively metastereotyped traits portrayed in job ads might act as cues that pose a threat to job seekers' social identity and capture job seekers' attention in a negative way, which may lower job attraction. Indeed, previous studies support this signaling purpose of cues during recruitment (e.g., Carpentier et al., 2019; Celani & Singh, 2011 for a review; Ganesan et al., 2018; Wille & Deros, 2017, 2018; Younis & Hammad, 2021), but did not directly measure the cognitive processes that underly these effects (Wille & Deros, 2017). Barber and Roehling (1993) employed a thinking aloud interview method to investigate how applicants process job ad information while reading job ads and how this effected their decisions to apply for the job ad. More recently, Pfiffelmann et al. (2020) used eye-tracking methodology to investigate how personalization use in job ads affected job seekers' attention toward job ads, and in turn their

attitudes toward the job. In line with studies that report a positive link between attention to advertisement information and attitudes toward that information (Barber & Roehling, 1993; Pfiffelmann et al., 2020) we expected more visual attention toward negative/threatening information in the job ad to lower job attraction of both older and younger job seekers:

Hypothesis 2b. Early attention towards job ads with negatively metastereotyped traits lowers job seekers' attraction to these advertised jobs.

Memory

Stereotyped cues presented to individuals might impair cognitive functioning (Steele & Aronson, 1995), like one's memory or information recall. For instance, women's working memory in terms of word recall decreased in a situations with cues that activated stereotype threat compared to neutral, non-threatening situations (Johns et al., 2008). Similarly, during job interviews, interviewers showed lower recall of information exchanged by job applicants who held stigmatized cues (like a port-wine stain; Buijsrogge et al., 2021; Madera & Hebl, 2012). Studies have also shown that recall levels of both older-aged people (see Lamont et al., 2015 for a meta-analysis) as well as younger-aged people (Popham & Hess, 2013) can be impaired when confronted with cues that activate negative age stereotypes (i.e., task instructions or explicit statements that imply that older/younger people tend to perform worse). Building on self-regulation theory (Muraven & Baumeister, 2000), dealing with negatively stereotyped information requires more self-regulating processes and hence may deplete cognitive resources that are needed for working memory tasks, such as recall (Inzlicht et al., 2006). For instance, Johns et al. (2008) measured whether the effect of threat-related stimuli decreased working memory through a reading-span task in which participants were first presented with new (non-threatening) words that they were later asked to recall and found that participants in the threat condition recalled fewer of these non-threatening words. In Buijsrogge et al. (2021) memory for general interview content (e.g., candidate information like work experiences) was impaired

when interviewers were presented with stigmatized versus non-stigmatized candidates. In the present study, we investigated the link between stereotyped information and memory in an earlier stage of the job seeking process, namely in the recruitment stage. We aimed to directly compare job seekers' memory for stereotyped versus non-stereotyped information in job ads. That is, Kanar et al. (2010) showed that negative information about the job/organization (i.e., transferred through word of mouth or a business press articles) was better recalled by job seekers than positive information during the pre-hiring stage. In a similar vein, we expected for older and younger job seekers:

Hypothesis 3a. Job seekers have better recall for negatively metastereotyped traits in job ads compared to not negatively metastereotyped traits.

It is further expected that more attention toward negative metastereotypes will be related to a better recall of negative metastereotypes. Building on Baddeley and Hitch (1974)'s working memory model, Theeuwes et al. (2009) reviewed literature on the link between attention and memory. The authors concluded that ample evidence has shown that more visual attention to a certain location leads to a better transfer of information on that location into the working memory. This general link between attention toward information and memory, has also been shown in the context of advertisements (Wedel et al., 2000; Wedel & Pieters, 2006) and for those cues that capture one's visual attention (Belopolsky et al., 2008). Negative metastereotypes in job ads that are expected to capture older/younger job seekers' early visual attention might therefore also be better recalled by older/younger job seekers.

Hypothesis 3b. Early attention towards job ads with negatively metastereotyped traits results in better recall for these requirements.

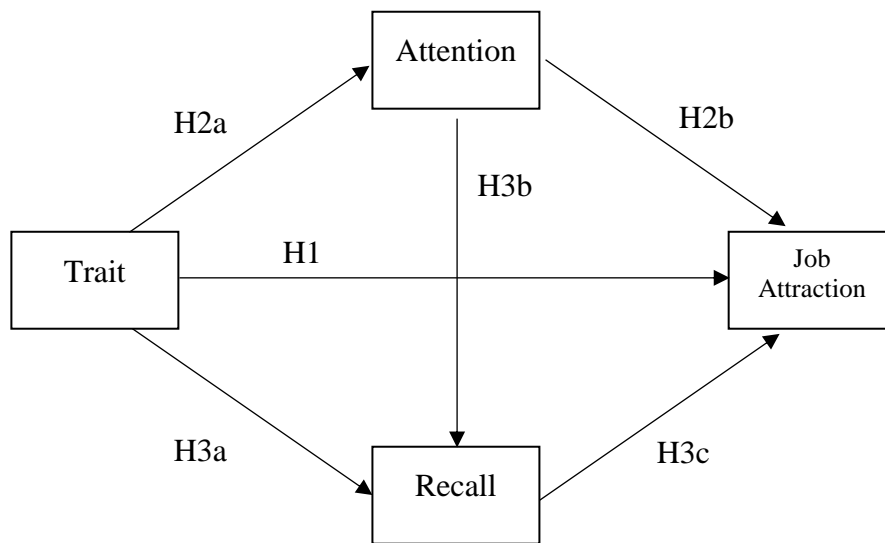
Although Kanar et al. (2010) showed that negative information about the job/organization lowered job seekers' organizational attraction and was better recalled than positive information, they did not consider the relationship between recall and attraction. The

memory-for-facts model (Ostrom et al., 1980) expected that information that individuals can recall (e.g., about advertisements) affects their attitudes. However, over the years, scholars found that the relationship between information recall and attitudes might depend on the exact reading or processing task and should therefore be investigated in a multitude of contexts/situations to further establish the boundary conditions of this relationship (Bao et al., 2012; Bizer et al., 2006; Carpenter & Boster, 2013; Lichtenstein & Srull, 1985; Loken & Hoverstan, 1985). The present study addresses this call by studying the relationship between recall and job attraction in the context of job advertisements. That is, studies have shown that job seekers' attitudes are affected by how job ad information is processed (Breugh, 2013; Jones et al., 2006; Roberson & Collins, 2005), but operationalized elaboration of information processing more indirectly through the level of specificity of job ad information (i.e., more specific information is expected to be processed more elaborately; Roberson & Collins, 2005) or through a high motivation and ability among applicants (i.e., it is expected that highly able and motivated individuals process information more elaborately; Jones et al., 2006). The present study aims to investigate information processing in job ads in a more direct way, through measuring older/younger job seekers' attention to and recall of negatively metastereotyped personality requirements:

Hypothesis 3c. Better recall of negatively metastereotyped traits in job ads lowers job attraction for job ads with negatively metastereotyped traits.

Mediating Effects

Finally, given that the present study aimed to test the underlying cognitive mechanism in terms of attention and recall to explain *why* negative metastereotypes lower attraction for older/younger job seekers, we tested a serial mediating model with attention and recall as mediators (See Figure 1).

Figure 1.*Serial Mediation Model and Hypothesis*

First, building on Hypotheses 1-3, we investigated whether attention mediated the relationship between type of trait in job ads (negatively metastereotyped or not) and recall for older/younger job seekers:

Hypothesis 4a. Job seekers allocate more early attention toward negatively metastereotyped traits than toward not negatively metastereotyped traits in job ads, which, in turn, increases recall of negatively metastereotyped traits.

Second, the mediating mechanism of working memory between attention to stigmatized cues and attitudes was also shown in studies in the context of interviews with job candidates (Buijsrogge et al., 2021; Madera & Hebl, 2012). In the present study, we aim to test a similar mechanism in the recruitment stage for older/younger job seekers:

Hypothesis 4b. More early attention to negatively metastereotypes in job ads increases recall of negatively metastereotyped traits and in turn, lowers job attraction for job ads with negatively metastereotyped traits.

To test the hypotheses we conducted two eye-tracking experiments. Since research showed that both older and younger people might experience threat when being confronted with

negative cues and hence experience consequences for their cognitive processing (Lamont et al., 2015; Popham & Hess, 2013), we tested identical paths for both older (Study 1) and younger (Study 2) job seekers. However, as the content of the metastereotypes differs for older and younger job seekers (Finkelstein et al., 2013), we conducted two separate experiments in which we used negative metastereotypes that are specific for either older or younger job workers, as further explained in Studies 1 and 2.

Study 1

Study 1 investigated whether *older* job seekers are less attracted to, allocate more early attention to and can better recall negatively metastereotyped traits in job ads, compared to not negatively metastereotyped requirements as well as mediating effects of attention and recall. Older participants were older than 50 years, based on McCarthy et al. (2014) who found that managers typically consider someone an ‘older’ worker when they aged 50 or older and research that established that people older than 50 experience specific metastereotypes and discrimination from that age on (Fasbender & Gerpott, 2020; Finkelstein et al., 2013). The current study was approved by the Ethical Commission of Ghent University in accordance with the Helsinki declaration [Special Ethical Protocol no 2020/77].

Method of Study 1

Participants

A total of 54¹⁹ older job seekers ($M_{\text{age}} = 54.74$ years, $SD_{\text{age}} = 3.43$, 100% older than 50 years; 66.7% women; 100% White/Caucasian ethnicity) were recruited via professional networks (i.e., via official social media accounts of the research consortium) and snowballing method. Participants received financial compensation (i.e., €10) for their participation in the study.

¹⁹ A priori executed power analyses (G*power version 3.1.9.2) for a power of .95 showed that this sample size was sufficient for retrieving small effect sizes ($\eta_p^2 = 0.04$) with $\alpha = .05$.

Design and Measures

An eye-tracking experiment among older job seekers was conducted that featured a two-condition within-participants design, in which personality requirements in job ads (*trait*: negative metastereotypes vs. not negative metastereotypes; see paragraph ‘Stimuli’ for examples) were manipulated and job attraction, attention and recall were the outcome variables. Job attraction was measured after each job ad with three items based on Van Hooft et al. (2006), e.g., “I am attracted to the advertised job”, on 5-point Likert scale with 1 = *strongly disagree* to 5 = *strongly agree*. Cronbach’s alpha for the items ranged from .94 to .97 in the condition with negative metastereotype ($M_{\text{cronbach's alpha}} = .96$) and .88 to .97 in the condition without negative metastereotype ($M_{\text{cronbach's alpha}} = .94$).

In order to measure early visual attention to traits in job ads, compared to early visual attention to other job ad information, we divided study materials (i.e., job ads) into seven interest areas. Visual attention toward each of these areas was measured through eye fixations using an eye-tracker (see below). More specifically, to measure participants’ early attention to the profiles, we measured their *first run dwell time* (Skinner et al., 2018), i.e., the sum of the duration (in milliseconds) of all fixations within the interest area of the profile during participants’ first pass through the job ad, and compared that to their first run dwell time to the other interest areas. We then calculated the difference between participants’ first run dwell time to the interest area of the profiles and the average of their first run dwell time to all other interest areas.

To measure recall of the traits, we built on Kanar et al. (2010). After reading and rating the job ads, participants were asked to write down the traits that they were able to recall from the profiles in the ads in a two-minute window. Next, manipulation checks were administered to ascertain that our manipulations of the *content* of the traits and their *metastereotyped connotation* were perceived as intended. Example items are “Does the person profile show that

they were looking for an *agreeable* or *conscientious* person? [choose one option]”, and “To what extent do you believe that younger workers think that older workers are agreeable?”, with 1 = *strongly disagree* to 5 = *strongly agree*. Finally, demographical question regarding participants’ age (in years) and gender (0 = *male*; 1 = *female*, 2 = *other*) were completed.

Stimuli

Study materials were fictional job advertisements. Building on Hilberink-Schulpen et al. (2016), we distinguished the following sections in the job ads (see Appendix): picture, logo, title, company information, profile with personality requirements (i.e., traits), job offer and contact information. Manipulations were situated in the profile section; profiles contained HEXACO-traits (Ashton & Lee, 2009; de Vries et al., 2009) that older job seekers held either negative or no negative metastereotypes about. These negatively metastereotyped and not negatively metastereotyped traits for older people were developed and pilot tested in a previous study within this research project. A detailed description of the procedure and results of this pilot study can be found in Appendix.

Results of the pilot study showed that older job seekers hold a negative metastereotypes about the HEXACO-trait Agreeableness, and no negative metastereotype about the HEXACO-trait Conscientiousness. Subsequently, the traits “obedient”, “flexible”, “friendly”, “patient”, and “compliant” were selected for the condition with a negative metastereotyped connotation (Agreeableness) and “punctual”, “perfectionistic”, “orderly”, “disciplined”, and “dutiful” for the condition without a negative metastereotype (Conscientiousness). The (not) negatively metastereotyped personality requirement was supplemented with other requirements that were held constant across job ads (i.e., required language proficiency and relevant educational degree for the advertised job). No organization name or type of organization/industry was mentioned (“*Company A*”, “*Company B*”), as research has suggested that organizational familiarity might affect job seekers’ application intention (Ganesan et al., 2018). Similarly, no job characteristics

were mentioned as those characteristics might differentially attract older job seekers (Truxillo et al., 2012). A short company description of the company was held constant across job ads, as well as the offer and contact information. The logo was adjusted based on the letter of the company “A” for company A, “B” for company B etc. (see Appendix).

Procedure and Experimental Apparatus

At the start of the experiment, participants signed an informed consent and were positioned in front of the eye-tracker. They placed their head in a chin- and headrest to minimize head movements. Once seated, they performed a 9-point calibration procedure. After a successful calibration, participants were instructed to carefully read and evaluate the presented job advertisements. They were also instructed to imagine that they were actively looking for a job and that the parts of the job ads that were not displayed would suit their interest/qualifications. A total of ten job ads (five for each experimental condition) were presented to participants in a randomized order. After each job ad, participants answered the three items regarding job attraction on the computer screen. On completion of reading all job ads, participants moved away from the eye-tracker and completed the recall question and additional manipulation checks/demographical questions through an online survey on a different computer. Participants' eye movements and fixations were measured by means of the Eyelink 1000 (SR Research, Canada; see Table 1) with a spatial resolution of less than 1/4 degrees of visual angle at a sampling rate of 1000Hz. Viewing was binocular, but only the right eye was tracked; Job advertisements were presented on a 1920x1080 Beng XL2411Z LED-monitor at a viewing distance of 95cm with a refresh rate of 144 Hz. Additional to the calibration at the start of the experiment, eye-tracking accuracy was also measured during the experiment by mean of drift checks. When eye-tracking accuracy was low (i.e. higher average error than 0.5°), the experiment was terminated and data was not included in the analyses.

