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THREE ESSAYS ON DISCRIMINATION IN SELECTION CONTEXTS

MENDES DE OLIVEIRA Alissone

UNIL | Université de Lausanne

FACULTÉ DES HAUTES ÉTUDES COMMERCIALES

DÉPARTEMENT DE COMPORTEMENT ORGANISATIONNEL

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THÈSE DE DOCTORAT

présentée à la

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de l'Université de Lausanne

pour l'obtention du grade de
Doctorat en Management

par

Alissone MENDES DE OLIVEIRA

Directrice de thèse
Prof. Franciska Krings

Jury

Prof. Valérie Chavez-Demoulin, Présidente
Prof. Marianne Schmid Mast, experte interne
Prof. Tobias Schlager, expert interne
Prof. Sabine Sczesny, experte externe

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Internef - 261
CH-1015 Lausanne

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Three Essays on Discrimination in Selection Contexts

sans se prononcer sur les opinions exprimées dans cette thèse.

Lausanne, le 11.10.2024

Professeure Marianne Schmid Mast, Doyenne

Members of the thesis committee

Prof. Franciska KRINGS,
Professor, Faculty of Business and Economics, University of Lausanne.
Thesis supervisor.

Prof. Marianne SCHMID MAST,
Professor and Dean, Faculty of Business and Economics, University of Lausanne.
Internal expert.

Prof. Tobias SCHLAGER,
Professor, Faculty of Business and Economics, University of Lausanne.
Internal expert.

Prof. Sabine SCZESNY,
Professor, University of Bern.
External expert.

University of Lausanne
Faculty of Business and Economics

Ph.D. in Management

I hereby certify that I have examined the doctoral thesis of

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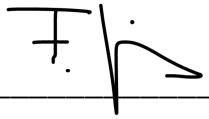
Signature:  Date: 23/09/2024

Prof. Franciska KRINGS
Thesis supervisor

University of Lausanne
Faculty of Business and Economics

Ph.D. in Management

I hereby certify that I have examined the doctoral thesis of

Alissone MENDES DE OLIVEIRA

and have found it to meet the requirements for a doctoral thesis.
All revisions that I or committee members
made during the doctoral colloquium
have been addressed to my entire satisfaction.

Signature:  Date: 23/09/2024

Prof. Marianne SCHMID MAST
Internal expert

University of Lausanne
Faculty of Business and Economics

Ph.D. in Management

I hereby certify that I have examined the doctoral thesis of

Alissone MENDES DE OLIVEIRA

and have found it to meet the requirements for a doctoral thesis.
All revisions that I or committee members
made during the doctoral colloquium
have been addressed to my entire satisfaction.

Signature: _____ Date: 19.9.2024

Prof. Tobias SCHLAGER
Internal expert

University of Lausanne
Faculty of Business and Economics

Ph.D. in Management

I hereby certify that I have examined the doctoral thesis of

Alissone MENDES DE OLIVEIRA

and have found it to meet the requirements for a doctoral thesis.
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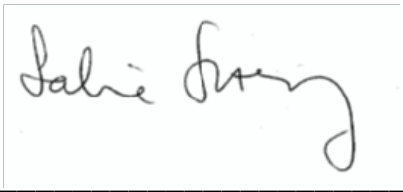
made during the doctoral colloquium
have been addressed to my entire satisfaction.

Signature:  Date: 20.9.2024

Prof. Sabine SCZESNY
External expert

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A PhD is a journey, and like every good one, it is best shared with companions. I am fortunate to have had colleagues who became dear friends along the way. We shared so much together. Special thanks to my lab mates: to Lilly, for her positivity; to Ottilie, for her expertise and wisdom; and to Nada, my partner in crime during this PhD. I could not have made it through without you all.

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Synthesis

Discrimination against members of stigmatized groups i.e., individuals who face social disapproval or negative stereotyping due to certain characteristics or attributes they possess (Goffman, 1963), is a public health issue (Bhui, 2016) that impacts both physical and mental health (Daftary et al., 2020; Soto et al., 2011; Stein et al., 2019). Discrimination in the selection contexts is particularly concerning because it negatively impacts career advancement and exacerbate wage inequalities (Heilman & Caleo, 2018; Ozeren, 2014) thus, it also has long-term financial implications.

Several stigmatized groups across different cultural contexts are the target of these unfair treatments. For instance, in the United States, 57% of black adults (Bleich et al., 2019) and 24% of LGBT+ individuals (Sears et al., 2021) report experiencing discrimination when applying for a position. In Sweden, 76% of immigrants from countries outside of Northwest Europe and North America believe that having a foreign name reduces their chances of being hired (Behtoui & Neergaard, 2009). In the United Kingdom, 11% of adults reported being rejected for a role due to their age (*Workplace Discrimination Statistics in 2021*, 2021).

Given the significance of discrimination, it has drawn considerable attention from governments and organizations alike. Various studies have employed a wide range of methods to explore this issue (Neumark, 2018). Over the years, governments and organizations worldwide have implemented numerous initiatives to reduce discrimination. However, the problem remains complex and has yet to be fully resolved. This ongoing challenge highlights the need for continued research to better understand discrimination, address its root causes, and develop effective solutions to reduce it.

In this thesis, I explore different angles for studying discrimination and potential ways to mitigate it that are often overlooked. First, in Chapters 1 and 2, together with my co-authors, I discuss perceived discrimination and how it can impact members of stigmatized groups. While the literature often focuses on the detrimental effects on targets, little is known about how these unfair treatments can also trigger motivation to overcome them. We build on the literature about Social identity-based impression management (Roberts, 2005) and explore how perceived discrimination could trigger the use of these additional types of impression management.

Second, the literature on discrimination often isolates a single identity, despite the fact that everyone possesses multiple identities. Isolating one identity can hinder a comprehensive understanding of the experiences of members of stigmatized groups (Kulik et al., 2007; Reid & Comas-Diaz, 1990) and reduce the effectiveness of proposed solutions to combat discrimination. To enhance this understanding, I explore how contextual cues can influence evaluations received by potential teammates at the intersections of age and gender in Chapter 3.

Together, my doctoral thesis employs several methods (e.g., field surveys, online and lab experiments, with or without incentivized decisions) and aims to contribute to the literature on discrimination in the selection process. I will now summarize these three chapters, highlight their individual contributions, and link them to each other.

Chapter 1: Perceived Discrimination in the Labor Market: Relationships with Job Seekers' Impression Management

As mentioned above, Chapter 1 considers the perspective of members of stigmatized groups reacting to discrimination they perceive. Given that the goal of impression management (IM) is to improve how one is perceived by others (Rosenfeld et al., 2015), members of stigmatized groups may use these strategies to try to mitigate the unfair treatment they may face.

Social identity-based IM (Roberts, 2005; Roberts et al., 2014) suggests that members of stigmatized groups may use specific IM strategies rooted in their social identity as a proactive response to perceived discrimination. Social identity-based IM (SIM) is defined as "the process of strategically influencing others' perceptions of one's own social identity in order to form a desired impression" (Roberts, 2005, p. 694). While perceived discrimination has been proposed as a trigger that motivates the use of SIM, this linkage has rarely been tested empirically. The aim of this chapter is to fill this gap and investigate the effectiveness of these strategies. Although traditional IM strategies, such as self-promotion, can improve hiring outcomes, they can also be risky for members of stigmatized groups, who may face backlash for behaving counter-stereotypically and could receive lower evaluations as a result (Rudman et al., 2012; Rudman & Phelan, 2008).

We investigate the relationship between the perception of discrimination and the use of IM on LinkedIn, today's most widely used professional social media platform, through an online survey conducted with U.S. job seekers currently using this platform. Our findings show that perceived discrimination is positively related to the increased use of different IM strategies, suggesting a potential role of perceived discrimination in triggering the use of IM (Neel et al., 2013; Roberts, 2005). Importantly, this relationship remains significant even when controlling for personality traits, excluding an alternative explanation often proposed to explain the use of IM (Bourdage et al., 2018). The use of IM was, in turn, related to better job-related outcomes for job seekers, highlighting the potential of IM to improve job-related outcomes.

One of the main contributions of Chapter 1 was to establish the relationship between perceived discrimination and the use of IM on LinkedIn through a field survey with real job seekers. However, this methodology also has its drawbacks. The results are based on self-

reported data and do not allow for the establishment of a causal impact of perceived discrimination on the use of IM on LinkedIn. Chapter 2 was designed to address this gap.

Chapter 2: Navigating Discrimination: How Job Seekers Proactively Use Impression Management on LinkedIn

Building on the findings of Chapter 1, my co-authors and I designed an experiment to causally test our results. In Chapter 1, we investigated the impact of perceived discrimination without specifying any targeted identity. For Chapter 2, we focused on "youngism," which refers to unfair treatment for being too young (Duncan & Loretto, 2004; Francioli & North, 2021). This form of ageism is often overlooked in both research and practice (Schmitz et al., 2023). However, younger adults are often perceived as entitled, arrogant, lazy, and inexperienced (Finkelstein et al., 2013; Francioli & North, 2021), and they receive the least favorable sentiments among all age groups (Francioli et al., 2024).

For Chapter 2, we developed and pretested a manipulation to increase the salience of youngism discrimination. To move away from self-reported data and measure actual behaviors on LinkedIn, we created a platform that mimicked the professional social media environment. Participants were randomly assigned to one of the two conditions: either high or low discrimination salience for being too young and then asked to create their profiles on our platform. For Chapter 2, we employed this design in a lab experiment with Swiss university students (Study 1), and online with a U.S. sample (Study 2).

Contrary to our expectations, results from Study 1 showed that discrimination salience increased the use of IM only for younger men, not younger women. Younger men in the high discrimination salience condition invested more effort when creating their profiles (e.g., included more sections in their profiles), used more IM (e.g., mentioned more soft skills), and as a result,

received better evaluations from independent raters. However, these results were not found among younger women. These findings indicate an intersectional effect, where the intersections of age and gender shape reactions to perceived discrimination. Intersectional studies (Cole, 2009) suggest that younger women and younger men might face different forms of ageism, possibly because women already anticipate gender discrimination. Thus, women might already increase their IM usage even when youngism discrimination was not salient. An alternative explanation could be that young men may feel more confident and therefore invest less effort compared to young women when discrimination is not salient.

We aimed to replicate and extend these results in Study 2 with individuals of all ages. We found no significant effect of discrimination salience on IM used, nor did we find an interaction with gender, despite the fact that young participants reported higher perceived discrimination when facing high youngism discrimination salience. The differences in results between Study 1 and Study 2 suggest that the impact of perceived discrimination on IM may be more complex than initially hypothesized. These differences could be explained by varying cultural contexts between the U.S. and Switzerland, particularly in terms of individualism and long-term orientation (*Country Comparison Graphs Country Comparison Graphs*, 2014; Hofstede, 1984). Another alternative explanation could be the difference in sample composition between Study 1 (i.e., students) and Study 2 (i.e., general population). Finally, the artificial setting of our experiment could also explain these results. Participants had no incentives to construct a better profile and, therefore, may have felt less motivated to use IM.

In sum, Chapter 2 contributes to the literature by highlighting the nuanced role of perceived discrimination in shaping the behaviors of job seekers from stigmatized groups. However, the findings underscore the context-dependence of these links and suggest that IM can

be a tool to combat discrimination, but solutions should be tailored to consider cultural context and the multiple identities to which the target individuals may belong.

Chapter 3: Context Matters: The Role of Technological Tool Descriptions in Age and Gender Intersectional Discrimination

Results from Study 1 in Chapter 2 reveal an interesting intersectional difference, with only younger men reacting to discrimination salience. In Chapter 3, I continue to explore intersectionality, focusing specifically on the intersections between age and gender. These two intersections are particularly relevant because a significant portion of the population could be at risk of discrimination based on gender. Ageism is also an important discrimination to study due to population aging, which is expected to have a major impact on the workplace (White et al., 2018), especially for older women whose participation in the workforce continues to grow (Toossi & Morisi, 2017).

Despite its major contributions to the study of discrimination, research about intersectionality often reveals mixed findings. Two alternative hypotheses are competing: Double Jeopardy, which suggests that people with multiple subordinate identities suffer more discrimination (Beal, 2008), and Intersectional Invisibility, which proposes that people with multiple subordinate identities suffer less discrimination (Purdie-Vaughns & Eibach, 2008). One potential explanation for these conflicting results is that stereotypes may depend on context (Casper et al., 2010; Kornadt et al., 2013).

For this project, I investigated the following question: How does the description made by a company of a technological tool used in the workplace impact intersectional discrimination based on age and gender when evaluating potential teammates? To answer this question, I employed a between-subjects experimental design based on vignettes. Participants were asked to

assume the role of a manager selecting a potential teammate. I manipulated the context by describing the technological tool used in the workplace as either a communication tool or a high-tech tool (Comunello et al., 2017). Additionally, participants evaluated either a man or a woman, who was either young (below 30) or older (above 50).

A question emerging from the discussion in Chapter 2 was the impact of incentives on participants' responses. The effect of incentives in research on discrimination is equivocal, and the literature on this topic remains scarce. Therefore, I applied the design above for Chapter 3 in two separate studies, one with incentives and one without.

The results show substantial differences between Study 1 and Study 2. In Study 1 (without incentives), the only significant effect was that older potential teammates received lower evaluations than younger ones. However, when participants were incentivized to predict the evaluations given by others (Study 2), significant interactions emerged: older individuals and women were rated more positively when the tool was described as a communication tool compared to a high-tech tool, supporting a context-dependent view of stereotypes. However, across our studies, no intersectional effects were found, providing no evidence to support conclusions about the intersectionality of age and gender.

Chapter 3 makes two important contributions. First, it shows that contextual cues can influence evaluations received by members of stigmatized groups (women and older people). Carefully designing job ads could be a potential tool to decrease discrimination. Even if the effect is small, these initiatives are highly cost-effective, and given the number of members of stigmatized groups, the overall improvements could be substantial.

Second, the inclusion of incentives in Study 2 led to considerably different results compared to Study 1. One potential reason for these differences is the varying perspectives taken

by the participants. In Study 1, participants reported their personal opinions. In contrast, in Study 2, when incentivized to predict the responses of others, participants focused on second-order normative beliefs (i.e., beliefs about others' beliefs). These can be interpreted as two different perspectives. However, both are relevant because, in the evaluation and selection context, it is likely that recruiters and managers use both. My results emphasize the need for future research to investigate these two different angles.

Conclusion and Perspectives

Understanding and fighting against discrimination in the selection contexts is crucial. These economic disadvantages significantly affect an individual's quality of life, influencing their access to essential resources, opportunities for personal and professional development, and overall well-being throughout their lifetime. Moreover, reduced financial stability and slower career progression can weaken a person's position at work, limiting their influence and ability to make meaningful changes related to discrimination in their professional environment.

In sum, this thesis employs a multifaceted approach to studying discrimination in selection contexts, exploring both the perception of discrimination and the strategic responses it elicits from members of stigmatized groups. By addressing discrimination faced by members of stigmatized groups, this research not only contributes to the existing literature but also provides insights that could inform more equitable hiring practices. Importantly, this work explores two potential solutions to combat discrimination: the use of Social identity-based Impression Management by individuals to navigate and mitigate unfair treatment, and the impact of contextual cues, such as in job descriptions, that can influence evaluations and reduce discriminatory outcomes.