Table 1.*Description and Performance estimates of EyeLink 1000 Tower and Desktop Mount*

	EyeLink 1000 Tower Mount performance estimates	EyeLink 1000 Desktop Mount performance estimates
Measure		
Max. Sampling Rate	2000 Hz (Monocular)	2000 Hz (Monocular)
Tracking principle	Pupil with Corneal Reflection	Pupil with Corneal Reflection
Accuracy	Down to 0.15°; 0.25° – 0.5° typical	Down to 0.15°; 0.25° – 0.5° typical
Resolution	0.01° RMS, micro-saccade resolution of 0.05°	0.01° RMS, micro-saccade resolution of 0.05°
Sample Delay	$M < 1.34$ msec, $SD < .2$ msec	$M < 1.34$ msec, $SD < .2$ msec
Real-Time data	1.4 msec ($SD < 0.2$ msec) @ 2000 Hz	1.4 msec ($SD < 0.2$ msec) @ 2000 Hz

Results of Study 1

Preliminary Analyses

Table 2 shows descriptives, reliabilities, and correlations among study variables.

Generalized Estimating Equation analysis (SPSS, v26) showed that older participants perceived the traits as we intended. That is, participants perceived those traits referring to Conscientiousness significantly more as Conscientiousness than Agreeableness, compared to the traits referring to Agreeableness, $b = 4.34$, $SE = 0.37$, Wald $\chi^2(1) = 133.00$, $p < .001$. Further, participants believed that younger people find older workers more conscientious ($M = 3.80$, $SD = 0.59$) than agreeable, $M = 2.92$, $SD = 0.62$, $F(1, 53) = 91.94$, $p < .001$, $\eta_p^2 = .63$.

Hypothesis Testing

A within-participant mediation analysis through path analysis (Montoya & Hayes, 2017) using the MEMORE macro (V2.1; Montoya, 2019) was performed to test Hypothesis 1 to 4. This allowed us to test the serial mediation model with attention and recall as mediators. Results are displayed in Figure 2.

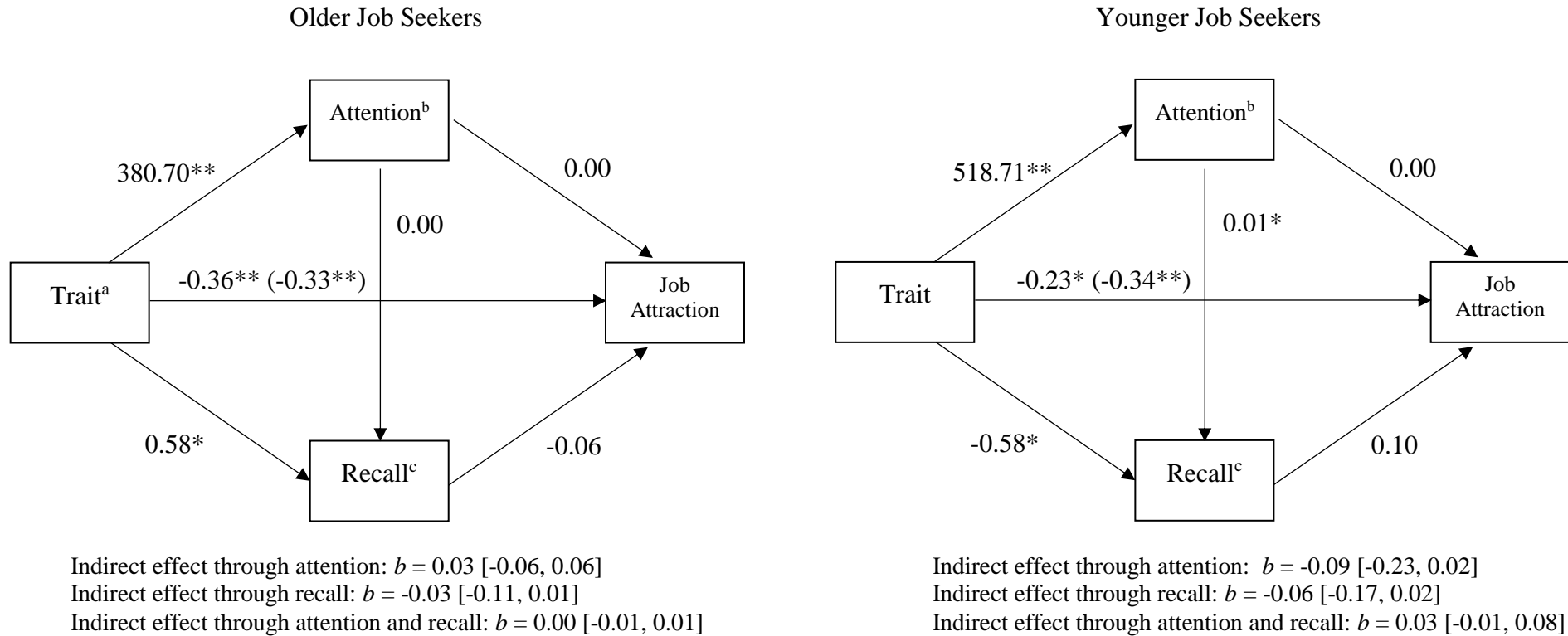
Table 2.*Descriptives, Internal Consistency and Correlations of Study Variables*

	Study 1		Study 2		1	2	3	4	5	6	7	8
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>								
1. Job Attraction negative MS ^a	3.00	0.61	2.88	0.48	(.96)/(.88)	.41**	-.23	-.16	.02	-.19	.04	-.12
2. Job Attraction not negative MS ^a	3.36	0.64	3.22	0.51	.68**	(.94)/(.91)	.20	.15	.23	.20	.35*	-.14
3. Early attention negative MS ^a	1340.89	1268.72	1190.59	919.35	-.09	.10	(--)	.54**	.27	.07	-.00	.10
4. Early attention not negative MS ^a	923.87	1082.28	671.88	540.56	-.09	.09	.70**	(--)	.28	.13	.04	.06
5. Recall negative MS ^a	2.15	0.94	1.55	1.00	-.16	-.03	.01	.04	(--)	.28	.15	.07
6. Recall not negative MS ^a	1.59	1.08	1.81	1.05	-.23	-.26	-.09	-.10	.13	(--)	.18	-.09
7. Gender ^{b, c}	0.67	0.47	0.67	0.47	.33*	.17	.08	.25	.26	.09	(--)	-.41**
8. Age	54.74	3.43	23.67	2.49	-.09	.00	-.00	.02	-.00	-.25	-.13	(--)

Note. Results for Study 1 are displayed under the diagonal ($N = 54$); Results for Study 2 are displayed above the diagonal ($N = 49$). Results on the diagonal represent Cronbach's alfa for older and younger job seekers, respectively ($\alpha_{old}/\alpha_{young}$). ^a MS = Metastereotype. ^b Spearman correlation. ^c Gender: 0 = male; 1 = female. ^e Age: all job seekers were 50 years or older in Study 1 and all job seekers were 30 years or younger for Study 2. * $p < .05$; ** $p < .01$

Figure 2

Serial Mediation Models for Older Job Seekers (Study 1) and Younger Job Seekers (Study 2)



Note. $N_{\text{Study 1}} = 54$; $N_{\text{Study 2}} = 49$; Unstandardized coefficients are reported. The coefficients in parentheses represent the total effect of trait on job attraction, i.e., the direct and indirect effects. ^aTrait 0 = not negatively metastereotyped trait, 1 = negatively metastereotyped trait. ^bAttention: the sum of the duration (in milliseconds) of all fixations within the interest area of the profile during participants' first pass through the job ad, compared to sum of the duration (in milliseconds) of all fixations within the other interest areas. ^cRecall: amount of remembered traits in two-minute window. * $p < .05$. ** $p < .01$

First, results showed that older job seekers were significantly less attracted to jobs when the job ad included negatively metastereotyped traits compared to when they included not negatively metastereotyped traits, $b^{20} = -0.36$, $SE = 0.07$, $t(53) = -5.30$, $p < .001$, supporting Hypothesis 1.

Next, Hypothesis 2a predicted that older job seekers allocate more early attention to negatively metastereotyped traits in job ads compared to not negatively metastereotyped traits and was supported, $b = 380.70$, $SE = 129.47$, $t(53) = 2.94$, $p < .001$. Hypothesis 2b, namely that more early attention toward negatively metastereotyped traits in job ads relates to lower job attraction, was not supported, $b = 0.00$, $SE = 0.00$, $t(49) = -0.20$, $p = .84$.

Further, supporting Hypothesis 3a, older job seekers better recalled negatively metastereotyped traits in job ads compared to not negatively metastereotyped traits, $b = 0.58$, $SE = 0.20$, $t(51) = 2.85$, $p = .01$. However, Hypothesis 3b that expected that more early attention to negatively metastereotyped traits in job ads related with better recall, remained unsupported, $b = 0.00$, $SE = 0.00$, $t(51) = -0.27$, $p = .79$. Moreover, contrary to Hypothesis 3c, better recall of negatively metastereotyped traits in job ads was not related with lower job attraction, $b = -0.06$, $SE = 0.05$, $t(49) = -1.11$, $p = .27$.

Building further on previous hypotheses, Hypothesis 4a investigated whether early attention mediates the relationship between type of trait and recall. Results showed that Hypothesis 4a was not supported for older job seekers, i.e., the indirect effect of type of trait on recall through early attention was not significant, $b = -0.01$, bootstrapped $SE = 0.03$, bootstrapped 95% $CI = [-0.06, 0.06]$. Hypothesis 4b further investigated the mediation of recall between early attention and job attraction. As the indirect effect of early attention on job attraction through recall was not significant, $b = -0.03$, bootstrapped $SE = 0.03$, bootstrapped

²⁰ Unstandardized coefficients are reported. No standardized coefficients are reported in MEMORE, since the model relies on difference scores and it's important that the variables stay in their original metric (A. Montoya, personal communication, February 13, 2022).

95% CI = [-0.11, 0.01], Hypothesis 4b could not be supported for older job seekers. Moreover, the indirect effect of type of trait on job attraction through attention *and* recall was also not significant, $b = 0.00$, bootstrapped $SE = 0.00$, bootstrapped 95% CI = [-0.01, 0.01].

Discussion of Study 1

In line with predictions from social identity theory (Turner et al., 1994) and previous findings among women and ethnic minorities, older job seekers were less attracted to jobs when job ads contained negatively metastereotyped traits. Older job seekers indeed allocated more early visual attention toward negative metastereotypes in job ads (Kaiser et al., 2006) and better recalled the negative metastereotypes compared to the not negative metastereotypes (Kantar et al., 2010). Attention to and recall of negatively metastereotyped traits in job ads was, however, not related to older job seekers' job attraction. We measured job seekers' early attention to investigate a *vigilance* for negative metastereotypes in job ads, yet future research might test whether an early attention bias toward negative metastereotypes in job ads is followed by a different attentional pattern in later stages (e.g., avoidance) and is hence not positively related to working memory and job attraction. Contrary to previous expectations rooted in Baddeley and Hitch (1974)'s working memory model (e.g., Belopolsky et al., 2008; Theeuwes et al., 2009; Wedel & Pieters, 2006), more attention to the negative metastereotypes did not increase recall of negative metastereotypes and no mediating effects of either attention or recall were found. Perhaps other, emotional-motivational processes might explain better why no effects were found and need to be considered in future research. We proceeded testing Hypothesis 1 until 4 for younger job seekers, using (not) negatively metastereotyped traits for younger people.

Study 2

Study 2 investigated the same hypotheses than Study 1 and tested whether *younger* job seekers are less attracted to, allocate more early attention to and can better recall negatively

metastereotyped traits in job, compared to not negatively metastereotyped traits, as well as the mediating mechanisms of attention to and of recall. Participants were all younger than 30 years, based on Arnett (2011)'s life stage transition to young adulthood that is situated around the age of 30y and Finkelstein et al. (2013) who found specific metastereotypes for people younger than 30 years. The method that was used in Study 2 was identical to the method employed in Study 1, unless explicitly stated otherwise.

Method of Study 2

Participants

A total of 49²¹ younger job seekers ($M_{\text{age}} = 23.67$ years, $SD_{\text{age}} = 2.49$, 100% younger than 30 years; 67.3% women, 100% White/Caucasian ethnicity) were recruited through the professional network of the researchers (e.g., social media accounts of the research consortium) and snowballing method. All participants were younger than 30 years. Participants received financial compensation (€10) for their participation in the study.

Design and Measures

We conducted an eye-tracking experiment among younger job seekers that, identically to Study 1, featured a two-condition within-participants design, in which traits in job ads (*trait*: negative metastereotypes vs. not negative metastereotypes) were manipulated and job attraction, attention and recall were outcome variables. Identical measures were used for job attraction [i.e., three items based on Van Hooft et al. (2006), Cronbach's alpha for the items ranged from .84 to .91 in the condition with negative metastereotype ($M_{\text{cronbach's alpha}} = .88$) and .89 until .95 in the condition without negative metastereotype ($M_{\text{cronbach's alpha}} = .91$)], visual attention (i.e., difference in *first run dwell time* to the interest area and to the other interest areas; Skinner et al., 2018), and recall (i.e., recalled requirements in two-minute window; Kanar

²¹ A priori executed power analyses (G*power version 3.1.9.2) for a power of .95 showed that this sample size was sufficient for retrieving small effect sizes ($\eta_p^2 = 0.04$) with $\alpha = .05$.

et al., 2010), and demographical questions. Manipulation checks were completed to test whether our manipulations of the *content* of the traits and their *metastereotyped connotation* were successful. Example items are “Does the person profile show that they were looking for a *conscientious* or *open* person? [choose one option]”, and “To what extent do you believe that older workers think that younger workers are conscientious?”, with 1 = *strongly disagree* to 5 = *strongly agree*.

Stimuli

Similar to Study 1, materials were fictional job advertisements but the manipulation of traits in the profile section was now tailored to younger job seekers: profiles contained traits that younger job seekers held either negative or no negative metastereotypes about. As in Study 1, we developed and pilot tested the traits (see Appendix). Results showed that younger people held a negative metastereotype about the HEXACO-trait Conscientiousness and no negative metastereotype about the HEXACO-trait Openness to Experience. We selected “punctual”, “disciplined”, “deliberative”, “consistent”, and “diligent”, for the condition with negative metastereotype (Conscientiousness) and “inventive”, “creative”, “open-minded”, “sharp-witted” and “versatile” for the condition without negative metastereotype (Openness to Experience). Other requirements were held constant across job ads, just as a short company description, the offer and contact information. No organization name, type of organization/industry or job characteristics were mentioned, and as for the logo, we used was an “A” for company A, etc. (see Appendix)

Procedure and Experimental Apparatus

Study 2 was also approved by the Ethical Commission of Ghent University in [Special Ethical Protocol no 2020/77]. Both the procedure and the experimental apparatus of Study 2 were identical to that of Study 1 (see above).

Results of Study 2

Preliminary Analyses

Table 2 shows descriptives, reliabilities, and correlations among study variables.

Our manipulations were successful: Generalized Estimating Equation analysis showed that younger participants perceived those traits referring to Openness significantly more as Openness than Conscientiousness, compared to the traits referring to Conscientiousness, $b = 4.44$, $SE = 0.33$, Wald $\chi^2(1) = 183.76$, $p < .001$. Further, participants believed that older people find younger workers more open ($M = 3.98$, $SD = 0.58$) than conscientious ($M = 2.53$, $SD = 0.67$), $F(1, 53) = 91.94$, $p < .001$, $\eta_p^2 = .85$.

Hypothesis Testing

Similar to Study 1, we performed a within-participant serial mediation analysis through path analysis (Montoya & Hayes, 2017) with the MEMORE macro (V2.1; Montoya, 2019) to investigate Hypothesis 1 to 4. Results are displayed in Figure 2. First, younger job seekers were significantly less attracted to jobs when the job ad included negatively metastereotyped traits compared to not negatively metastereotyped traits, $b = -0.34$, $SE = 0.08$, $t(48) = -4.37$, $p < .001$, supporting Hypothesis 1.

Further, Hypothesis 2a investigated whether younger job seekers allocate more early attention to negatively metastereotyped traits in job ads compared to not negatively metastereotyped traits and was supported by the data, $b = 518.71$, $SE = 122.82$, $t(48) = 4.22$, $p < .001$. However, more early attention toward negatively metastereotyped traits in job ads did not significantly relate to lower job attraction, providing no support for Hypothesis 2b, $b = -0.00$, $SE = 0.00$, $t(44) = -1.50$, $p = .14$.

Moreover, contrary to Hypothesis 3a, younger job seekers better recalled not negatively metastereotyped traits in job ads compared negatively metastereotyped traits, $b = -0.58$, $SE = 0.21$, $t(46) = -2.78$, $p = .01$. Next, more early attention to negatively metastereotyped traits in

job ads was related with better recall, supporting Hypothesis 3b, $b = 0.01$, $SE = 0.00$, $t(46) = 2.58$, $p = .01$. However, Hypothesis 3c expected that better recall of negatively metastereotyped traits in job ads was related with lower job attraction, but was not supported by the data, $b = 0.10$, $SE = 0.06$, $t(44) = 1.48$, $p = .15$.

Finally, building on Hypotheses 1 to 3, we tested the mediating effects of attention (Hypothesis 4a) and recall (Hypothesis 4b). First, results showed that the indirect effect of type of trait on recall through early attention was not significant, $b = -0.09$, bootstrapped $SE = 0.06$, bootstrapped 95% CI = $[-0.23, 0.02]$, providing no support for Hypothesis 4a. Next, as the indirect effect of early attention on job attraction through recall was not significant, $b = -0.06$, bootstrapped $SE = 0.05$, bootstrapped 95% CI = $[-0.17, 0.02]$, Hypothesis 4b could not be supported for younger job seekers. Similarly to Study 1, the indirect effect of type of trait on job attraction through attention *and* recall was not significant for younger job seekers, $b = 0.03$, bootstrapped $SE = 0.02$, bootstrapped 95% CI = $[-0.01, 0.08]$.

Discussion of Study 2

Similar to Study 1, Study 2 results showed that younger job seekers' job attraction was lower for job ads with negatively metastereotyped traits, compared to job ads with not negatively metastereotyped personality requirements. Younger job seekers also allocated more early attention to negatively metastereotyped personality requirements in job ads. These findings are in line with social identity theory (Turner et al., 1994) and an attention bias toward negative/threatening information (Kaiser et al., 2006). However, unlike Study 1 and findings of Kanar et al. (2010), no support was found for a better recall of negative metastereotypes in job ads in Study 2. That is, while we expected that negatively metastereotyped traits would be better recalled, the opposite relationship was found and not negatively metastereotyped traits were better recalled (i.e., as marked by the negative regression coefficient in Figure 2). This indicates that the effect of negative metastereotypes on memory might depend on age. As in

Study 1, no effects of early attention and recall on job attraction were found and future research initiatives should investigate later or overall attention patterns to negative metastereotypes to provide more insight. Contrary to Study 1, we did find a small positive relationship between attention toward negative metastereotypes in job ads and recall for younger job seekers, in line with predictions from Baddeley and Hitch (1974)'s working memory theory and earlier findings. This might be understood in light of the differential working memory performance that has been observed between older and younger people (see Chai et al., 2018 for a review). Finally, no mediating effects of attention and recall on job attraction were found, job seekers' emotions and motivation might explain this to a further extent.

General Discussion

Compared to prime-aged people, particularly older ($\geq 50y$) and younger ($\leq 30y$) people experience specific obstacles when trying to enter the labor force (OECD, 2020, 2021). Despite legislation that prohibits discrimination against people based on their age (Council Directive 2000/78/EC), studies have shown that older and younger job seekers both experience hiring discrimination (Farber et al., 2019). Remarkably, studies have overlooked more subtle forms of age discrimination in the early stages of the job seeking process. Therefore, the present study investigated whether and how negatively metastereotyped personality requirements in job ads affect older and younger job seekers' attraction during recruitment procedures.

Key Findings

Previous studies showed that female and ethnic minority job seekers' job attraction was lower for job ads with negative metastereotypes (Wille & Derous, 2017, 2018). The present study built on these results and, as a first goal, investigated these effects among older and younger job seekers. First, results of Study 1 and Study 2 confirmed that job attraction was lower for job ads with negatively metastereotyped traits for both older and younger job seekers. That is, job seekers' social identity based on age might also be threatened by negative

metastereotypes in job ads and hence might influence job attraction (Oliveira & Cabral Cardoso, 2018; Turner et al., 1994). Thus, in line with previous findings (Carpentier et al., 2019; Ganesan et al., 2018; Highhouse et al., 2007), job advertisements as tools to attract job seekers might contain signals that can lower attraction for certain groups of job seekers.

Second, while previous studies have investigated the *effect* of negative metastereotypes in job ads on job attraction, the underlying processes have not been considered before and were investigated here, as a second goal of the present study. Results of two experimental eye-tracking studies showed that both older and younger job seekers allocated more early visual attention to negative metastereotypes in job ads and provide support for the attention bias toward negative/threatening cues that has been shown in previous studies (e.g., Crombez et al., 2013; Koster et al., 2004; Veerapa et al., 2020). Interestingly, the present study showed that this attention bias does not only exist for more imminent threats, but also for information that is ego-threatening, or a threat to one's social identity (Kaiser et al., 2006). However, more early attention to negative metastereotypes was not related to lower job attraction for both older and younger job seekers, and attention did not mediate the relationship between type of trait and job attraction, which is not in line with expectations based on previous findings from general advertisements (Pieters & Warlop, 1999; Storme et al., 2015; Tam & Ho, 2006) or job advertisements (Barber & Roehling, 1993; Pfiffelmann et al., 2020). Results might be understood in light of the vigilance-avoidance hypothesis. That is, studies have shown that a vigilance or attention bias toward negative information might be followed by an *avoidance* of that negative information (Mogg et al., 2004; Vassilopoulos, 2005). Hence, an early attention-bias toward negative information might not necessarily always result in a more elaborate procession of that information. Future research should investigate this for negative metastereotypes in job ads. Additionally, while negatively metastereotyped traits were less attractive for older/younger job seekers and captured their attention, the exact mechanism in

which attention affects job attraction might depend on additional factors that were not studied in the present study. For instance, the link between attention toward information and attitudes based on this information might be influenced by personal factors such as one's self-perceptions (Tam & Ho, 2006). Indeed, Finkelstein et al. (2020) showed that individuals' core self-evaluations (i.e., CSE; the general belief in oneself) might affect how older people react toward negative metastereotypes and Koçak et al. (2022) showed that negative metastereotypes might lower older job seekers' specific self-efficacy. Additional research is needed to investigate the role of CSE or self-efficacy on older and younger job seekers' processing of negative metastereotypes in job ads.

Third, building on Kanar et al. (2010), we expected that negatively metastereotyped traits in job ads would be better recalled than not negatively metastereotyped traits in job ads. Remarkably, this was only supported for older job seekers and not for younger job seekers, since we found a significant but negative relationship between type of trait and recall for younger job seekers (see Figure 2). While not in line with our expectations based on social identity theory and previous findings (Lamont et al., 2015; Popham & Hess, 2013), a study by Hehman and Bugental (2013) showed that age stereotypes might also threaten younger people to a lesser extent than older people and hence affect their cognitive performance in a different way. The authors explain this differential reaction to negative age stereotypes in terms of 'life-stage specific' experiences that older and younger people have. That is, younger people continuously grow older and thus become closer to the group of the 'prime-aged' people. Their status in terms of age-stereotypes will therefore improve, which might alter how they process negative age-stereotypes compared to older people whose age-based status will not improve.

Fourth, for both older and younger job seekers, recall did not significantly relate to job attraction and was not a mediator between attention to negative metastereotypes and job attraction. While recall was found to be a mediator in studies the relationship between

stigmatizing information (facial stigma) and interviewer's attitudes toward candidates in an interview setting, this mediation does not seem to uphold for the relationship between stigmatizing information in the form of metastereotypes in job ads and candidates' attitudes about the job (job attraction) in a recruitment setting.

Fifth, based on Baddeley and Hitch (1974), and Theeuwes et al. (2009), as well as previous findings (Belopolsky et al., 2008; Theeuwes et al., 2009; Wedel et al., 2000; Wedel & Pieters, 2006), we expected that more visual attention to negative metastereotypes would be related to a better recall of those negative metastereotypes. This was not the case for older job seekers. Interestingly, we know of two other studies that also found no support for the expected positive relationship between visual attention to textual information and recall (Dirix et al., 2019; Yeari & Broek, 2015). Similar to the relationship between attention and job attraction, the relationship between attention and recall might be different when considering later attentional stages are considered, hence a vigilance-avoidance pattern might explain our current findings. However, for younger job seekers, we did find a positive relationship between visual attention toward negative metastereotypes and recall, in line with previous findings (Belopolsky et al., 2008; Theeuwes et al., 2009; Wedel & Pieters, 2006) and Baddeley and Hitch (1974). Interestingly, the two findings that differed between older and younger job seekers were both related to recall/memory. Indeed, research has vastly shown that individual's working memory generally declines with age and that older participants might perform differently than younger participants on a memory task (see Chai et al., 2018 for a review). However, while this is true for *general* working memory capacity, the effects of negative metastereotypes on older and younger job seekers' working memory was not considered before. While research has touched on the idea that negative versus positive cues might affect memory of older and younger people differently (Oren et al., 2017; Ziaei et al., 2017), results were contradictory and scholars also did not consider cues that are threatening for one's social

identity. We thus contribute by showing that working memory processing of social identity-threatening information might differ between older and younger job seekers.

Further, both in Study 1 and Study 2, recall of negative metastereotypes was not related to job attraction, providing no support for a general link between information recall and attitudes based on that information (memory-for-facts model; Ostrom et al., 1980). Indeed, studies showed that the link between information recall and attitudes depends on certain conditions, such as the exact processing task (Bao et al., 2012; Bizer et al., 2006; Carpenter & Boster, 2013; Lichtenstein & Srull, 1985; Loken & Hoverstan, 1985). The present results indicates that a better recall of negatively metastereotyped information in job ads might not lead to lower job attraction of older and younger job seekers and hence uncovered one boundary condition of the relationship between recall and attitudes (Loken & Hoverstan, 1985).

Finally, and not surprisingly, no serial mediating effect of attention and recall was found for older/younger job seekers, nor did we find individual mediating effects for attention or recall. Job seekers' higher early attention levels to and lower job attraction for negative metastereotypes in job ads indicate that older and younger job seekers' social identity might be threatened by negative metastereotypes in job ads (Koçak et al., 2022). However, we did not measure alternative appraisal mechanisms, nor did we measure job seekers' *emotional* experiences. Finkelstein et al. (2015) suggested that negative metastereotypes might elicit both positive and negative emotions within older/younger job seekers. Since emotions can affect people's attention (McDonnell, 2011), memory (Bower & Forgas, 2001; Phelps, 2006) and attitudes (Grigorios et al., 2022; LeBlanc et al., 2015 for a review; Lerner & Keltner, 2000), it might be interesting to consider job seekers' emotional experiences in future research initiatives. Not only job seekers' emotions, also their motivation might influence job seeker's processing of and attraction to job ads (see Breugh, 2013 for a review; e.g., Roberson & Collins, 2005) and should be considered in the future.

Contributions, Limitations, and Directions for Future Research

While age-related stereotypes might influence recruiters' hiring decisions later in the selection process, age stereotypes might also impair older and younger job seekers' chances earlier, during recruitment procedures. As a first contribution to the literature, the current study thus considered experiences of job seekers during the early stage of the job search process, i.e., while reading job ads and thereby focused on demographic groups that tend to be overlooked (i.e., older and younger job seekers). Second, previous studies on the effects of negative metastereotypes in job ads have not considered the underlying mechanisms that are at play (Wille & Derous, 2017, 2018). By studying job attraction, as well as mediating effects of early visual attention and recall, we added to the existing literature and uncovered not only the effect of negative metastereotypes on job attraction, but also the processing of negative metastereotypes among older and younger job seekers. That is, we measured job seekers' attention toward (not) negatively metastereotyped traits in relation to other job ad information, and we measured job seekers' recall of negatively versus not negatively metastereotyped traits. Hence, we obtained unique insight into the processing of negatively metastereotyped information compared to other information in job ads. Third, studies on the attention bias toward negative information focused on negative information that poses a general/imminent threat. The present study contributes to the limited research that supports the attention bias for cues that pose a more subtle threat to one's social identity (i.e., ego-threat; Kaiser et al., 2006). Finally, the present study provides a unique application of attentional and recall mechanisms in a recruitment setting. Through two eye-tracking experiments, we tested the effects of thoroughly developed and pilot tested stimuli in a recruitment context. By experimentally manipulating traits in complete and realistic job advertisements, we aimed to optimize the internal and ecological validity of both studies and combine insight into general information processing, as well as into older/younger job seekers' specific experiences during recruitment.

As in any study, limitations and directions for future research should be acknowledged. First, the present study focused on the cognitive processing of negative metastereotypes in job ads among older and younger job seekers, yet, job seekers' emotional-motivational mechanisms were not considered. Hence, future research could investigate the emotions that older and younger job seekers experience while reading negative metastereotypes in job ads, since emotional processes might affect attention, memory and attitudes (LeBlanc et al., 2015). Future research might therefore consider not only the appraisal of negative metastereotypes in terms of threat, but also in terms of emotions. Moreover, emotional processes might affect older and younger job seekers differently. Since previous study findings showed contradictory results (Oren et al., 2017; Ziaei et al., 2017), future research might further compare effects of emotional processes on attention, memory and attitudes between older and younger job seekers. Hence, interactional effects between age and emotions can be investigated. Further, motivational processes should be considered as well. While we used complete and realistic job ads, no real jobs were at stake. Future research initiatives might test whether results of our study hold or might be even stronger when job seekers were presented with an actual job tailored to their interests, since this might increase their motivation. Not only the job, but also the personality requirements can be tailored more to individual job seekers in future research. That is, while we checked whether older/younger job seekers indeed hold the negative metastereotypes that we used in the study, results might be stronger when the most negative metastereotypes for one individual are used.