Additionally, my thesis highlights the complexity of discrimination, showing how it is influenced by cultural contexts and the multiple identities held by members of stigmatized groups. These findings underscore the need for further research to continue addressing these issues through the lens of intersectionality, with the ultimate aim of creating a fairer selection process for everyone.

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Perceived Discrimination in the Labor Market: Relationships with Job Seekers' Impression Management

Alissone Mendes de Oliveira and Franciska Krings

Faculty of Business and Economics, University of Lausanne, Switzerland

Abstract

While hiring discrimination against stigmatized individuals (e.g., women, older individuals) is well-documented (Neumark, 2018), job seekers are often regarded as passive recipients of unfair treatment, which neglects the fact that they are also active agents who react to the discrimination they face. Drawing on frameworks of impression management (IM) employed to overcome other people's stereotypes (Roberts, 2005; Shih et al., 2013), we investigated the relationships between perceptions of unfair treatment on the labor market and the use of different IM techniques on LinkedIn, today's most widely used recruitment platform, with participants currently looking for a new job. The results of our time-lagged survey study show a positive relationship between perceived discrimination and the use of both honest and dishonest IM on LinkedIn. Moreover, honest IM was in turn positively related to job-related outcomes (e.g., interview invitations). Additional exploratory analyses suggested an indirect positive relationship between anticipating unfair treatment and job-related outcomes, mediated by higher levels of IM. Potential implications for research and practice are discussed.

Keywords: identity-based impression management, LinkedIn, discrimination

Perceived Discrimination in the Labor Market: Relationships with Job Seekers' Impression Management

Hiring discrimination against members of stigmatized groups, i.e., individuals who face social disapproval or negative stereotyping due to certain characteristics or attributes they possess (Goffman, 1963), is well documented in the literature (Neumark, 2018). It has vast negative financial consequences such as impending carrier advancement (Heilman & Caleo, 2018) and wage inequalities (Ozeren, 2014). Additionally, perceived discrimination (i.e., subjective perceptions of unfair treatment due to one's individual characteristics) among members of stigmatized groups negatively impacts their mental health (Daftary et al., 2020), such as increased depression (Stein et al., 2019) and anxiety symptoms (Rippy & Newman, 2006; Soto et al., 2011). Given its negative impacts on physical and mental health, discrimination has been identified as a major public health issue (Bhui, 2016).

Many studies in this domain portray targets of discrimination as passive recipients of unfair treatment. Less is known about targets' behaviors arising from the motivation to counteract discrimination when they feel they are being treated unfairly. Given that impression management (IM) aims to construct a positive image to gain others' social or financial support (Rosenfeld et al., 2015), jobseekers from stigmatized groups could see these strategies as a tool to minimize unfair treatments. Indeed, it has been proposed that members of these groups use specific IM tactics, grounded in social identity, as a proactive response to perceived discrimination, with the goal to challenge and overcome the impact of stereotypes on other people's judgments (Houston & Grandey, 2013; Roberts, 2005). However, these linkages have rarely been empirically examined. Building on these frameworks, we propose that job seekers' perceptions of discrimination trigger the motivation to counteract these prejudicial impressions,

by engaging in different IM strategies. Moreover, we propose that the use of these strategies affects job-related outcomes. While IM strategies such as self-promotion can improve hiring outcomes (Barrick et al., 2009; Chen & Lin, 2014; Zhao & Liden, 2011), they could be risky for members of stigmatized groups as they may face backlash for behaving counter-stereotypically (Krings et al., 2023; Rudman et al., 2012; Rudman & Phelan, 2008). Thus, it is important to understand how perceived discrimination could increase the use of IM and thereby indirectly influence job market success.

In this research, we investigate the relationships between perceived discrimination, IM and outcomes in a time-lagged survey with participants currently searching for a new job. We focused on IM in the context of professional social media, i.e., LinkedIn, because today, LinkedIn is the main tool used by jobseekers and recruiters alike, replacing more traditional forms such as searching through job ads in print media (Nikolaou, 2014). Our findings shed light on the significant role of perceived discrimination in shaping workplace behaviors, specifically the use of IM strategies. Additionally, by investigating the efficacy of these strategies on job-related outcomes, it underscores the potential of IM as a tool for members of stigmatized groups to counteract biases and enhance their professional evaluations.

Perceptions of Discrimination Among Members of Stigmatized Groups

Hiring discrimination against candidates from stigmatized groups is examined in both qualitative and quantitative studies, including field experiments (Carlsson & Eriksson, 2019; Hangartner et al., 2021; Quillian & Lee, 2023; Zschirnt & Ruedin, 2016). Studies on perceived discrimination show that members of stigmatized groups are aware of these unfair treatments. For example, in the United States, 57% of black adults (Bleich et al., 2019) and 24% of LGBT+ (Sears et al., 2021) report facing discrimination when applying for a job. In the United Kingdom,

11% of adults reported being denied a job because of their age (*Workplace Discrimination Statistics in 2021,* 2021). In Sweden, 76% of immigrants from countries outside northwest Europe and north America agree that their foreign name decreases the probability of being hired (Behtoui & Neergaard, 2009). Thus, different stigmatized groups (e.g., older people, women, immigrants) across various cultural contexts report being targets of unfair treatments (Lippens et al., 2023).

While it has been shown that perceived discrimination can have negative down-stream consequences (e.g. Daftary et al., 2020; Sawyer et al., 2012; Straiton et al., 2019), less is known to what extent it may also trigger pro-active behaviors motivated by the desire to prevent potential unfair treatments. Indeed, members of stigmatized groups often attempt to influence other people's judgments about them, with the goal to alleviate the negative effects of these stereotypical beliefs (Neel et al., 2013; Shih et al., 2013). One potential way to influence others perceptions is IM, i.e., behaviors "by which people control the impressions others form of them" (Leary & Kowalski, 1990, p.1). IM has been suggested as a viable strategy for individuals from stigmatized groups to decrease the likelihood of prejudicial impressions and unfair treatment as outlined in the following section.

Using IM to Decrease Discrimination

IM at hiring is prevalent, in more classical recruitment situations such as interviews (Ellis et al., 2002) as well as on professional social media (Roulin & Levashina, 2016). IM tactics can be distinguished along several dimensions (e.g., level of conscientiousness, goals; Bolino et al., 2016). A common distinction (Bolino et al., 2016; Roulin et al., 2015; Roulin & Levashina, 2016) is between honest (i.e., authentic) and dishonest tactics (i.e., "with intentional distortion of information"; Ho et al., 2021, p.1), e.g., exaggerating one's accomplishments during a job

interview to appear more qualified. Frequently used tactics are self-promotion (emphasizing one's qualities), fit-with organization (demonstrating one's similarities with the organization), opinion conformity (endorsement of the target opinions), other-enhancement (praising the target) and non-verbal behaviors (Stevens & Kristof, 1995).

Individuals belonging to stigmatized groups may use an additional set of strategies, also called social-identity based IM. Social identity-based IM (SIM) is defined as "the process of strategically influencing others' perceptions of one's own social identity in order to form a desired impression" (Roberts, 2005, p.694). SIM differs mainly from traditional IM because they are not only aiming to influence personal traits but also the perceptions of their social identity groups. Two categories of SIM have been suggested: social recategorization and positive distinctiveness (Roberts, 2005). Social recategorization involves members of stigmatized groups aligning their behavior with that of more positively valued identities, thereby reducing the salience of their devalued identity through decategorization or assimilation. Conversely, positive distinctiveness seeks to enhance the status of the current social identity group by emphasizing its positive attributes and challenging negative stereotypes, using strategies such as integration or confirmation.