Practical Implications

Organizations seldomly evaluate how job advertisements are perceived by job seekers, although job ads are used to inform and attract job seekers. Results of Study 1 and Study 2 showed that job advertisements might contain negatively metastereotyped information that captures older/younger job seekers' attention and decreases their job attraction. Considering

the importance of job attraction for application intentions and behavior (Chapman et al., 2005), these seemingly subtle cues in job ads might affect the composition of the applicant pool and hence the success of recruitment (Wille & Deros, 2017, 2018). In order to obtain an age-diverse applicant pool, organizations are advised to avoid using traits in job ads that activate negative metastereotypes within older and younger job seekers. This might be particularly useful for those organizations that aim to target older and younger job seekers in their recruitment strategy. Targeted recruitment (e.g., Newman et al., 2013), for instance, is a recruitment strategy that organizations can use to target those specific job seekers that are currently underrepresented in the labor market or in their own organization, e.g., older and younger job seekers. Research on targeted recruitment has overlooked how job seekers from those underrepresented groups perceive required qualifications in job ads (Wille & Deros, 2017). Study findings indicate that when job seekers have negative metastereotypes about those qualifications, targeted recruitment strategies can backfire, and job seekers from underrepresented groups can be discouraged by job advertisements instead.

Organizations can use different sources of information to determine negative age-related metastereotypes for older/younger age groups. First, older and younger employees in the organization can be consulted and share their experiences. Second, the present study and previous studies on age metastereotypes (Finkelstein et al., 2015; Finkelstein et al., 2020) report traits that older and younger job seekers might have negative metastereotypes about and can be used as a starting point for organizations. Based on these negative metastereotypes, organizations might thoroughly evaluate job advertisements on potentially metastereotyped information. Additionally, machine learning techniques can be used to facilitate this process (Burn et al., 2020).

Further, apart from eliminating negative information in job ads that grabs job seekers' attention, organizations might also add information in job ads that signals identity safety instead

of threat. Davies et al. (2005), for instance, suggest using explicit statements during test-taking that stress that “research shows that the underrepresented group does not perform significantly worse on tests” and could also be used in the recruitment context. Adapting the positioning and lay-out of those statements such that they capture readers’ attention more than the negative information might also be an additional suggestion.

Finally, while most people know of the existence of age stereotypes, age *metastereotypes* are a less known topic. For organizations and recruiters, the existence, content and effects of age metastereotypes can be included in diversity trainings (Devine & Ash, 2022 for a review). For job seekers, metastereotype awareness can be provided during career counseling by job coaches.

Conclusion

Two experimental eye-tracking showed that negatively metastereotyped traits captured older/job seekers attention and decreased their job attraction compared to not negatively metastereotyped traits in job ads. Older but not younger job seekers also better recalled these negative metastereotypes compared to not negative metastereotypes. These findings provides unique insight into older/younger job seekers’ processing of negative recruitment information and showed that subtle, but negative cues in job advertisements might have an attention-grabbing effect and discourage certain groups of job seekers.

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Appendix

Example of Job Advertisement



JOB ADVERTISEMENT: job A

Who are we?

At **Company A**, we deliver quality for our clients and a comfortable workplace for our employees.

What profile are we looking for?

You are flexible

You are in possession of a relevant degree

You can speak Dutch

What do we offer?

We offer a full time position, training opportunities and a salary relative to your experience.

Do you recognize yourself in this and are you looking for an interesting job?

Development of Study Materials for Older and Younger Job Seekers.

We conducted a pilot study among both older and younger people to establish personality traits that older and younger people hold negative and no negative metastereotypes about. Each pilot study was preceded by a literature review of the metastereotypes that are reported in the literature for either older (e.g., Finkelstein et al., 2013; Harwood et al., 2013; Peters et al., 2019; Weiss & Perry, 2020) or younger people (e.g., Finkelstein et al., 2013; Harwood & Williams, 1998).

Older Sample

An empirical pilot study was conducted in which older participants were presented negative adjectives that referred to personality traits from the HEXACO Personality Inventory Revised (Ashton & Lee, 2009; de Vries et al., 2009). This validated Big Six personality model includes six personality traits, i.e., Extraversion, Agreeableness, Emotionality, Conscientiousness, Openness to Experience, and Integrity. Older participants ($N = 80$; $M_{age} = 53.91$, $SD_{age} = 3.25$, 100% 50y and older; 55% women; 98.8% Caucasian/White; different from the main study) had to answer for each of these adjectives whether they believed that *younger* (<50y) workers think that the adjectives applied to *older* ($\geq 50y$) workers, e.g., inflexible (using a 5-point Likert scale with 1 = *strongly disagree* to 5 = *strongly agree*). A higher score corresponded to a more negative metastereotype. Results showed that older workers held the most negative metastereotype about the trait Agreeableness ($M = 2.90$, $SD = 0.57$), compared to the other HEXACO-traits ($M = 2.60$, $SD = 0.46$), $t(42) = 3.42$, $p = .001$ and the least negative metastereotype about the trait Conscientiousness ($M = 2.13$, $SD = 0.49$), compared to the other HEXACO-traits ($M = 2.79$, $SD = 0.51$), $t(59) = -10.74$, $p < .001$. Subsequently, building on previous studies (Wille & Derous, 2017, 2018), we selected those adjectives that were perceived as the most negatively metastereotyped for the condition with negative metastereotype and the least negatively metastereotyped for the condition without negative

metastereotype. We used the back translation method and built on dictionary entries for synonyms and antonyms to develop the profiles. Further, the profiles were adjusted so that they would be realistic in job ads (i.e., worded in a positive way and contextualized within a work context). “Obedient”, “flexible”, “friendly”, “patient”, and “compliant” were selected for the condition with negatively metastereotyped trait (Agreeableness) and “punctual”, “perfectionistic”, “orderly”, “disciplined”, and “dutiful” for the condition with a not negatively metastereotyped trait (Conscientiousness). Finally, the profiles were evaluated by nine independent raters on content (i.e., whether the adjectives accurately represented the trait in question) and realism (i.e., to what degree would the adjectives/expressions fit in real job ads; Hilberink-Schulpen et al., 2016). Results showed that materials were perceived as we intended.

Younger Sample

An empirical pilot study presented younger participants ($N_{\text{young}} = 28$; 100% 30y or younger; 53.7% women; 96.4% Caucasian/White; different from the main study) negative adjectives that referred to personality traits from the HEXACO Personality Inventory Revised (Ashton & Lee, 2009; de Vries et al., 2009). For each adjective, participants indicated whether they believed that *older* (>30y) workers think that *younger* ($\leq 30y$) workers were e.g., unpunctual (using a 5-point Likert scale with 1 = *strongly disagree* to 5 = *strongly agree*). A higher score indicated a more negative metastereotypes for a trait. Results showed the most negative metastereotype was the trait Conscientiousness ($M = 3.36$, $SD = 0.64$) as compared to the other HEXACO-traits ($M = 2.90$, $SD = 0.33$), $t(27) = 3.79$, $p = .001$. Younger participants held no negative metastereotypes about Openness to Experience ($M = 2.56$, $SD = 0.45$) compared to the other traits ($M = 3.06$, $SD = 0.37$), $t(27) = -5.89$, $p < .001$. we took an identical approach to that of Study 1 to develop the profile section and selected “punctual”, “disciplined”, “deliberative”, “consistent”, and “diligent”, for the condition with negatively metastereotyped trait (Conscientiousness) and “inventive”, “creative”, “open-minded”, “sharp-

witted” and “versatile” for the condition without negatively metastereotyped trait (Openness to Experience). Nine independent raters evaluated the profiles and we concluded that materials were perceived as intended.

CHAPTER 6

GENERAL DISCUSSION

The present doctoral dissertation aimed to uncover how female, older and younger job seekers experience person requirements in job ads. Specifically, the traits and competences that female, older and younger job seekers have negative metastereotypes about, their effects on job attraction and application intention, and the underlying mechanisms were investigated. Additionally, the way in which person requirements in job ads are worded and how this affected job seekers' job attraction was studied as well. In this general discussion, we present the main findings of the four empirical chapters of this doctoral dissertation, followed by theoretical contributions and opportunities for future research initiatives. Finally, implications for practitioners are highlighted as well.

Job seekers only have limited information about the job/organization during the recruitment phase and therefore use certain cues in job advertisements as signals about what the organization values (Highhouse et al., 2007). The present dissertation investigated one type of cue in job ads, namely person requirements, and how they are perceived by certain groups of job seeker, i.e., female job seekers, older job seekers and younger job seekers. Person requirements in job ads can activate negative metastereotypes (Vorauer et al., 1998) within job seekers, meaning that they believe that their group is considered to not possess the requirement. Hence, job seekers' job attraction might be lower if job ads contain negatively metastereotyped person requirements (Wille & Derous, 2017, 2018). In turn, job seekers' intention to apply for the job might be lower as well (Van Hooft et al., 2006; Wille & Derous, 2017). The possibility that older and younger job seekers might self-select out during recruitment and women might self-select out during promotion procedures has been largely overlooked and is studied here. Specifically, a first objective of the present dissertation was to uncover traits and competences that female, older and younger job seekers have negative metastereotypes about (Objective 1) and a second objective that we formulated was to investigate the effect that such metastereotypes have on job attraction and application intention of female, older and younger job seekers (Objective 2). Scholars have called for more research that investigates the underlying mechanism of recruitment and of the effects that metastereotypes have during recruitment (Breugh, 2013; Wille & Derous, 2017). Addressing this call, the third objective that we proposed was to disclose the underlying processes at play when female, older and younger job seekers encounter metastereotypes in job ads (Objective 3), such as threat/challenge appraisals, lowered self-efficacy, the indirect effect on application intention through job attraction, and cognitive processing in terms of attention and recall.

Finally, studies showed that a behavioral wording of requirements in job ads might be perceived differently than a dispositional wording (Born & Taris, 2010; Wille & Derous, 2017,

2018), yet this has not been considered for person requirements that older/younger people hold negative metastereotypes about and for person requirements that women hold positive metastereotypes about in a promotion context. Objective 4 therefore aimed to test whether the wording of metastereotypes in job ads affects job attraction of female, older and younger job seekers (Objective 4).

Main Findings

Table 1 provides an overview of the main findings of the present doctoral dissertation for older, younger and female job seekers. While Table 1 can be used to obtain a quick summary of the most important findings, more detailed results are presented below for each of the research objectives as formulated in the general introduction (Chapter 1).

Objective 1: Develop knowledge about those personality traits and competences that female, older and younger job seekers hold metastereotypes about.

According to Vorauer et al. (1998, p. 917), metastereotypes are “a person’s beliefs regarding the stereotype that out-group members hold about his or her own group”. In the present dissertation we aim to uncover those *personality traits* that older and younger job seekers have negative metastereotypes about and those personality traits that they have no negative metastereotypes about (i.e., ‘neutral’ personality traits). We thereby built on a well-known and validated Big Six personality model, namely the HEXACO-personality model (Ashton & Lee, 2009). This model includes six personality traits: Extraversion, Agreeableness, Emotionality, Conscientiousness, Openness to Experience, and Integrity. Negative and not negative age-metastereotypes were retrieved through a pilot study among older and younger job seekers (results of the **pilot study** are presented in **Chapters 2, 3 and Chapter 5**). Results were in line with age metastereotypes reported in previous studies (Finkelstein et al., 2013; Harwood & Williams, 1998; Peters et al., 2019; Weiss & Perry, 2020) and showed that older job seekers hold a negative metastereotype about the HEXACO-trait ‘Agreeableness’ and no

negative metastereotypes about the HEXACO-trait Conscientiousness. For younger job seekers, results showed a negative metastereotype about the HEXACO-trait ‘Conscientiousness’ and no negative metastereotype for the HEXACO-trait ‘Openness to Experience’. Interestingly, these (not) negative metastereotypes were always verified in the **main studies of Chapters 2, 3 and 5**. Results showed that older and younger job seekers of the main study indeed held the negative metastereotypes that we expected. However, person requirements in job ads are not always portrayed by means of HEXACO-traits, organizations might also require certain *competences* of candidates. While scholars have investigated effects of negatively metastereotyped HEXACO-traits for women in job ads (Wille & Derous, 2017, 2018), the effect of negatively metastereotyped competences for women in job ads were not considered before. In **Chapter 4**, we therefore uncovered competences that women have negative and positive metastereotypes about. We therefore built on a competence framework from a large, Flemish governmental organization that defines the required competences for candidates in three categories, namely the leadership competences, the behavioral competences and finally, the technical competences. Results of a **pilot study in Chapter 4** showed that, in line with previously reported gender metastereotypes for women (Owumalam & Zagefka, 2011) and the communal/agentic distinction between men and women (Eagly et al., 2019), women in the organization held negative metastereotypes about the leadership competence ‘leading’, the behavioral competence ‘decision making’ and the technical competences regarding ICT. Further, women had a positive metastereotype about the leadership competences ‘coaching’, the behavioral competences ‘customer service’ and the technical competences ‘managing personnel’. Similarly to Chapters 2, 3 and 5, metastereotypes were tested again in the **main study of Chapter 4** to ensure that participants of the main study held negative/positive metastereotypes as expected based on the pilot study. As expected, results showed that women of the main study held the same negative and positive metastereotypes as

in the pilot study. In sum, metastereotypes of women, older and younger job seekers were in line with previously reported metastereotypes in the literature and consistent through pilot studies and main studies.

Objective 2: Develop knowledge about the effect of metastereotypes²² on job seekers' job attraction and application intention during recruitment and promotion.

Negative metastereotypes in job ads can signal to job seekers that the job and organization do not fit job seekers' social identity and therefore decrease job seekers' attraction to the job (Highhouse et al., 2007; Turner et al., 1994). In turn, job seekers' application intention/behavior might be lower, since negative metastereotypes might result in avoidance behavior (Fowler & Gasiorek, 2020; Goff et al., 2008; Shelton & Richeson, 2005). In support of these findings, **Chapter 3** of the present dissertation found that older job seekers' application intention was indeed lower for job ads with negatively metastereotyped traits compared to job ads without negatively metastereotyped traits. This was not found for younger job seekers and job ads with negatively metastereotyped traits and was explained by life-stage specific reactions toward negative (meta)stereotypes (Hehman & Bugental, 2013). **Chapter 4** found that during promotion procedures, both women's job attraction and application intention were lower for job ads with negatively metastereotyped competences for women, compared to job ads with positively metastereotypes competences for women. Finally, **Chapter 5** showed that job attraction of both older and younger job seekers was lower for job ads with negatively metastereotyped traits compared to job ads without negatively metastereotyped traits. In sum, job ads with negative metastereotypes were less attractive for female, older and younger job seekers, but application intention for those ads was lower for female and older job seekers, but not for younger job seekers.

²² For simplification purposes, we write 'metastereotypes' in research objectives 2, 3 and 4. Please note that with 'metastereotypes', we actually mean personality traits and competences in the person requirements that female, older and younger job seekers hold negative or positive metastereotypes about.

Objective 3: Develop knowledge about the cognitive/emotional processes (in terms of threat/challenge appraisal, self-efficacy, job attraction and attention/recall) that underly the effect of metastereotypes on job seekers' job attraction and application intention during recruitment and promotion.