In different fields of research and similar to social identity based IM, other theories such as Sigma Theory (Camacho et al., 2020; Follmer et al., 2020; Goffman, 2009; Knous, 2006; Siegel et al., 1998) and Stereotype-congruence IM hypothesis (Houston & Grandey, 2013) discuss how members holding those stigmatized identities could try to manage them. Importantly, these different theories converge on the idea that one of the central goals of stigmatized workers' IM strategies is to counter or distance themselves from the negative stereotypes associated with their social group. Moreover, these strategies often aim at refuting

low competence stereotypes (Houston & Grandey, 2013). Such stereotypes are a significant cause for hiring discrimination and lie at the heart of the negative perceptions of several low-status groups (Cuddy et al., 2008; Fiske et al., 2002). For example, women, older workers, immigrant workers, black workers, workers from lower social classes, and LGBTQIA+ workers are perceived as less competent than their majority group counterparts (Durante et al., 2017; Fiske, 2015; Fiske et al., 2002; Froehlich & Schulte, 2019).

Previous research shows that members of stigmatized groups indeed use specific IM grounded in their social identity, specifically when stakes are high such as at hiring (Derous, 2017; Krings et al., 2021; Roberts et al., 2014). However, what triggers the use of these strategies remains largely unknown. While perceived discrimination has been suggested as a central precursor (Neel et al., 2013; Roberts, 2005; Shih et al., 2013) empirical evidence is still lacking. Identifying these antecedents is important because the use of the strategies likely also influences labor market success, i.e., a particular crucial outcome for jobseekers who are members of stigmatized groups. Moreover, the impact of these strategies on job-related outcomes is uncertain. On the one hand, a large body of literature suggests that using IM improves evaluations at hiring (Barrick et al., 2009; Chen & Lin, 2014). On the other hand, members of stigmatized groups risk facing backlash when showing high levels of assertiveness and competence (Rudman et al., 2012; Rudman & Phelan, 2008). Thus, perceptions of discrimination may indirectly amplify or attenuate the risk of unfair treatment as we outline in the following section.

IM and Hiring Outcomes

The use of honest IM, particularly techniques such as self-promotion to contradict low competence stereotypes has been shown to consistently improve applicant outcomes (Barrick et

al., 2009; Chen & Lin, 2014; Levashina et al., 2013; Zhao & Liden, 2011), mainly because they increase perceived competence of the applicant (Amaral et al., 2019). The use of dishonest strategies seems to have little effect and is often unrelated to hiring outcomes (Bourdage et al., 2018; Ho et al., 2021). However, using these strategies remains risky as the detection of dishonest IM by evaluators can result in adverse evaluations and negative reactions (Carlson et al., 2011).

For members of stigmatized groups honest IM such as self-promotion may already be risky because it provokes backlash. Backlash is a form of discrimination that punishes individuals that break stereotypical norms (Rudman & Glick, 1999, 2021). In previous studies, women (Rudman et al., 2012; Rudman & Phelan, 2008) and older workers (Krings et al., 2023) were socially and economically punished for using high levels of self-promotion (e.g., they received lower evaluations and were less likely to be hired). However, research in this area is based on vignettes depicting hypothetical persons and scenarios. Moreover, it often contrasts candidates using very high with very low levels of self-promotion, thereby neglecting more subtle differences and the fact that most people are neither on one nor on the other extreme (Turnley & Bolino, 2001). Additionally, very high levels of IM are unlikely to occur in the online realm given higher control of IM strategies (i.e., more time to prepare the message), the presence of immediate feedback through interaction with the audience (Siibak, 2009; Walther, 2007) and the desire to be in line with social norms (Cotter, 2017). Taken together, backlash against jobseekers from stigmatized groups for using IM on LinkedIn seems less likely. Instead, using more moderate levels of IM may be just as effective for members of stigmatized groups as they are for members of higher status groups. Indeed, previous research suggests that older job seekers' job-related outcomes improve when using a somewhat younger looking photo on their

LinkedIn profile, indicating that modest levels of SIM may indeed be successful (Krings et al., 2021).

Purpose of the Present Study and Hypotheses

The main goals of this study are two-fold. Firstly, we explore the relationships between perceived discrimination during the job search and the use of different IM tactics. While it has been suggested that anticipating unfair treatment may trigger the use of IM tactics to increase competence perceptions and mitigate the risk of discrimination (Neel et al., 2013), these linkages have not yet been tested. Because stakes are particularly high for low-status individuals searching for a new job, thus motivating these job seekers to use a broad range of strategies to increase their chances, we expected positive relationships between perceived discrimination and both honest and dishonest IM.

Hypothesis 1: Perceived discrimination will be positively related to the use of honest IM *(H1a)* and dishonest IM *(H1b)*

Moreover, as it has been suggested that the strategies are used intentionally, with the goal to increase perceptions of competence in others (Houston & Grandey, 2013), we expected a positive relationship between perceived discrimination and strategies explicitly used to create impressions of higher competence.

Hypothesis 2: Perceived discrimination will be positively related to the use of competence-targeted IM tactics.

Our second aim was to examine the relationships between perceived discrimination, IM strategies, and job-related outcomes. While strategies such as self-promotion often improve outcomes (Barrick et al., 2009; Chen & Lin, 2014; Zhao & Liden, 2011), using these strategies could be risky for members of stigmatized groups, due to the risk of backlash (Krings et al.,

2023; Rudman et al., 2012; Rudman & Phelan, 2008). However, backlash was mostly shown when using high levels of IM, as manipulations in hypothetical situations. Moreover, recent evidence suggests that more moderate levels of IM can indeed be effective for job seekers belonging to stigmatized groups (Krings et al., 2021). Additionally, dishonest IM is often unrelated to hiring outcomes (Bourdage et al., 2018; Ho et al., 2021). We therefore expect the following:

Hypothesis 3: The use of honest *(H3a)* and competence-targeted IM tactics *(H3b)* will be positively related to more advantageous job-related outcomes (i.e., job offers, invitations for interviews and company events).

Additionally, we intended to explore the extent to which the use of IM (honest and competence-targeted) mediates the relationship between perceived discrimination and job-related outcomes. As suggested by the theoretical reasoning and empirical evidence outlined above, perceived discrimination and job-related outcomes may be related positively and indirectly, through an increased use of IM. We decided to explore these relationships in an exploratory fashion rather than with a directed hypothesis due to the survey methodology (i.e., some concepts were measured at the same time; see below). Finally, we explored the differences in the relationships between perceived discrimination and both honest and dishonest IM.

To test our hypotheses, we conducted a time-lagged survey with individuals who were actively seeking new job opportunities and using LinkedIn as one of their strategies. The survey included two separate measurement points, with our main variables of interest (perceived discrimination and IM) assessed at different times to minimize bias due to common method use.

Before describing our method in more detail, a note on IM on professional social media like LinkedIn seems warranted. LinkedIn is presently the most popular professional social media

with around 1 billion members in more than 200 countries (Bondar, 2023). With its popularity, LinkedIn has emerged as an innovative and essential tool for current job searching. It allows users to craft a professional profile that acts as an online resume. This online professional profile contains sections, most of them similar to a traditional resume. The headline features a brief job title or professional tagline. Users can add a picture to their profile. The summary (i.e., About) section provides a detailed narrative about their professional background, career aspirations, and key achievements. The experience section lists work history in reverse chronological order, detailing job titles, company names, employment dates, and descriptions of roles and responsibilities. The education section includes academic qualifications, institutions attended, and dates of attendance, along with activities and societies participated in during academic tenure. In the skills and endorsements section, users list key skills which can be endorsed by connections to add credibility. The recommendations section features written testimonials from colleagues, supervisors, and clients, vouching for the user's professional capabilities and character. Additional sections include accomplishments (e.g., honors, publications), interests and volunteer experience (Whitaker, 2021).

These predefined sections on LinkedIn are highly structured to showcase achievements (e.g., job updates, certifications, awards). By doing so, they encourage IM, particularly by creating perception of competence through self-promotion. In addition, LinkedIn facilitates both honest and dishonest IM by giving applicants more time to craft their messages and refine their strategies (Roulin & Levashina, 2016; Siibak, 2009; Walther, 2007). Importantly, LinkedIn encourages its users to build a network with colleagues, as well as previous and potential employers. Thus, IM on LinkedIn is crucial because it targets an entire network, significantly increasing the size of the audience (Paliszkiewicz & Madra-Sawicka, 2016). Little is known

about how members from stigmatized groups may use these strategies as a response to perceived discrimination (Roulin & Levashina, 2016). Previous research has shown that older jobseekers used more IM strategies on their profiles compared to young job seekers (i.e., used younger looking pictures) but received less job offers (Krings et al., 2021). However, the link between these strategies and perceived discrimination was not tested.

Method

Participants, Design, and Procedure

We recruited 384 jobseekers for a two-wave survey on job search behaviors through CloudResearch. To qualify for participation in this study, respondents had to be actively seeking new employment, have a LinkedIn account, fall within the age range of 18 to 65 years, and be a U.S. resident. Participants received USD $4.4 in total for completing both parts of the survey. Among the initial sample at time 1, 362 filled out the second questionnaire at time 2. Thirty respondents were rejected because they failed at least one of the attention checks (i.e., 16 respondents for the attention check at time 1 and 2 respondents at time 2)[1], took less than 3 minutes to complete the study (11 participants) or did not describe themselves with binary gender (i.e., one person).

The final sample consisted of 332 participants composed of 41.87% women and an age range from 19 to 65 (M = 39.54, SD = 12.55). The majority (70.18%) described themselves as White/Caucasian, 12.35% as Black/African American, 9.34% as Asian, 5.72% as Hispanic/ Latino, and 2.41% as others. In terms of education, 72.59% had a university degree (minimum bachelor). Most participants (84.64%) indicated currently having a job (part-time or full-time) which indicates that most of our sample were looking to switch jobs.

Most participants used LinkedIn more than two or three times a week (70.18%), while the remaining participants used it once a week or less. They mostly went on LinkedIn to look for jobs (M = 6.06; SD = 0.06) and scroll (M = 5.49; SD = 0.08; on a 7-point scale, ranging from 1 = *Almost never* or 7 = *Almost always*). About a third (34.04%) updated their profile every time they had a new achievement (i.e., 65.96% updated it less). Having a picture on their profile was common and only 24.70% did not have any. They had on average 126.96 connections in their network (SD = 11.99). In terms of following people and organizations, most participants did not have specific rules and followed a variety of profiles (68.67% and 54.82%, respectively). However, others focused mainly on potential employers, with 17.47% following individuals and 30.72% following organizations they could work for.

The study was conducted online. In order to minimize bias due to common method variance (Tehseen et al., 2017), the survey had two measurement points that were separated by a week. IM (honest and competence-targeted) was measured at time 1, and perceived discrimination and job-related outcomes were measured at time 2. We measured IM (honest and competence-targeted) at time 1 because we wanted to capture these responses before participants reflected on perceived discrimination at time 2, thereby avoiding any influence on their responses. We included the measure of dishonest IM at time 2 for reasons of coherence with the other items in this part of the study.

Measures

Impression Management

Honest IM (Time 1). We measured the use for honest IM on LinkedIn by using an adapted version of Stevens & Kristof, 1995)'s scale composed of 11 items (see Appendix). We adjusted the original scale by deleting three items that were not applicable to social media

platforms and by adapting the wording for those remaining (i.e., mentioning or replacing "interviews" by "on LinkedIn" or "on your profile"). Participants had to evaluate each item on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). Self-promotion was measured with five items (e.g., "I describe my skills and abilities in an attractive way on LinkedIn".), fit-with-organization by two items (e.g., "I find out what kind of person organizations are seeking and explain how I fit in through my LinkedIn profile".), opinion conformity with one item ("I share information from organizations I would be interested in working for."), other-enhancement with two items (e.g., "I praise organizations I would be interested in working for on LinkedIn posts.") and non-verbal behavior with one item (i.e., "I smile a lot or use other friendly nonverbal cues on my profile picture."). Based on the results of our factor analysis, we excluded item 5 (a reverse-coded item on self-promotion).[2] We averaged responses across the 10 items to create a score of honest IM ($\alpha = .91$).

Competence-targeted IM (Time 1). We created four items to measure IM tactics with the explicit intention to increase perceptions of competence. Each item targeted one key section of the LinkedIn profile and read: "Through your picture/with the list of skills/through your recommendations/through the text you wrote, what kind of impressions of yourself, of the type of person you are, do you intend to convey to others". For each item, participants rated to what extent they wanted to create impressions of competence on a 7-point Likert scale (1= *Not at all* to 7 = *Very much*). We then averaged responses across the four items ($\alpha = .73$).

Dishonest IM (Time 2). We created three items to measure dishonest IM in response to perceived discrimination. Participants indicated if they had changed something in their profile to avoid being discriminated against ("Have you ever changed something on your LinkedIn profile to avoid being discriminated against while looking for new job opportunities?") for three

situations (i.e., “left out something”, “embellished something”, and “invented something that is not entirely true”) on a 4-point scale (1 *No, never* to 4= *Yes, several things*). We coded each component with a 0 when participant answered *No, never* and 1 elsewhere. To create the final score of dishonest IM, we computed a sum score of the three components ranging from 0 to 3.

Perceived Discrimination

Perceptions of discrimination (time 2) were measured with four items. Based on the Everyday Discrimination Scale (Williams et al., 1997), participants indicated how often they have felt discriminated or treated unfairly when looking for new job opportunities in three different situations: when contacting organizations, during interviews or assessments or after going through the hiring procedure. Moreover, we added one item adapted from Scheim and Bauer (2019) “What is the situation like now: To what extent do you expect to experience discrimination or unfair treatment, while looking for new job opportunities?”. All answers were indicated on a 6-point Likert scale (1= *Never* to 6= *Always*). We averaged responses across the four items ($\alpha = .94$).

Job-related Outcomes

To assess job-related outcomes (time 2), we created three items. Participants reported job-related success indicators (i.e.., interviews and events invitations and jobs received through LinkedIn) in the last 4 months (“Please think of the last 4 months: how many ... did you receive that were in some way related to your presence/activity on LinkedIn?”), item on 5-points response scales (1= *0* to 5= *more than 6*). We created an index of job-related outcomes by computing the mean for the three indicators ($\alpha = .74$).

Control Variables

We included three sets of control variables. Firstly, because levels of extraversion and conscientiousness have been linked to higher levels of IM (Bourdage et al., 2018) and neuroticism to higher levels of perceived discrimination (Sutin et al., 2016; Xu & Chopik, 2020), we included these three personality traits as control variables in the analyses. Traits were measured at time 2 using the Ten-Item Personality Inventory (Gosling et al., 2003) Each trait was measured with two items: for extraversion "Extraverted, enthusiastic" and "Reserved, quiet" (reverse-coded); for conscientiousness "Dependable, self-disciplined" and "Disorganized, careless" (reverse-coded), and for neuroticism "Anxious, easily upset" and "Calm, emotionally stable" (reverse-coded). Responses were indicated on a 7-point scale (from 1= *Strongly disagree* to 7= *Strongly agree*). Correlations between the items within each trait were $r = .52$; $r = .56$; $r = .40$; all $ps < .001$, for extraversion, neuroticism and conscientiousness respectively. Following recommendations for two-items scales (Eisinga et al., 2013), we calculated the Spearman-Brown coefficients which were .68 for extraversion, .57 for conscientiousness, and .72 for neuroticism. Thus, while correlations between items within each trait were significant, Spearman-Brown coefficients indicate a lower reliability.