Up until now, little was known about the cognitive/emotional processes that underly the effects of metastereotypes in job ads on recruitment outcomes. First, based on stereotype threat literature (Steele & Aronson, 1995), scholars assumed that negative metastereotypes in job ads would be threatening for job seekers and hence affect job attraction (Wille & Deros, 2017, 2018), but this was not directly tested before. Alternatively, negative metastereotypes might also be appraised as a challenge instead of a threat (Finkelstein et al., 2020; Hehman & Bugental, 2013; Kalokerinos et al., 2014). **Chapter 2** investigated both of these appraisal mechanisms and found that neither perceived threat nor perceived challenge was a mediator in the relationship between wording of negative metastereotypes in job ads and older job seekers' job attraction. However, for younger job seekers, perceived challenge was a mediator in the relationship between wording of negative metastereotypes in job ads and younger job seekers' job attraction such that a negative metastereotype worded in a behavioral way (compared to a dispositional way, see Objective 4), increased perceived challenge, which hence increased their job attraction. Similar to findings among older job seekers, perceived threat was no mediator between wording of negative metastereotypes in job ads job attraction for younger job seekers. These results support the idea that negative (meta)stereotypes might be perceived as a challenge instead of a threat (Finkelstein et al., 2020; Kalokerinos et al., 2014), especially for younger-aged people who are in a different life-stage than older-aged people, who will lose their negative age-based status and who still have a whole career in front of them (e.g, *life-stage specific reactions*; Hehman & Bugental, 2013; Von Hippel et al., 2019).

Second, the effect of negative versus not negative metastereotypes in job ads on older and younger job seekers' application intention might be explained by a lowered belief that one possesses the required traits (Bandura, 1997; Jaidi et al., 2011; Turner et al., 1994). **Chapter 3** tested the mediating effects of older and younger job seekers' trait-specific self-efficacy between (not) negatively metastereotyped trait and application intention. In line with expectations, results showed that trait-specific self-efficacy was a mediator for older job seekers, such that negatively metastereotyped traits lowered older job seekers' trait-specific self-efficacy and hence decreased their application intention compared to not negatively metastereotyped traits. This was not the case for younger job seekers, i.e., neither application intention, nor trait-specific self-efficacy were lower for negatively metastereotyped traits. These results might also be understood in light of life-stage specific reactions, since younger job seekers might see the negative metastereotypes more as a challenge than older job seekers.

Third, while studies showed that job seekers' job attraction is related to their application intention (Carless, 2005; Chapman et al., 2005; Highhouse et al., 2003; Van Hooft et al., 2006), this was not yet tested in the context of job ads with negative metastereotypes. In **Chapter 4**, we investigated whether women's job attraction was a mediator between negatively versus positively metastereotyped competences and women's application intention when applying for a promotion. Results were in line with previous findings (Koçak et al., 2022; Wille & Derous, 2017, 2018) and showed that negatively metastereotyped competences in job ads indeed lowered women's job attraction compared to positively metastereotyped competences, which hence lowered women's application intention for those job ads.

Finally, cognitive mechanisms such as attention patterns and working memory processing (e.g., recall) might also explain why negative metastereotypes in job ads affect job attraction and were studied in the present dissertation. In **Chapter 5**, a serial mediation model was expected in which negatively metastereotyped traits receive more early visual attention

(Kaiser et al., 2006) and are, in turn, better recalled (Baddeley & Hitch, 1974; Belopolsky et al., 2008; Kanar et al., 2010; Theeuwes et al., 2009; Wedel & Pieters, 2006) than not negatively metastereotyped traits, which hence lowers job attraction of older and younger job seekers. This serial mediation model was not found for either older or younger job seekers. Yet, job seekers' early visual attention was indeed higher for negative metastereotypes for both older and younger job seekers, which corroborates the vigilance for negative and ego-threatening cues (Kaiser et al., 2006). The effect of negative metastereotypes on job seekers' recall was significantly positive for older job seekers (i.e., better recall for negatively metastereotyped traits compared to not negatively metastereotyped traits), which was indeed expected based on Kanar et al. (2010). However, contrary to expectations, this relationship was significantly negative for younger job seekers (i.e., better recall for not negatively metastereotyped traits). Cognitive differences in memory tasks between older and younger job seekers might explain results (Chai et al., 2018), as well as the possibility that early attention to negative metastereotypes was followed by avoidance patterns (Mogg et al., 2004; Vassilopoulos, 2005).

In sum, younger job seekers' appraised negative metastereotypes with a behavioral wording in job ads more as a challenge, which hence increased their job attraction. Negative metastereotypes in job ads lowered older job seekers' application intention through a lowered trait-specific self-efficacy and finally, female job seekers' application intention was lower for negative metastereotypes in job ads, which was mediated by lower job attraction. No mediating effects of attention and recall were found for older and younger job seekers.

Objective 4: Develop knowledge about the effect of the wording (dispositional versus behavioral) of metastereotypes on job seekers' job attraction during recruitment and promotion.

Building on the linguistic category model (Semin & Fiedler, 1991) and previous empirical findings (Born & Taris, 2010; Wille & Derous, 2018), we expected that a behavioral

wording (e.g., ‘you can easily adapt’) of negatively metastereotyped traits and competences would be more attractive than a dispositional wording (e.g., ‘you are flexible’) for female, older and younger job seekers. **Chapter 2** tested this for older and younger job seekers and found that for both groups, a behavioral wording of a negatively metastereotyped trait was indeed more attractive than a dispositional wording. **Chapter 4** tested these effects for competences that women hold negative metastereotypes about, but found no effects of the wording on job attraction. However, in line with expectations for positive metastereotypes, competences in job ads that women hold positive metastereotypes about were more attractive when worded in a dispositional way. In sum, assumptions of the linguistic category model (Semin & Fiedler, 1991) regarding negative metastereotypes only appeared to uphold for older and younger job seekers and for negatively metastereotyped *personality traits*, and not for negatively metastereotyped *competences* for women. We hence uncovered boundary conditions for the attractiveness of a behavioral wording of negative metastereotypes in job ads.

Strengths and Theoretical Contributions

The present dissertation adds to the recruitment literature in several ways. First, ample studies focus on how attitudes and decisions of managers/recruiters affect whether female (Bosak & Sczesny, 2011; González et al., 2019), older (Kaufmann et al., 2016; Zaniboni et al., 2019) or younger (Duncan & Loretto, 2004; Farber et al., 2019) job seekers will be selected for a job or not. However, building on the social process perspective on selection (Herriot, 1989), attitudes and decisions of candidates should be considered as well (Anderson, 2011; McCarthy et al., 2017). Therefore, scholars have called for more research that investigates the perspective of the applicants in recruitment procedures (Born et al., 2018; Johnson et al., 2008). The present dissertation addressed this call by investigating job seekers’ perceptions of job ad information and found support for the idea that recruitment is not unidirectional and rather a two-way street where both attitudes/decisions at the organizations’ side and attitudes/decisions at the

applicants' side are important to consider (Anderson, 2011; Born et al., 2018; Herriot, 1989; McCarthy et al., 2017).

Second, studies on the effect of (meta)stereotypes during recruitment tend to focus on gender and ethnicity as demographic variables (Born & Taris, 2010; Wille & Derous, 2017, 2018), while age as a demographic is often overlooked. Additionally, most research on the negative effects of age stereotypes in the workplace focuses on older-aged people (Lamont et al., 2015; Truxillo et al., 2014), and studies on the recruitment of people from a particular age group also focus on older-aged people (Earl et al., 2015; Lievens et al., 2012). However, since age discrimination is prohibited for applicants of all ages, both old and young people, (Council of the European Union, 2000) and since younger people might also experience young-age metastereotypes (Finkelstein et al., 2020; Ryan et al., 2015), the present dissertation investigated effects of metastereotypes among female job seekers, older job seekers and younger job seekers and showed that each group of job seekers might be negatively affected by their respective negative metastereotypes in job ads.

Third, most research focuses on negative metastereotypes and their consequences, while the effects of positive metastereotypes in the workplace is often overlooked (Grutterink & Meister, 2021). That is, contrary to negative metastereotypes, positive metastereotypes might not threaten people (Steele & Aronson, 1995) and might even boost them (Armenta, 2010; Finkelstein et al., 2020; Gaither et al., 2015), resulting in more positive reactions (Finkelstein et al., 2015; Shih et al., 2012). In **Chapter 4** of the present dissertation, we therefore considered the effect of competences that women hold positive metastereotypes about on women's attraction and application intention during promotion procedures. Results were promising and showed that positive metastereotypes (and their wording) might not threatened and even boost women and might therefore be a way for women to apply cracks to the glass ceiling.

Fourth, while studies indeed established that negative metastereotypes might decrease job attraction and application behavior/intention, they overlooked the underlying mechanisms that shape these effects (Breagh, 2013). In line with Blascovich & Tomaka (1996)'s biopsychosocial model, as well as a more recent review (Uphill et al., 2019), the present dissertation disclosed challenge instead of threat as an alternative appraisal mechanism of negative metastereotypes among younger job seekers (**Chapter 2**). These findings are also in line with studies that found that younger people might perceive negative stereotypes as challenging, because they will eventually lose their negative age-based status by growing older i.e., life-stage specific reactions to stereotypes (Hegman & Bugental, 2013; Popham & Hess, 2013; Von Hippel et al., 2019). Moreover, building on Bandura (2015) and Turner et al. (1994), a lowered trait-specific self-efficacy mediated the relationship between type of trait (negatively metastereotyped vs. not negatively metastereotyped) and application intention for older, but not younger job seekers (**Chapter 3**). Further, in **Chapter 4**, women' job attraction was a mediator between type of metastereotyped competence in job ads (negatively vs. positively) and application intention during promotion procedures, which supports previous findings in the recruitment literature (Carless, 2005; Chapman et al., 2005; Highhouse et al., 2003; Van Hooft et al., 2006). Finally, early visual attention was no mediator in the relationship between type of trait (negatively metastereotyped vs. not negatively metastereotyped) and job attraction of either older or younger job seekers. However, early visual attention was higher for negative metastereotypes than for not negative metastereotypes for both older and younger job seekers (**Chapter 5**), in line with a vigilance for negative information (Kaiser et al., 2006).. This might indicate that negative information might attract early visual attention, which is not necessarily translated into a further cognitive processing in the working memory, for example, because of avoiding patterns afterwards (Mogg et al., 2004; Vassilopoulos, 2005). Similarly and contrary to expectations based on cognitive processing (Baddeley & Hitch, 1974; Belopolsky et al.,

2008; Kanar et al., 2010; Theeuwes et al., 2009; Wedel & Pieters, 2006), recall was also not a mediator for either older or younger job seekers and the effects of negative metastereotypes on recall were contradictory for older and younger job seekers. While the absence of a link between attention and recall might be explained by our operationalization of attention (i.e., early visual attention), the link between recall and job attraction (i.e., attitudes) might be dependent on the exact context (Bao et al., 2012; Bizer et al., 2006; Carpenter & Boster, 2013; Lichtenstein & Srull, 1985; Loken & Hoverstan, 1985) and might not hold for negative information that might trigger an emotional reaction/appraisal within job seekers (Bower & Forgas, 2001; Finkelstein et al., 2015; Grigorios et al., 2022; LeBlanc et al., 2015; Lerner & Keltner, 2000; Phelps, 2006). Fifth, studies that tested the linguistic category model in a recruitment context mostly focused on the wording of negative metastereotypes and considered personality requirements that were worded either as a disposition or a behavior (Wille & Derous, 2017, 2018). The present study additionally considered the effect of the wording of negatively metastereotyped *competences* for women, as well as that of positively metastereotyped competences for women. Results showed that negatively metastereotyped traits are more attractive for older and younger job seekers when worded in a behavioral way, while positively metastereotyped competences are more attractive for women when worded in a dispositional way. Interestingly, a unique added value of the present dissertation is the finding that the attractiveness of the wording of metastereotyped person requirement depended on (a) the demographic group that is studied and (b) the type of person requirement that is studied (i.e., personality traits versus competences). Up until now, the wording of competences versus personality traits in job ads was not considered before. Hence, we contribute to the literature by showing that different types of person requirements and their effects should be studied separately, based on their different nature (i.e., traits/dispositions vs. competences/skills), particularly when investigating the effects of a dispositional versus behavioral wording.

As a sixth and final contribution to the literature, we investigated effects of metastereotyped person requirements through a multitude of different experimental studies with a different level of realism/ecological validity. **Chapter 2** and **Chapter 3** were online lab experiments in which participants evaluated only the person profiles of job ads (i.e., the part with the person requirements). This allowed an investigation of effects of negative metastereotypes in job ads while experimentally (and statistically) controlling for several variables (e.g., other parts of the job ad, organization type, etc...). **Chapter 4** and **Chapter 5** of the present dissertation were also lab experiments, though with more realism such that we could increase the ecological validity of these studies. **Chapter 4** was an experiment conducted in a large, Flemish governmental organization, among actual employees of the organization and used person requirements (competences) from the original framework of the organization. While the experiments of **Chapters 2 and 3** used incomplete job ads that only included the person requirements (and no other job ads sections), **Chapter 5** included complete and more realistic job ads such that job seekers' attention to other parts of the job ads could be investigated as well. Specifically, job ads of **Chapter 5** included more job ad sections such as: picture, logo, title, company information, profile with personality requirements (i.e., traits), job offer and contact information. Hence, both **Chapters 4 and 5** of the present dissertation provide additions to the external validity of research findings on the effects of metastereotypes in job ads.

Caveats and Future Research Ideas

While the four empirical chapters of the present dissertation add to the literature in several ways, limitations and corresponding ideas for future research should be acknowledged as well. A first caveat relates to the development of study materials of all four chapters. All study materials were retrieved in a 'top down' way, including a review of the relevant literature regarding metastereotypes, followed by pilot studies among the relevant group of job seekers. **Chapters 2, 3 and 5** built on the same pilot study results among older and younger job seekers,

in which they were confronted with HEXACO-items and we hence established those traits that older and younger job seekers held the most/least negative metastereotypes about. We then used those traits as person requirements in the **main studies of Chapters 2, 3 and 5**. Similarly, **Chapter 4** included a pilot study among women in which we presented them with competences from the organization's competence framework and investigated which competences that they held negative/positive metastereotypes about. Subsequently, we used those competences as person requirements in job ads for the **main study of Chapter 4**. Although all empirical chapters included measurements of the metastereotypes in the main study (as either a manipulation check or control variable), there might be individual variability even *within* the group of female, older or younger job seekers. Therefore, future research could develop study materials in a more 'bottom-up'/individual way to test whether results might be even stronger.

Second, in **Chapters 2, 3 4 and 5**, we deliberately controlled for job/organizational characteristics in order not to confound study results (Bhargava & Theunissen, 2019), since job seekers might not only hold metastereotypes about person requirements, but maybe also about certain elements of jobs and organizations. Interactive effects of person requirements with job/organizational characteristics and additionally, job seekers' age and gender were not investigated in the present dissertation but could be considered in future research. For instance, older and younger job seekers might be differently attracted to job elements such as task variety, task significance, and feedback from the job (Truxillo et al., 2012; Zacher et al., 2017). Similarly, men and women might also weigh certain job characteristics differently (Chapman et al., 2005) and might be interested in different kind of jobs (Lasselle et al., 2021). Thus, the effect of metastereotypes on job attraction might be affected by the differential attractiveness of certain job elements for female, older and younger job seekers. Additionally, since stereotypes might not only exist about people, but also about jobs (Derous & Ryan, 2019) future research

should consider whether female, older and younger job seekers might also hold negative metastereotypes about certain jobs or job characteristics and how this affects their job attraction.