Secondly, we included participant demographic characteristics, measured at time 2, namely participant gender ("What is you gender"), age ("What is your age? Please indicate your age in years."), ethnicity ("What is your ethnicity?"), employment status ("What is your current main employment situation?") and education ("What is the highest level of formal education you have completed?"). Categorical variables were dummy coded: gender (0 = man; 1 = woman); ethnicity (0 = White/Caucasian; 1 = other), employment status (0 = Full-time employed; 1 = Not full-time) and education (0 = No university degree; 1 = University degree).

Finally, we included the time spent on LinkedIn because spending more time on LinkedIn may increase opportunities to use IM. Frequency on LinkedIn was measured at time 1 with "How often do you use LinkedIn?" on a 6-point scale (1 = *almost every day* to 6 = *less than once a month*).

Results

Analytical Strategy

The descriptive statistics (means, *SD*s) and correlations for main variables of interest are displayed in Table 1 and Table 2 respectively. To investigate our hypotheses, we conducted linear regressions and tested three models for each linkage. The first model contained the focal variables only. Participant levels of extraversion, neuroticism, and conscientiousness were added in model 2 while the remaining control variables (i.e., gender, age, ethnicity, employment status, education and frequency of use of LinkedIn) completed model 3.

Hypothesis Testing

Relationships between Perceived Discrimination and IM

Results of the regression analyses to investigate the relationship between perceived discrimination and honest IM (H1a), dishonest IM (H1b) and competence-targeted IM (H2) are displayed in Tables 3, 4, and 5 respectively.

For honest IM (see Table 3), results of the first model show a significant positive relationship between perceived discrimination and honest IM. This relationship remained stable after controlling for participant extraversion, neuroticism, and conscientiousness (model 2) and demographic characteristics (model 3). These results support H1a. Among the control variables, extraversion was positively related to higher levels of honest IM. Moreover, older jobseekers

used less honest IM and jobseekers with a more intensive usage of LinkedIn used more. The remaining control variables were unrelated to honest IM.

Concerning dishonest IM (see Table 4), results of the first model show a significant positive relationship between perceived discrimination and dishonest IM, as hypothesized. This relationship remained stable after controlling for participant extraversion, neuroticism, and conscientiousness (model 2) and demographic characteristics (model 3). These results supported H1b. Among the control variables, conscientiousness was negatively related to higher levels of dishonest IM. Similar to honest IM, older jobseekers used less dishonest IM. The other control variables were unrelated to dishonest IM.

For the use of competence-targeted IM (see Table 5), results across our models show no clear relationship between perceived discrimination and these strategies. Only in the first model, perceived discrimination was negatively linked to competence-targeted IM. However, the effect became nonsignificant when adding the control variables and thus, results do not support H2. Among the control variables, participant age and level of conscientiousness were positively related to competence-targeted IM.

Job-related Outcomes (H3a and H3b)

Results of the regression analyses to investigate the relationship between honest IM (H3a), competence-targeted IM (H3b) and outcomes are displayed in Tables 6 and 7. For honest IM (see Table 6), results of the first model show a significant positive relationship between honest IM and job-related outcomes. The coefficient remained stable after controlling for participant extraversion, neuroticism, and conscientiousness (model 3), and demographic characteristics (model 3). Together, these results support H3a. Among the control variables, extraversion was positively related to higher levels of job-related outcomes, and negatively

related to conscientiousness. In addition, non-white/caucasian jobseekers reported more job-related outcomes while jobseekers without already a full-time job reported less. The remaining control variables were unrelated to job-related outcomes.

Concerning the use of competence-targeted IM (see Table 7), results of the three models show no significant relationship with job-related outcomes, and thus do not support H3b. For the control variables, extraversion, being non-white/caucasian, and frequency of LinkedIn usage had a positive relationship with job-related outcomes. Conscientiousness and not being full-time employed were negatively related to job-related outcomes. The remaining control variables were unrelated to job-related outcomes.

Exploratory analyses

Indirect Relationships between Perceived Discrimination, IM and Job-related Outcomes

Table 2 shows a positive correlation between perceived discrimination and job-related outcomes ($r = .43$, $p < .01$). To further explore to what extent this relationship is mediated by IM, we conducted two mediations analyses using PROCESS (Hayes, 2022) with honest IM and competence-targeted IM as mediators. Participants' gender, age, employment, ethnicity, education, extraversion, conscientiousness, neuroticism, and use of LinkedIn were entered as control variables. Results regarding honest IM are displayed in Table 8 and show that perceived discrimination had a positive direct effect on job-related outcomes. In addition, the indirect effect was also positive and significant ($b = 0.05$, *BootSE* = 0.01, *95% CI* [0.03, 0.08]).

The second model with competence-targeted IM as mediator is represented in Table 9. Perceived discrimination had a positive direct effect on job-related outcomes. However, the indirect effect was not significant ($b = -0.006$, *BootSE* = 0.006, *95% CI* [-0.02, 0.003]). Together,

these results suggest that the use of more honest IM partially mediates the relationship between perceived discrimination and job-related outcomes.

Comparison between Perceived Discrimination's Relationship with Honest and Dishonest IM

We conducted an exploratory analysis to examine whether perceived discrimination had a different relationship with honest and dishonest IM. Because the honest and dishonest IM measures were on different scales, we standardized both variables before analysis. Using a robust mixed-effects regression model, we included random intercepts for participants. The results indicated that perceived discrimination had a significant positive relationship with both honest and dishonest IM (b = 0.21, SE = 0.04, z = 4.79, $p < .001$, 95% CI [0.12, 0.29]), suggesting that higher levels of perceived discrimination were associated with increased IM. Additionally, the relationship with perceived discrimination was significantly stronger for dishonest IM, as indicated by the significant interaction between perceived discrimination and IM type (b = 0.30, SE = 0.05, z = 6.00, $p < .001$, 95% CI [0.20, 0.40]).

Discussion

The aim of this research is to investigate the associations between perceived discrimination during job search and the use of honest and dishonest IM, and to examine the relationships between these tactics and job-related outcomes. In our survey, we investigate these links in the field among individuals currently looking for a job.

We found consistent support for a positive relationship between perceived discrimination and the use of IM, supporting the assumption that perceptions of discrimination may trigger IM behaviors in order to mitigate unfair treatments (Gioaba & Krings, 2017; Neel et al., 2013; Roberts, 2005). Perceived discrimination was related to a broad range of IM, including honest and dishonest tactics. Importantly, these relationships remained constant even when controlling

for individuals' characteristics (i.e., personality traits and demographics) excluding alternative explanations often proposed for the use of IM (Bourdage et al., 2018; Sutin et al., 2016; Xu & Chopik, 2020). Thus, these results suggest a central role of perceived discrimination on influencing behaviours in the workplace and the use of IM.

Contrary to our expectations, perceived discrimination was not significantly related to strategies that were used with the explicit goal to create impressions of higher competence on one's profile (i.e., competence-targeted IM). Several elements may explain this finding. First, the results may be due to a ceiling effect as mean ratings were very high on this scale (6.08 on a scale of 7). Additionally, some stigmatized groups are not perceived as lacking competence (e.g., Asian Americans; Berdahl & Min, 2012). Members of such groups may be less concerned about enhancing competence impressions but rather warmth or agency.

Regarding the outcomes of IM strategies, our findings indicate that honest IM is positively associated with job-related outcomes. This aligns with existing literature (Barrick et al., 2009; Zhao & Liden, 2011), which asserts that employing IM strategies can successfully enhance job seekers' chances and positively influence recruiters' perceptions. On a professional social media platform, honest IM strategies were related to better outcomes similar to strategies used during traditional job searching. However, competence-targeted IM was unrelated to job-related outcomes. This result suggests that competence might not be the sole criterion recruiters consider when selecting candidates.

In sum, this study found that perceived discrimination is linked to increased use of both honest and dishonest IM tactics. While honest IM was positively associated with job-related outcomes, competence-targeted IM was not. Thus, they highlight the importance of IM as a tool

for navigating the job market. These strategies could be a potential tool for members of stigmatized groups to improve job-related outcomes and decrease the risk of discrimination.

Implications for Practice

Our results suggest that when perceiving the threat of discrimination, jobseekers could use IM as a response. While it raises the potential opportunity to later provide them with IM strategies to try to overcome hiring discrimination, it also can be risky especially for members of stigmatized groups as they risk facing backlash for counter-stereotypical behaviors. Additionally, our findings suggest that perceived discrimination is related to higher levels of dishonest IM which can threaten the validity of the recruitment process. Thus, organizations should improve the transparence of their recruitment process to lower the threat perceived by jobseekers from stigmatized groups (e.g., by providing specific trainings for recruiters or implementing structured interviews and standardized evaluation criteria).

Finally, perceived discrimination could serve as a motivation to use IM, but perceived discrimination also has detrimental effects on members of stigmatized groups as it threatens both their mental and physical health. These conclusions emphasize the duty of society to try to decrease unfair treatments against stigmatized groups.

Limitations and Directions for Future Research

This study has several limitations that should be acknowledged. The reliance on self-reported data may introduce response biases, and the cross-sectional design limits our ability to draw causal inferences. To do so, further research should replicate our findings in an experimental setting and measure actual IM behaviors.

We used a validated 10-item personality measure (Gosling et al., 2003), suitable for studies where personality traits are not the main focus. However, modest item correlations

question its validity for our study, and the Big Five lacks an honesty dimension, relevant to our distinction between honest and dishonest IM. Future research should use the HEXACO scale (Ashton & Lee, 2009), to measure personality traits and explore the impacts of honesty.

We expected a positive relationship between perceived discrimination and competence-targeted IM. However, the relationship was not significant and competence-targeted IM was also unrelated to job-related outcomes. Further research should investigate the type of impressions that members of stigmatized groups intend to convey when using IM (e.g., warmth) and how they could be effective in mitigating bias as these results suggest that recruiters do not only rely only on competence to evaluate candidates.

In addition, we conducted our survey with US jobseekers. Perceived discrimination could increase chances of stigmatized group members if they lead to honest IM. However, when anticipating very high levels of discrimination, jobseekers could be demotivated or afraid to confirm stereotypes and decrease their performance during recruitment. Because our results could be dependent on cultural context (e.g., public opinion about discrimination, habits during job-search), our results should thus be replicated in different countries to increase their generalizability.

Finally, our results suggest that candidates from stigmatized groups perceive discrimination and could react by using IM strategies. These findings emphasize the need to better understand how jobseekers could perceive discrimination (Small & Pager, 2020). Further studies should integrate candidates' agency in research about discrimination. This would allow researchers to have a better understanding on the effects of discrimination on applicants' perceptions and reactions.

Conclusion

Discrimination against stigmatized groups have gathered a lot of attention from researchers, governments and companies in the last decades. Despite these efforts, many unexplained differences remain in treatment between majority and minority groups. In this context, applicants from stigmatized groups may develop strategies to reduce the likelihood of facing discrimination during the job search. These strategies are particularly focused on what the applicants can control, rather than depending on the organization's efforts or intentions to promote diversity. By doing so, they seek to influence their chances of fair treatment without relying on external actions to combat discrimination.

Our findings suggest that stigmatized group members not only anticipate discrimination but may try to overcome them by using IM strategies. Some of these tactics were indeed associated with improved job-related outcomes, suggesting a potential tool for members of stigmatized groups to mitigate discrimination. By identifying and promoting successful approaches, we can try fostering more inclusive and equitable employment practices, ultimately combating discrimination in general.

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Endnotes

[1] The attention check question for time 1 was “Please choose "slightly oppose" to this question, to show that you are attentive.” and “Please choose "Rarely" to this question, to show that you are attentive.” for time 2. Participants had to select the right answer from respectively seven and five other options in order to be eligible for the final sample.

[2] We conducted Exploratory Factor Analyses (EFA) to determine the number of variables used to measure Impression Management (IM). Based on the scree plot displayed in Figure 1 and the fact that the Eigenvalue for four factors was close to 1 (i.e., 1.075), we retained three factors: honest IM, dishonest IM, and competence-targeted IM. Results from the extraction for three factors (see Table 10) show strong loadings for each variable (> .40), except for the reversed items of self-promotion (IM_5R), which we decided to remove from the scale. Additionally, we conducted a Confirmatory Factor Analysis (CFA) using Structural Equation Modeling (SEM), which confirmed that our three-factors model had better fit indicators compared to any models with fewer factors (see Table 11).

Table 1

Descriptive Statistics for the Variables of Interest

Variables	*N*	*M*	*SD*	*Min*	*Max*
Perceived discrimination	332	1.18	1.16	0	5
Honest IM	332	4.60	1.30	1	7
Dishonest IM	332	0.75	1.09	0	3
Comp. targeted IM	319	6.08	0.93	2	7
Job-related ouctomes	332	0.89	0.87	0	4
Extraversion	332	3.71	1.64	1	7
Conscientiousness	332	5.84	1.15	2	7
Neuroticism	332	5.13	1.52	1	7
Age	332	39.54	12.55	19	65
Gender (women)	332	0.58	0.49	0	1
Ethnicity (non-withe/Caucasian)	332	0.30	0.46	0	1
Education (University degree)	332	0.73	0.45	0	1
Employment (Not full-time)	332	0.27	0.44	0	1
Frequency on LinkedIn	332	3.83	1.02	1	5

Note. Age is measured in years

Table 2
Correlation Matrix for the Variables of Interest

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Perceived discrimination	-													
(2) Honest IM	.24***	-												
(3) Dishonest IM	.59***	.25***	-											
(4) Comp. targeted IM	-.14**	.21***	-.17***	-										
(5) Job-related outcomes	.43***	.40***	.41***	-.01	-									
(6) Extraversion	-.05	.17***	-.09	.08	.14**	-								
(7) Conscientiousness	-.29***	.02	-.40***	.38***	-.23***	.17***	-							
(8) Neuroticism	-.22***	.08	-.26***	.16***	-.09*	.39***	.50***	-						
(9) Age	.07	-.17***	-.11**	.14**	-.06	.19***	.21***	.28***	-					
(10) Gender (women)	-.12**	.06	.02	-.02	.04	-.02	-.04	.08	-.12**	-				
(11) Ethnicity (non-white/Caucasian)	.20***	.19***	.12**	-.00	.19***	-.06	-.02	-.02	-.22***	.07	-			
(12) Education (University degree)	.05	.16***	.08	.02	.17***	-.02	-.01	-.07	-.05	.05	.15***	-		
(13) Employment (Not full-time)	.02	-.10*	-.03	.02	-.17***	-.05	-.01	-.07	-.08	-.14**	.01	-.24***	-	
(14) Frequency on LinkedIn	.06	.25***	.01	.10*	.15***	.05	.08	-.02	-.08	.12**	.05	.18***	-.06	-

Note. Age was measured in years*; *** p<.01, ** p<.05, * p<.1.*

Table 3

Regression Models for Perceived Discrimination and Honest IM

Variables	(1)	(2)	(3)
Perceived discrimination	0.27***	0.30***	0.31***
	(0.06)	(0.06)	(0.06)
Extraversion		0.12**	0.13***
		(0.05)	(0.05)
Conscientiousness		0.04	0.05
		(0.07)	(0.07)
Neuroticism		0.06	0.11*
		(0.06)	(0.06)
Age			-0.02***
			(0.01)
Gender (Women)			0.04
			(0.14)
Ethnicity (Non-white/Caucasian)			0.19
			(0.15)
Education (University degree)			0.25
			(0.15)
Employment (Not full-time)			-0.23
			(0.15)
Frequency LinkedIn usage			0.23***
			(0.07)
Constant	4.28***	3.28***	2.82***
	(0.10)	(0.40)	(0.47)
Observations	332	332	332
R-squared	0.06	0.10	0.22

Note. Robust standard errors in parentheses. Age was measured in years. *** $p<.01$, ** $p<.05$, * $p<.1$.