Third, **Chapters 2, 3 and 5** of the present dissertation investigated older and younger job seekers' perceptions of metastereotypes in job ads, while **Chapter 4** investigated female job seekers' perceptions of metastereotypes in job ads. Since research on the effects of metastereotypes in recruitment is still scarce, investigating metastereotypes of each group separately is a good starting point, yet job seekers might belong to multiple demographic groups at once (e.g., a female, older job seeker). Moreover, research has shown that people who belong to a specific ethnic background also experience particular metastereotypes (Owuamalam & Zagefka, 2014; Wille & Derous, 2017). Hence, future research initiatives could consider intersectionality between demographic variables (e.g., age, gender and ethnicity) in research on job seekers' perceptions and investigate (effects of) specific negative versus positive metastereotypes that women of particular ages and ethnic backgrounds hold.

Fourth, although participants were actual job seekers in **Chapters 2, 3, 4 and 5**, job ads were fictional and no real job was at stake. Relatedly, we deliberately used fictional organizations in **Chapters 2, 3 and 5**, since organizational familiarity, i.e., the degree to which one knows the organization, might affect application intention of job seekers (Ganesan et al., 2018). Future research could further investigate whether our results hold/amplify in field settings with real job ads and jobs at stake, while accounting for the organizational familiarity among job seekers.

Further, results of **Chapter 5** were in line with expectations regarding visual attention toward negative information (Kaiser et al., 2006), and might indicate that eye-tracking is a useful tool to measure one's attention. However, no link was found between attention and recall or attention and job attraction. This highlights that scholars should carefully consider which eye-tracking outcome measure to use (Skinner et al., 2018). While we measured participants'

early attention or vigilance for negative metastereotypes by means of their ‘first run dwell time’, job seekers might also avoid negative metastereotypes during later attentional phases. Future research is needed to examine this possibility and provide more insight as to whether eye-tracking is a useful tool to measure later attentional phases and the cognitive processing from attention to working memory (recall).

As a final caveat, one might argue that a self-selection of candidates based on person requirements is not necessarily disadvantageous, especially when those candidates are not qualified for job. However, the present dissertation accounted for job seekers’ actual qualifications by means of personality scores from the HEXACO Personality Inventory Revised and population mean scores as cut-offs (Ashton & Lee, 2009; de Vries et al., 2009). We statistically controlled for older/younger job seekers’ qualifications in our analysis (**Chapter 3**) and showed that results remained the same when comparing those job seekers that are qualified with those who are not qualified for the requirements (**Chapters 2 and 4**). Thus, since even those job seekers that actually possess the person requirements in the job ad might self-select out when they hold negative metastereotypes about the person requirements, the present dissertation provides interesting findings that should be further investigated by scholars in the future with the above-mentioned caveats and research ideas in mind.

Practical Implications

Findings of the empirical chapters of this dissertation do not only contribute to the recruitment literature, but are also relevant for practitioners. First, while ample research has shown the importance of negative stereotypes in the workplace, for example, when hiring managers’ decision making is biased because of stereotypes (Duncan & Loretto, 2004; González et al., 2019; Kaufmann et al., 2016), the present dissertation shows that negative *metastereotypes* also affect female, older and younger job seekers’ experiences during recruitment/selection. Therefore, a first suggestion for practitioners might be to increase

awareness of the existence of these negative metastereotypes among recruiters, managers and employees. Specifically, the existence, content and effects of age and gender metastereotypes can be included in diversity trainings (Devine & Ash, 2022). Relatedly, metastereotype awareness might also be valuable for job seekers and can be included in career counseling or job coaching. Apart from a focus on the existence and pitfalls of metastereotypes in job ads, these interventions might also focus on boosting job seekers' self-efficacy, since job seekers' self-efficacy might be lowered by negative metastereotypes (**Chapter 3**; Eden & Aviram, 1993; Wanberg et al., 2020).

Further, it might be argued that, given that metastereotypes are (possibly false) cognitions within female, older or younger job seekers, their lower representation in (upper levels of) the workforce is 'their own fault'. However, organizations are responsible for (the evaluation of) their job ads and can benefit from not discouraging certain groups of job seekers, especially during a war for talent (Kwon & Jang, 2022). Moreover, obtaining a more diverse workforce in terms of age and gender can increase productivity for organizations (De Meulenaere et al., 2016; Luanglath et al., 2019).

Thus, the most important practical contributions that the present dissertation offers, are suggestions for organizations as to how job advertisements should be constructed to avoid that certain groups select themselves out of the applicant pool. First, **Chapters 2, 3, 4 and 5** provide negative metastereotypes for either female, older or younger job seekers that can discourage those groups of job seekers to apply for a job when placed in job ads. We found that for older job seekers and younger job seekers, the respective HEXACO-traits Agreeableness and Conscientiousness were negative metastereotypes. For female job seekers, the more agentic competences such as leading, making decisions and ICT-competences were perceived as negative metastereotypes. Organizations might consult the present dissertation, as well as previous reviews in the literature (e.g., Finkelstein et al., 2015) to know which words to avoid

when constructing job advertisements. Additionally, organizations might consult female, older and younger workers in their organization to ask about their experiences and metastereotypes. Similarly, we investigated female employees' perceptions (e.g., metastereotypes) of the current job advertisements at a large, governmental organization, which provided unique insight into the specific challenges of that organization and allowed for more tailored implications. Furthermore, a useful tool when aiming to avoid negative age metastereotypes in job ads are machine learning techniques/automatic recognition systems that might help identify certain words in job advertisements. For instance, automatic gender recognitions (AGR, like <https://textio.com/>) evaluate the gender tone in job descriptions/ads and could also be used to evaluate the gender-related metastereotyped connotation of certain words in job ads, as well as the age-related metastereotyped connotation (e.g., Burn et al., 2020). While all organizations might benefit from evaluating job ads to obtain a more age- and gender-diverse applicant pool, findings of the present dissertation might be particularly relevant for those organizations that aim to attract more age- and gender-diverse applicants through their recruitment strategy, for instance, via qualification-based targeted recruitment (Newman et al., 2013; Newman & Lyon, 2009). This technique is used by organizations that aim to attract certain demographic groups of qualified job seekers. The present doctoral dissertation showed a boundary condition of qualification-based targeted recruitment and showed that certain groups of job seekers might be discouraged by job ads that were aimed to attract them, despite being qualified. Therefore, organizations that aim to attract certain groups of job seekers should be particularly vigilant about negative metastereotypes that might discourage those job seekers and might consult the present dissertation/previous literature or conduct an investigation of that one particular group and their experiences before constructing targeted job ads.

Second, based on the current findings and especially for younger job seekers, it might be useful to not only focus on eliminating negative information in job ads, but to also add

information in job ads that increases perceptions of challenge (e.g., signaling available resources; Blascovich & Tomaka, 1996) and identity safety instead. For instance, drawing from Davies et al. (2005), explicit statements that mention that “research shows that the underrepresented group does not perform significantly worse on tests” during selection might also be used in the recruitment context. These cues might also be constructed such that they capture readers’ attention more than the negative information, for example through notable layout and positioning adaptations.

Third, wording person requirements in a behavioral way (e.g., ‘you *can easily adapt to colleagues*’) might help attract more older and younger job seekers than wording person requirements in a dispositional way (e.g., ‘you *are flexible*’) when older and younger job seekers might hold negative metastereotypes about person requirements in job ads. For female job seekers, a dispositional wording (e.g., ‘you *are* a good coach’) was more attractive, but only when the women held positive metastereotypes about the competences. Taken together, results regarding the wording of person requirements in job ads indicate that organizations might better use a behavioral wording of person requirements as a safe option to attract a diverse applicant pool in terms of gender and age.

Finally, positive metastereotypes in job ads can encourage women to apply for promotions. Hence, organizations can use those positive metastereotypes (i.e., the more communal competences such as coaching) in job ads to boost women and help them break through the glass ceiling. Similarly to what we suggested regarding negative metastereotypes, organizations can use **Chapter 4** of this dissertation and previous studies as a starting point and use those words that we uncovered as positive metastereotypes (e.g., the more communal words such as coaching). Additionally, organizations might consult women in their own organization to uncover positive metastereotypes for women and thereby build on the methodology that we used in the present dissertation to retrieve metastereotypes.

Conclusion

This doctoral dissertation aimed to provide more insight into how female, older and younger job seekers perceive person requirements in job ads and how members of these groups might select-out from the applicant pool based on these requirements. First, female, older and younger job seekers hold particular negative metastereotypes about certain HEXACO-traits and competences that can be placed in job ads. Second, when coming across these negative metastereotypes in job ads, female, older and younger job seekers were less attracted to the job portrayed in the job advertisement, and female and older job seekers also had lower intentions to apply for those positions. Third, in terms of underlying and possibly explanatory processes, both older and younger job seekers had a vigilance for negative metastereotypes in job ads. Older job seekers' self-efficacy was lowered by negative metastereotypes in job ads, but this was not the case for younger job seekers; they appraised the negative metastereotypes more as a challenge. Female job seekers' job attraction mediated effects of negative versus positive metastereotypes in job ads on application intention. Fourth, a behavioral wording of negative metastereotypes was more attractive for older and younger job seekers, while a dispositional wording of positive metastereotypes was more attractive for female job seekers. Based on the above-mentioned findings, clear suggestions for organizations on how to construct job advertisements were mentioned. Avoiding negative age- and gender-related metastereotypes in job ads, including and emphasizing identity safety statements, employing a behavioral wording and including positive gender-related metastereotypes might all help in preventing that female, older and younger job seekers would select themselves out of the applicant pool during recruitment and promotion procedures.

Table 1.*Overview of Key Findings for Older, Younger and Female Job Seekers*

	Older job seekers...	Younger job seekers...	Female job seekers...
Metastereotypes	<p>Hold a negative metastereotype about the trait Agreeableness (e.g., flexible)</p> <p>Hold no negative metastereotype about the trait Conscientiousness (e.g., punctual)</p>	<p>Hold a negative metastereotype about the trait Conscientiousness (e.g., punctual)</p> <p>Hold no negative metastereotype about the trait Openness to Experience (e.g., open-minded)</p>	<p>Hold a negative metastereotype about the competences leading, decision making and ICT</p> <p>Hold a positive metastereotype about the competences coaching, customer service and personnel management</p>
Effects of metastereotypes in job ads	<p>Are less attracted to job ads with negatively metastereotyped traits compared to not negatively metastereotyped traits</p> <p>Have lower application intention for job ads with negatively metastereotyped traits compared to not negatively metastereotyped traits</p>	<p>Are less attracted to job ads with negatively metastereotyped traits compared to not negatively metastereotyped traits</p> <p>No effects were found of type of trait on application intention</p>	<p>Are less attracted to job ads with negatively metastereotyped competences compared to positively metastereotyped competences</p> <p>Have lower application intention for job ads with negatively metastereotyped competences compared to positively metastereotyped competences</p>
Underlying mechanisms	<p>Have lower trait-specific self-efficacy for negatively metastereotyped traits, which lowered their application intention</p> <p>Have more early attention and recall of negatively metastereotyped traits, but no mediating effects were found on job attraction</p>	<p>No mediating effects were found of trait-specific self-efficacy on application intention</p> <p>Have more early attention of negatively metastereotyped traits, but lower recall for negatively metastereotyped traits. No mediating effects were found on job attraction.</p>	<p>Have lower job attraction for negatively metastereotyped competences, which lowered their application intention</p>
Wording	<p>Are more attracted to negatively metastereotyped traits in a behavioral wording vs. a dispositional wording. No mediating effects were found of threat/challenge</p>	<p>Are more attracted to negatively metastereotyped traits in a behavioral wording vs. a dispositional wording, which is mediated by a higher perceived challenge, and not mediated by threat</p>	<p>Are more attracted to positively metastereotyped competences in a dispositional wording vs. a behavioral wording. No effects of wording were found for negatively metastereotyped competences</p>

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ENGLISH SUMMARY

MIND THE AD:

WHY QUALIFIED JOB SEEKERS MAY (NOT) APPLY

Introduction

Attracting qualified candidates for an open position is crucial for organizational success (Chapman et al., 2005) and is particularly important during an ongoing war for talent (Kwon & Jang, 2022). In order to obtain a diverse applicant pool, organizations might also be particularly interested in attracting those demographic group members that are currently underrepresented in the workforce. That is, older and younger people are two age-groups that are *generally* underrepresented in the workforce compared to prime-aged people (OECD, 2020, 2021), while female job seekers are underrepresented at the highest levels of organizations and in specific sectors (OECD, 2022; Stoet & Geary, 2018). Signals during recruitment and promotion procedures might discourage instead of attract these demographic groups of job seekers for a position (Highhouse et al., 2007). One type of signal that might discourage female, older and younger job seekers is the person requirements (e.g., traits and competences) in job ads and their metastereotyped connotation (Wille & Derous, 2017, 2018). In order to prevent that certain job seekers will select themselves out of the applicant pool, it is important to know how these groups of job seekers perceive (the wording of) person requirements in job ads, how person requirements affect job attraction and application intention of job seekers and finally, which exact cognitive/emotional mechanisms are at play.

Contributions and Findings of the Present Dissertation

The aim of the present doctoral dissertation was to investigate whether and how metastereotypes person requirements in job advertisements affect female, older and younger job seekers' job attraction and application intention. More specifically, we first aimed to uncover those personality traits that older and younger job seekers hold (no) negative metastereotypes about and those competences that female job seekers hold negative or positive metastereotypes about (Objective 1). Second, we aimed to test whether negatively metastereotyped person requirements would affect female, older and younger job seekers' job attraction and application intention during recruitment and promotion procedures (Objective 2). Third, we also aimed to disclose how metastereotyped person requirements affect job attraction and application intention during recruitment and promotion procedures in terms of cognitive/emotional processes (i.e., threat/challenge appraisals, self-efficacy, job attraction and recall through attention; Objective 3). Finally, we aimed to provide knowledge about the effect of the wording (dispositional versus behavioral) of metastereotypes on job seekers' job attraction during recruitment and promotion (Objective 4).

Person requirements in job ads represent signals for job seekers that informs them about whether the job/organization fits their social identity (Highhouse et al., 2007; Turner et al., 1994). For certain person requirements, job seekers might believe that others think that they do not possess these requirements. In other words, job seekers might hold negative metastereotypes about person requirements in job ads. Negatively metastereotyped person requirements might be appraised either as a threat or as a challenge (Blascovich & Tomaka, 1996; Finkelstein et al., 2020; Steele & Aronson, 1995) and can affect job seekers' job attraction. The way in which negative metastereotypes are worded might also represent a signal for job seekers. A behavioral wording (e.g., you adapt easily) might lower threat and increase challenge appraisals, while a dispositional wording (e.g., you are flexible) might increase threat and decrease challenge (Born

& Taris, 2010; Semin & Fiedler, 1991; Wille & Derous, 2017, 2018). Drawing from the social identity theory (Turner et al., 1994) and linguistic category model (Semin & Fiedler, 1991), **Chapter 2** of the present dissertation investigated whether a behavioral wording of negatively metastereotypes traits lowers threat or increases challenge (parallel mediators) and, in turn, increases job attraction compared to a dispositional wording of negatively metastereotyped traits among older and younger job seekers. Results of two experimental studies among older (Study 1; $N = 123$) and younger (Study 2; $N = 151$) job seekers showed that a behavioral wording of negative metastereotypes was more attractive for both older and younger job seekers, but challenge mediated this effect only for younger job seekers such that younger job seekers perceived more challenge when a negative metastereotypes was worded in a behavioral way, which hence increased job attraction. To attract older and younger job seekers, organizations might use a behavioral wording of their person requirements in job ads instead of a dispositional wording.

When person requirements in job ads trigger negative metastereotypes for job seekers, this might affect how they see themselves in terms of the person requirements (Gordijn, 2010; Owuamalam & Zagefka, 2014). That is, job seekers' trait-specific self-efficacy or their belief that they possess the person requirement in the job ad might be lowered when job seekers hold negative metastereotypes about the person requirements in job ads (Turner et al., 1994). Hence, job seekers' application intention might decrease as well (Bandura, 1997; Jaidi et al., 2011). Based on social categorization and self-efficacy theories (Bandura, 2015; Turner et al., 1994), **Chapter 3** of this dissertation investigated whether older and younger job seekers' application intention was lower for job ads with negatively metastereotyped traits compared to job ads without negatively metastereotyped traits and whether these effects were mediated by a lower trait-specific self-efficacy. Results of an experimental study among older and younger job seekers ($N = 556$) revealed that for older job seekers, metastereotyped traits in job ads lowered

their trait-specific self-efficacy, which, in turn, lowered their application intention. For younger job seekers, no effects on application intention or trait-specific self-efficacy were found. In order not to discourage older job seekers to apply, organization might avoid negative metastereotyped traits in job ads that can lower job seekers' self-efficacy. Further, interventions aimed to boost older job seekers' self-efficacy might increase their application intention for a job (Eden & Aviram, 1993; Wanberg et al., 2020).

Metastereotyped person requirements might not only affect job attraction and application intention of older and younger job seekers during recruitment, women's job attraction and application intention might also decrease by negative metastereotypes in job ads (Wille & Derous, 2018), for instance, while applying for a promotion. While negative metastereotypes might threaten female job seekers (Steele & Aronson, 1995), positive metastereotypes might not threat or boost female job seekers as well (Armenta, 2010; Finkelstein et al., 2020; Gaither et al., 2015). Women's job attraction might therefore be lower for negative than positive metastereotyped person requirements in job ads. Hence, their application intention might in turn be lower for negatively metastereotyped person requirements (Carless, 2005; Chapman et al., 2005; Highhouse et al., 2003; Van Hooft et al., 2006). Building on the linguistic category model (Semin & Fiedler, 1991), a behavioral wording of negative metastereotypes in job ads increases women's job attraction compared to a dispositional wording. However, for positive metastereotypes, the opposite effect is expected and a dispositional wording might be more attractive for female job seekers. **Chapter 4** of this doctoral dissertation investigated the effect of negatively versus positively metastereotyped person requirements and their wording (behavioral vs. dispositional) on job attraction and application intention of female job seekers during promotion procedures. While Chapters 2, 3 and 5 studied person requirements in the form of personality traits, Chapter 4 investigated another type of person requirement, namely competences. Results of an experiment among 432

women in a large, Flemish government organization showed that women's application intention was lower for negatively metastereotyped competences in job ads and that this effect was mediated by decreased job attraction. Moreover, positively metastereotyped competences were indeed more attractive when worded in a dispositional way, yet no effects of wording were found for negatively metastereotyped competences. Organizations that aim to obtain more women at the highest organizational levels might avoid negative metastereotypes in job ads and use positive metastereotypes to boost women, which can provide cracks in the glass ceiling that women might face.

Finally, on a cognitive processing level, negatively metastereotyped traits in job ads might lower job seekers' job attraction because they grab job seekers' attention (Kaiser et al., 2006) and are better recalled than not negatively metastereotyped traits (Kanar et al., 2010). Drawing from cognitive processing models regarding attention and working memory (Baddeley & Hitch, 1974; Lichtenstein & Srull, 1985; Pfiffelmann et al., 2020), **Chapter 5** of this dissertation investigated a serial mediation model where negatively metastereotyped traits receive more early attention, are hence better recalled and in turn lower job attraction of older and younger job seekers. Findings of two eye-tracking experiments among older (Study 1; $N = 54$) and younger (Study 2; $N = 49$) job seekers indicate that, in line with expectations, job ads with negatively metastereotyped traits were less attractive for older and younger job seekers than ads without negatively metastereotyped traits. Older and younger job seekers' early attention was higher for negatively metastereotyped traits, but while older job seekers indeed better recalled negatively metastereotyped traits, younger job seekers better recalled the not negatively metastereotyped traits. Moreover, no mediating effects were found for either attention or recall for older or younger job seekers. Results indicate that organizations might avoid negative metastereotyped traits in job ads to attract older and younger job seekers. Additionally, information that signals identity safety for job seekers (e.g., statements regarding

equal performance/job chances for older and younger candidates) might be included and emphasized to divert attention away from negative metastereotypes.

General Conclusion

Research has already focused on how stereotypes within managers/recruiters might shape decisions about female, older or younger candidates, yet job seekers' beliefs regarding those stereotypes might shape attitudes and behavior of the job seekers themselves. The present doctoral dissertation adds to the recruitment literature by considering person requirements in job ads that female, older or younger job seekers might hold negative metastereotypes about and investigated whether and how these affect job attraction and application intention during recruitment and promotion procedures. In doing so, we uncovered person requirements in job ads that can discourage certain job seekers to apply and can therefore lead to a self-select out based on negative metastereotypes. Findings can thus be valuable for practitioners, since we provide organizations with practical guidance as to how to construct job ads to ensure an age and gender-diverse applicant pool. Hence, the present dissertation addressed the general underrepresentation of older and younger people in the workforce, as well as the underrepresentation of women at the highest levels of the organization by looking at job ads from the job seekers' point of view.

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DUTCH SUMMARY
NEDERLANDSTALIGE SAMENVATTING

**VACATURES VACANT:
WAAROM GEKWALIFICEERDE SOLLICITANTEN (NIET) SOLLICITEREN.**

Introductie

Het aantrekken van gekwalificeerde kandidaten voor een open positie is cruciaal voor het succes van organisaties (Chapman et al., 2005) en is vooral belangrijk tijdens de ‘war for talent’ (‘oorlog om talent’; Kwon & Jang, 2022). Om een diverse pool van kandidaten te verkrijgen, kunnen organisaties specifieke demografische groepen werkzoekenden aantrekken, die ondervertegenwoordigd zijn in het werkveld. Ouderen (≥ 50 jaar) en jongeren (≤ 30 jaar), bijvoorbeeld, zijn in het algemeen ondervertegenwoordigd in het werkveld in vergelijking met mensen tussen de 30 en de 50 jaar oud (OECD, 2020, 2021). Vrouwen zijn dan weer ondervertegenwoordigd op de hoogste niveaus van organisaties en in specifieke sectoren (OECD, 2022; Stoet & Geary, 2018). Tijdens procedures voor rekrutering en promoties kunnen bepaalde signalen deze verschillende demografische groepen van werkzoekenden afschrikken in plaats van aantrekken (Highhouse et al., 2007). Eén soort signaal dat vrouwen, ouderen en jongeren kan afschrikken, zijn persoonsvereisten (bv. persoonlijkheidstrekken en competenties) in vacatures en hun meta-stereotype connotatie (Wille & Derous, 2017, 2018). Om ervoor te zorgen dat werkzoekenden zichzelf niet uit de pool van kandidaten selecteren, is het belangrijk om te begrijpen hoe deze groepen werkzoekenden (de verwoording van) persoonsvereisten in vacatures percipiëren, hoe persoonsvereisten de gepercipieerde job attractiviteit en de sollicitatie intentie beïnvloeden en welke onderliggende cognitieve/emotionele mechanismen meespelen.

Bijdragen en Bevindingen van dit Proefschrift

Het doel van dit proefschrift was om te onderzoeken of en hoe meta-stereotype persoonsvereisten in vacatures de gepercipieerde job attractiviteit en sollicitatie intentie van vrouwelijke, oudere en jongere werkzoekenden beïnvloeden. Eerst en vooral identificeerden we de persoonlijkheidstrekken waarover ouderen en jongeren (geen) negatieve meta-stereotypen hebben en de competenties waarover vrouwen negatieve of positieve meta-stereotypen hebben (Objectief 1). Ten tweede beoogden we na te gaan of negatieve meta-stereotype persoonsvereisten in vacatures de gepercipieerde job attractiviteit en sollicitatie intentie van vrouwelijke, oudere en jongere werkzoekenden beïnvloeden tijdens rekruterings- en promotieprocedures (Objectief 2). Als derde trachtten we te onderzoeken hoe persoonsvereisten in vacatures de gepercipieerde job attractiviteit en sollicitatie intentie beïnvloeden tijdens rekruterings- en promotieprocedures in termen van de cognitieve en emotionele processen (met name de ervaren bedreiging/uitdaging van meta-stereotypen, iemands' zelf-effectiviteit, de gepercipieerde job attractiviteit en of meta-stereotypen onze aandacht trekken en vervolgens beter herinnerd worden; Objectief 3). Tot slot wilden we meer kennis genereren over het effect van de verwoording (dispositioneel of gedragsmatig) van meta-stereotypen op de gepercipieerde job attractiviteit en sollicitatie intentie van werkzoekenden tijdens rekrutering of promoties (Objectief 4).

Persoonsvereisten in vacatures vormen signalen voor werkzoekenden die hen vertellen of de job/organisatie past bij hun sociale identiteit (Highhouse et al., 2007; Turner et al., 1994). Over sommige persoonsvereisten kunnen werkzoekenden geloven dat anderen denken dat ze die niet bezitten. Met andere woorden, werkzoekenden kunnen negatieve meta-stereotypen hebben over persoonsvereisten in vacatures. Negatieve meta-stereotype persoonsvereisten kunnen door werkzoekenden ervaren worden als een bedreiging of als een uitdaging (Blascovich & Tomaka, 1996; Finkelstein et al., 2020; Steele & Aronson, 1995) en kunnen zo

de gepercipieerde attractiviteit van de job beïnvloeden. Ook de manier waarop een persoonsvereiste verwoord is (gedragmatig of dispositioneel), kan signaleren waar een werkgever naar op zoek is en wat een werkgever dus belangrijk vindt bij kandidaten. Een gedragmatige verwoording (bv. ‘Je past je gemakkelijk aan’) kan zo de ervaren bedreiging verlagen en de ervaren uitdaging verhogen, terwijl een dispositionele verwoording (bv. ‘Je bent flexibel’) de ervaren bedreiging kan verhogen en de ervaren uitdaging kan verlagen (Born & Taris, 2010; Semin & Fiedler, 1991; Wille & Derous, 2017, 2018). Voortbouwend op de sociale identiteitstheorie (Turner et al., 1994) en het model van linguïstische categorisatie (Semin & Fiedler, 1991), onderzocht **Hoofdstuk 2** van dit proefschrift of een gedragmatige verwoording van een negatieve meta-stereotype persoonlijkheidstrekk de ervaren bedreiging verlaagt of ervaren uitdaging verhoogt en zo op zijn/haar beurt de gepercipieerde job attractiviteit verhoogt voor oudere en jongere werkzoekenden. Resultaten van twee experimentele studies bij oudere (Studie 1; $N = 123$) en jongere (Study 2; $N = 151$) werkzoekenden toonden aan dat een gedragmatige verwoording van negatieve meta-stereotypen aantrekkelijker was voor zowel ouderen als jongeren. Echter de ervaren uitdaging medieerde dit effect alleen voor de jongeren zodat jongere werkzoekenden meer uitdaging ervoeren wanneer een negatief meta-stereotype gedragmatig verwoord was, wat op zijn beurt zorgde voor een hogere gepercipieerde job attractiviteit. Om ouderen en jongeren aan te trekken, kunnen organisaties gebruik maken van een gedragmatige verwoording van de persoonsvereisten in vacatures in plaats van een dispositionele verwoording.

Wanneer persoonsvereisten in vacatures negatieve meta-stereotypen activeren bij werkzoekenden kan dit een effect hebben op hoe zij zichzelf zien in termen van die persoonsvereisten (Gordijn, 2010; Owuamalam & Zagefka, 2014). De ‘trek-specifieke zelf-effectiviteit’ van de werkzoekenden, oftewel of ze geloven dat ze zelf de gevraagde vereisten in vacatures bezitten, kan ‘aangetast’ worden wanneer werkzoekenden een negatief meta-

stereotype hebben over de gevraagde persoonsvereisten in de vacature (Turner et al., 1994). Bijgevolg kan de sollicitatie intentie van werkzoekenden ook dalen (Bandura, 1997; Jaidi et al., 2011). Op basis van theorieën inzake sociale categorisatie en zelf-effectiviteit (Bandura, 2015; Turner et al., 1994), onderzocht **Hoofdstuk 3** of de sollicitatie intentie van ouderen en jongeren lager was voor vacatures met negatieve meta-stereotype trekken in vergelijking met vacatures zonder negatieve meta-stereotype trekken en of dit gemedieerd werd door een lagere ‘trek-specifieke zelf-effectiviteit’. Resultaten van een experimentele studie bij ouderen en jongeren ($N = 556$) toonden aan dat meta-stereotype trekken in vacatures de trek-specifieke zelf-effectiviteit van ouderen verlaagde, wat bijgevolg hun sollicitatie intentie deed dalen. Voor jongeren vonden we geen effecten op trek-specifieke zelf-effectiviteit of sollicitatie intentie. Om ouderen niet te ontmoedigen, kunnen organisaties best negatieve meta-stereotype trekken in vacatures vermijden die hun zelf-effectiviteit verlagen. Bovendien kunnen interventies die de zelf-effectiviteit van ouderen een boost geven, de sollicitatie intentie van oudere werkzoekenden verhogen (Eden & Aviram, 1993; Wanberg et al., 2020).

Meta-stereotype persoonsvereisten kunnen niet alleen de gepercipieerde job attractiviteit en sollicitatie intentie van ouderen en jongeren beïnvloeden tijdens rekruteringsprocedures. Ook de gepercipieerde job attractiviteit en sollicitatie intentie van vrouwen kan dalen door negatieve metastereotypen in vacatures (Wille & Derous, 2018), bijvoorbeeld wanneer ze solliciteren voor een promotie. Terwijl negatieve meta-stereotypen in vacatures vrouwelijke werkzoekenden kunnen bedreigen (Steele & Aronson, 1995), kunnen positieve meta-stereotypen vrouwen zelfs een boost geven (Armenta, 2010; Finkelstein et al., 2020; Gaither et al., 2015). Bijgevolg kan de gepercipieerde job attractiviteit bij vrouwen dalen voor negatieve versus positieve meta-stereotype vereisten, waardoor de sollicitatie intentie eveneens daalt (Carless, 2005; Chapman et al., 2005; Highhouse et al., 2003; Van Hooft et al., 2006). Voortbouwend op het model van linguïstische categorisatie (Semin & Fiedler, 1991),

verwachten we dat een gedragsmatige verwoording van een negatief meta-stereotype de gepercipieerde job attractiviteit bij vrouwen verhoogt in vergelijking met een dispositionele verwoording. Echter, voor een positief meta-stereotype verwachten we het tegenovergestelde, namelijk dat een dispositionele verwoording aantrekkelijker is dan een gedragsmatige verwoording voor vrouwen. **Hoofdstuk 4** van dit proefschrift onderzoekt de effecten van negatieve versus positieve meta-stereotype persoonsvereisten en hun verwoording (dispositioneel vs. gedragsmatig) op de gepercipieerde job attractiviteit en sollicitatie intentie van vrouwen tijdens promotieprocedures. Terwijl Hoofdstukken 2, 3 en 4 keken naar persoonsvereisten in de vorm van persoonlijkheidstrekken, onderzocht Hoofdstuk 4 een andere soort persoonsvereiste, met name competenties. Resultaten van een experimentele studie bij 432 vrouwen van een grote, Vlaamse overheidsorganisatie toonden dat de sollicitatie intentie van vrouwen lager was voor vacatures met negatieve meta-stereotype competenties en dat dit effect gemedieerd werd door een verlaagde gepercipieerde job attractiviteit. Positieve meta-stereotype persoonsvereisten waren inderdaad aantrekkelijker wanneer deze verwoord waren op een gedragsmatige manier, maar we vonden geen effecten van de verwoording van negatieve meta-stereotype competenties. Organisaties die meer vrouwen op de hoogste niveaus wensen, kunnen negatieve meta-stereotypen vermijden in vacatures en positieve metastereotypen gebruiken om vrouwen een boost te geven en zo het ‘glazen plafond’ proberen te breken.

Tot slot, op het niveau van cognitieve verwerking, kunnen negatieve meta-stereotypen in vacatures de gepercipieerde job attractiviteit van werkzoekenden verlagen omdat ze hun aandacht vastgrijpen (Kaiser et al., 2006) en beter herinnerd worden dan de niet-negatieve meta-stereotypen (Kanar et al., 2010). Gebaseerd op modellen inzake cognitieve informatieverwerking met betrekking tot aandacht en werkgeheugen onderzocht **Hoofdstuk 5** van dit proefschrift een serieel mediatiemodel waarin negatieve meta-stereotype trekken meer aandacht krijgen van werkzoekenden, zo beter herinnerd worden en bijgevolg ook de

gepercipieerde job attractiviteit verlagen van ouderen en jongeren. Bevindingen uit twee eye-tracking experimenten bij ouderen (Studie 1; $N = 54$) en jongeren (Studie 2; $N = 49$) tonen aan dat, in lijn met de verwachtingen, vacatures met negatieve meta-stereotype persoonsvereisten minder aantrekkelijk waren voor ouderen en jongeren in vergelijking met vacatures zonder negatieve meta-stereotype persoonsvereisten. Ouderen en jongeren hadden meer aandacht voor negatieve meta-stereotypen in vacatures. Echter, terwijl ouderen zich meer negatieve meta-stereotypen herinnerden, herinnerden jongeren zich meer niet-negatieve meta-stereotypen. Bovendien werden er geen mediërende effecten gevonden voor zowel aandacht als herinnering voor zowel ouderen als jongeren. Resultaten geven aan dat organisaties best negatieve meta-stereotype persoonsvereisten vermijden in vacatures om oudere en jongere werkzoekenden aan te trekken. Ook zouden organisaties in vacatures informatie kunnen toevoegen die een signaal geven van een veilige sociale identiteit aan werkzoekenden (bv. een boodschap over een gelijke prestaties of job kansen voor oudere en jongere kandidaten). Die boodschap zou extra benadrukt kunnen worden zodat de aandacht van de werkzoekenden wordt weggeleid van de -eventuele- negatieve meta-stereotypen.

Algemene Conclusie

Studies onderzochten reeds hoe stereotypen bij managers/recruiters hun beslissingen over vrouwelijke, oudere en jongere kandidaten kunnen bepalen. Echter, de overtuigingen van werkzoekenden over deze stereotypen kunnen hun eigen attitudes en gedragingen eveneens bepalen. Dit proefschrift draagt bij tot de bestaande literatuur inzake rekrutering door te kijken naar persoonsvereisten in vacatures waar vrouwelijke, oudere en jongere werkzoekenden negatieve meta-stereotypen over hebben en onderzocht of en hoe deze persoonsvereisten de gepercipieerde job attractiviteit en sollicitatie beslissing tijdens rekrutering en promotie kunnen beïnvloeden. We ontdekten daarbij die persoonsvereisten die ervoor kunnen zorgen dat sommige werkzoekenden ontmoedigd kunnen worden en zo zichzelf uit de 'pool' van

kandidaten selecteerden op basis van negatieve meta-stereotypen. Bevindingen kunnen waardevol zijn voor de praktijk, aangezien we aantoonen hoe vacatures opgesteld kunnen worden om een leeftijds- en genderdiverse ‘pool’ van kandidaten te bekomen. Zo onderzocht dit proefschrift de algemene ondervertegenwoordiging van ouderen en jongeren in het werkveld en de ondervertegenwoordiging van vrouwen op de hoogste niveaus van de organisatie door te kijken naar vacatures vanuit het perspectief van werkzoekenden.

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ACADEMIC OUTPUT

Journal Publications

Koçak, A., Rooman, C., Duyck, W., & Deros, E. (2022). Mind the ad: How personality requirements affect older and younger job seekers' job attraction. *Journal of Occupational and Organizational Psychology*, 95(3), 718–737.
<https://doi.org/10.1111/joop.12396>

Koçak, A., Deros, E., Born, M. P., & Duyck, W. (2022). What (not) to add in your ad: When job ads discourage older or younger job seekers to apply. *International Journal of Selection and Assessment*, 1–13. <https://doi.org/10.1111/ijsa.12385>

Conferences

Koçak, A., & Deros, E. (2019, February 14–15). *Mind the ad: Age related threats in job ads*. [Paper presentation]. The 1st PhD Working on Work Meeting, WZB Social Science Center, Berlin, Germany.

Koçak, A., & Deros, E. (2019, May 28 – June 1). *'I'm so sorry', a gender perspective on CEO apologies*. [Paper presentation]. The 19th Biennial Meeting of European Association of Work and Organizational Psychology (EAWOP), Turin, Italy.

Koçak, A., & Deros, E. (2019, October 18). *When Job Ads Turn You Down*. [Paper presentation]. The 14th Annual Dutch-Flemish Research Meeting on Personnel Recruitment and Selection Meeting, Amsterdam, The Netherlands.

Koçak, A., & Deros, E. (2019, November 7–9). *Mind the ad: When Younger Job Seekers Are Not Attracted To Job Ads*. [Paper presentation]. The 5th Biennial Age In The Workplace Small Group Meeting, St. Gallen, Switzerland.

Koçak, A., Deros, E., & Born, M. Ph. (2021, April 14). *Too old or too young? When job ads discourage job seekers to apply* [Poster presentation]. The 36th Annual Conference of

the Society of Industrial and Organizational Psychology (SIOP), New Orleans, LA, United States (Virtually attended).

Koçak, A., Deros, E., & Born, M. Ph. (2021, August 31 – September 2). *When job ads turn older and younger candidates down: Evidence from two experimental studies*. [Paper presentation]. The 6th biennial European Network of Selection Research (ENESER)/European Association of Work and Organizational Psychology (EAWOP) Small Group Meeting, Zurich, Switzerland (Virtually Attended).

Koçak, A., & Deros, E., & Schellaert, M. (2021, October 15). *What are they looking at? Older job seekers' attention patterns to metastereotypes in job ads*. [Paper presentation]. The 15th Annual Dutch-Flemish Research Meeting on Personnel Recruitment and Selection, Groningen, The Netherlands.

Koçak, A., & Deros, E., & Schellaert, M. (2021, October, 27–29). *What are they looking at? Older job seekers' attention to metastereotypes in job ads*. [Poster presentation]. The 6th Biennial Age In The Workplace Small Group Meeting, Groningen, The Netherlands.

DATA STORAGE FACT SHEETS**Data Storage Fact Sheet 1**

Name/identifier study: Dissertation Chapter 2; Koçak, Rooman, Duyck, & Deros (2022)

Author: Aylin Koçak

Date: June 13th, 2022

1. Contact details

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2. Information about the datasets to which this sheet applies

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* Reference of the publication in which the datasets are reported: Koçak, A., Rooman, C., Duyck, W., & Deros, E. (2022). Mind the ad: How personality requirements affect older and younger job seekers' job attraction. *Journal of Occupational and Organizational Psychology*, 95(3), 718-737. <https://doi.org/10.1111/joop.12396>

* Which datasets in that publication does this sheet apply to?: This sheet applies to all data reported in the above-mentioned publication.

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Data Storage Fact Sheet 2

Name/identifier study: Dissertation Chapter 3; Koçak, Derous, Born, & Duyck (2022)

Author: Aylin Koçak

Date: June 13th, 2022

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* Reference of the publication in which the datasets are reported: Koçak, A., Derous, E., Born, M. P., & Duyck, W. (2022). What (not) to add in your ad: When job ads discourage older or younger job seekers to apply. *International Journal of Selection and Assessment*, 1–13. <https://doi.org/10.1111/ijsa.12385>

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- ☒ file(s) containing analyses. Specify: SPSS syntax files (.sps) and R code files (.R)
- ☐ file(s) containing information about informed consent
- ☐ a file specifying legal and ethical provisions
- ☐ file(s) that describe the content of the stored files and how this content should be interpreted. Specify: ...
- ☐ other files. Specify: ...

* On which platform are these other files stored?

- ☒ individual PC
- ☒ research group file server
- ☐ other: ...

* Who has direct access to these other files (i.e., without intervention of another person)?

- ☒ main researcher
- ☒ responsible ZAP
- ☐ all members of the research group
- ☐ all members of UGent
- ☐ other (specify): ...

4. Reproduction

=====

* Have the results been reproduced independently?: ☐ YES / ☒ NO

* If yes, by whom (add if multiple):

- name:
- address:
- affiliation:
- e-mail:

Data Storage Fact Sheet 3

Name/identifier study: Dissertation Chapter 4

Author: Aylin Koçak

Date: June 13th, 2022

1. Contact details

=====

1a. Main researcher

- name: Aylin Koçak
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- e-mail: aylin.kocak@ugent.be

1b. Responsible Staff Member (ZAP)

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If a response is not received when using the above contact details, please send an email to data.pp@ugent.be or contact Data Management, Faculty of Psychology and Educational Sciences, Henri Dunantlaan 2, 9000 Ghent, Belgium.

2. Information about the datasets to which this sheet applies

=====

* Reference of the publication in which the datasets are reported: Koçak, A., & Deraus, E., (2022). *Women's attraction to top-level executive positions: An experimental study in a large government organization*. Chapter 4. (Doctoral dissertation). Ghent University, Ghent, Belgium.

* Which datasets in that publication does this sheet apply to?: This sheet applies to all data reported in the above-mentioned publication.

3. Information about the files that have been stored

=====

3a. Raw data

* Have the raw data been stored by the main researcher? ☒ YES / ☐ NO

If NO, please justify:

* On which platform are the raw data stored?

- ☒ researcher PC
- ☒ research group file server
- ☐ other (specify):

* Who has direct access to the raw data (i.e., without intervention of another person)?

- ☒ main researcher
- ☒ responsible ZAP
- ☐ all members of the research group
- ☐ all members of UGent
- ☐ other (specify): ...

3b. Other files

* Which other files have been stored?

- ☒ file(s) describing the transition from raw data to reported results. Specify: SPSS syntax files (.sps)
- ☒ file(s) containing processed data. Specify: SPSS data files (.sav), excel files (.xlsx and .csv) and Nvivo files (video files (.mp4)
- ☒ file(s) containing analyses. Specify: SPSS syntax files (.sps) and R code files (.R)
- ☐ file(s) containing information about informed consent
- ☐ a file specifying legal and ethical provisions
- ☐ file(s) that describe the content of the stored files and how this content should be interpreted. Specify: ...
- ☐ other files. Specify: ...

* On which platform are these other files stored?

- ☒ individual PC
- ☒ research group file server
- ☐ other: ...

* Who has direct access to these other files (i.e., without intervention of another person)?

- ☒ main researcher
- ☒ responsible ZAP
- ☐ all members of the research group
- ☐ all members of UGent
- ☐ other (specify): ...

4. Reproduction

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* If yes, by whom (add if multiple):

- name:
- address:
- affiliation:
- e-mail:

Data Storage Fact Sheet 4

Name/identifier study: Dissertation Chapter 5

Author: Aylin Koçak

Date: June 13th, 2022

1. Contact details

=====

1a. Main researcher

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If a response is not received when using the above contact details, please send an email to data.pp@ugent.be or contact Data Management, Faculty of Psychology and Educational Sciences, Henri Dunantlaan 2, 9000 Ghent, Belgium.

2. Information about the datasets to which this sheet applies

=====

* Reference of the publication in which the datasets are reported: Koçak, A., Deraus, E., & Duyck, W. (2022). *Older and younger job seekers' attention towards metastereotypes in job ads*. Chapter 5. (Doctoral dissertation). Ghent University, Ghent, Belgium.

* Which datasets in that publication does this sheet apply to?: This sheet applies to all data reported in the above-mentioned publication.

3. Information about the files that have been stored

=====

3a. Raw data

* Have the raw data been stored by the main researcher? ☒ YES / ☐ NO

If NO, please justify:

* On which platform are the raw data stored?

- ☒ researcher PC
- ☒ research group file server
- ☐ other (specify):

* Who has direct access to the raw data (i.e., without intervention of another person)?

- ☒ main researcher
- ☒ responsible ZAP
- ☐ all members of the research group
- ☐ all members of UGent
- ☐ other (specify): ...

3b. Other files

* Which other files have been stored?

- ☒ file(s) describing the transition from raw data to reported results. Specify: SPSS syntax files (.sps)
- ☒ file(s) containing processed data. Specify: SPSS data files (.sav and excel files (.xlsx and .csv)
- ☒ file(s) containing analyses. Specify: SPSS syntax files (.sps)
- ☐ file(s) containing information about informed consent
- ☐ a file specifying legal and ethical provisions
- ☐ file(s) that describe the content of the stored files and how this content should be interpreted. Specify: ...
- ☐ other files. Specify: ...

* On which platform are these other files stored?

- ☒ individual PC
- ☒ research group file server
- ☐ other: ...

* Who has direct access to these other files (i.e., without intervention of another person)?

- ☒ main researcher
- ☒ responsible ZAP
- ☐ all members of the research group
- ☐ all members of UGent
- ☐ other (specify): ...

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