Table 4

Regression Models for Perceived Discrimination and Dishonest IM

Variables	(1)	(2)	(3)
Perceived discrimination	0.55***	0.48***	0.51***
	(0.04)	(0.04)	(0.05)
Extraversion		-0.01	0.00
		(0.03)	(0.03)
Conscientiousness		-0.22***	-0.19***
		(0.05)	(0.05)
Neuroticism		-0.02	-0.01
		(0.04)	(0.04)
Age			-0.01**
			(0.00)
Gender (Women)			0.15
			(0.10)
Ethnicity (Non-white/Caucasian)			-0.06
			(0.12)
Education (University degree)			0.11
			(0.10)
Employment (Not full-time)			-0.08
			(0.16)
Frequency LinkedIn			-0.03
			(0.05)
Constant	0.10*	1.57***	1.66***
	(0.05)	(0.33)	(0.38)
Observations	332	332	332
R-squared	0.35	0.41	0.42

Note. Age was measured in years; Robust standard errors in parentheses. *** $p<.01$, ** $p<.05$, * $p<.1$.

Table 5

Regression Models for Perceived Discrimination and Competence-targeted IM

Variables	(1)	(2)	(3)
Perceived discrimination	-0.11**	-0.03	-0.06
	(0.05)	(0.05)	(0.05)
Extraversion		0.02	0.01
		(0.03)	(0.03)
Conscientiousness		0.32***	0.29***
		(0.05)	(0.05)
Neuroticism		-0.04	-0.05
		(0.04)	(0.04)
Age			0.01**
			(0.00)
Gender (Women)			-0.01
			(0.11)
Ethnicity (Non-white/Caucasian)			0.08
			(0.11)
Education (University degree)			0.07
			(0.11)
Employment (Not full-time)			0.08
			(0.11)
Frequency LinkedIn			0.06
			(0.05)
Constant	6.22***	4.41***	3.99***
	(0.07)	(0.30)	(0.36)
Observations	319	319	319
R-squared	0.02	0.15	0.16

Note. Age was measured in years; Robust standard errors in parentheses. *** $p<.01$, ** $p<.05$, * $p<.1$.

Table 6

Regression Models for Honest Impression Management and Job-related Outcomes

Variables	(1)	(2)	(3)
Honest IM	0.27***	0.26***	0.23***
	(0.04)	(0.03)	(0.03)
Extraversion		0.07***	0.07***
		(0.03)	(0.02)
Conscientiousness		-0.17***	-0.18***
		(0.04)	(0.04)
Neuroticism		-0.04	-0.04
		(0.03)	(0.04)
Age			0.00
			(0.00)
Gender (Women)			-0.00
			(0.08)
Ethnicity (Non-white/Caucasian)			0.25**
			(0.10)
Education (University Degree)			0.11
			(0.09)
Employment (Not full-time)			-0.21**
			(0.09)
Frequency LinkedIn Usage			0.05
			(0.04)
Constant	-0.35**	0.61**	0.36
	(0.15)	(0.25)	(0.29)
Observations	332	332	332
R-squared	0.16	0.23	0.28

Note. Age was measured in years; Robust standard errors in parentheses. *** $p<.01$, ** $p<.05$, * $p<.1$.

Table 7

Regression Models on Competence-targeted IM and Job-related Outcomes

Variables	(1)	(2)	(3)
Competence-targeted IM	-0.01	0.08	0.07
	(0.05)	(0.06)	(0.05)
Extraversion		0.10***	0.09***
		(0.03)	(0.03)
Conscientiousness		-0.21***	-0.21***
		(0.06)	(0.06)
Neuroticism		-0.02	-0.02
		(0.04)	(0.04)
Age			0.00
			(0.00)
Gender (Women)			-0.03
			(0.09)
Ethnicity (Non-white/Caucasian)			0.36***
			(0.11)
Education (University degree)			0.16
			(0.10)
Employment (Not full-time)			-0.27***
			(0.10)
Frequency LinkedIn			0.09**
			(0.05)
Constant	0.95***	1.37***	0.91***
	(0.31)	(0.34)	(0.35)
Observations	319	319	319
R-squared	0.00	0.09	0.18

Note. Age was measured in years; Robust standard errors in parentheses. *** $p<.01$, ** $p<.05$, * $p<.1$.

Table 8

Mediation Analysis of the Effect of Perceived Discrimination on Job-related Outcomes via Honest IM with Covariates

Effect	*B*	*SE*	*t*	*p*	*95% CI*
Outcome: Honest IM					
Perceived discrimination	0.31	0.06	5.11	< .001	[0.19, 0.43]
Extraversion	0.13	0.04	3.03	.003	[0.05, 0.21]
Conscientiousness	0.05	0.07	0.69	.493	[-0.09, 0.18]
Neuroticism	0.11	0.05	2.02	.045	[0.00, 0.22]
Age	-0.02	0.01	-4.29	< .001	[-0.04, -0.01]
Gender (Women)	0.04	0.14	0.30	.767	[-0.23, 0.31]
Ethnicity (Non-white/Caucasian)	0.19	0.15	1.28	.201	[-0.10, 0.49]
Education (University degree)	0.25	0.15	1.63	.104	[-0.05, 0.55]
Employment (Not full-time)	-0.23	0.15	-1.51	.132	[-0.53, 0.07]
Frequency LinkedIn	0.23	0.07	3.47	.001	[0.10, 0.35]
Constant	2.82	0.47	5.95	< .001	[1.88, 3.75]

Effect	*B*	*SE*	*t*	*p*	*95% CI*
Outcome: Job-related outcomes					
Perceived discrimination	0.23	0.04	6.02	< .001	[0.16, 0.31]
Honest IM	0.17	0.03	5.05	< .001	[0.11, 0.24]
Extraversion	0.08	0.03	2.88	.004	[0.02, 0.13]
Conscientiousness	-0.11	0.04	-2.79	.006	[-0.20, -0.03]
Neuroticism	-0.02	0.03	-0.47	.641	[-0.08, 0.05]
Age	0.00	0.00	-0.19	.846	[-0.01, 0.01]
Gender (Women)	0.06	0.08	0.78	.435	[-0.10, 0.23]
Ethnicity (Non-white/Caucasian)	0.13	0.09	1.46	.146	[-0.05, 0.31]
Education (University degree)	0.12	0.09	1.32	.189	[-0.06, 0.31]
Employment (Not full-time)	-0.23	0.09	-2.51	.013	[-0.42, -0.05]
Frequency LinkedIn	0.04	0.04	0.89	.372	[-0.04, 0.12]
Constant	0.07	0.31	0.23	.818	[-0.53, 0.67]

Note. X = Perceived discrimination, M = Honest IM, Y = Job-related outcomes. B = Unstandardized coefficient, SE = Standard error, t = t-value, p = p-value, CI = Confidence Interval. The confidence intervals for the indirect effect are obtained by the bootstrap method with 5000 samples. Models statistics: $F(11, 320) = 15.60$, $p < .001$, $R^2 = .35$

Table 9

Mediation Analysis of the Effect of Perceived Discrimination on Job-related Outcomes via Competence-targeted IM with Covariates

Effect	*B*	*SE*	*t*	*p*	*95% CI*
Model: Competence-targeted IM					
Perceived discrimination	-0.06	0.05	-1.32	.188	[-0.15, 0.03]
Extraversion	0.01	0.03	0.33	.742	[-0.05, 0.07]
Conscientiousness	0.29	0.05	5.79	< .001	[0.19, 0.39]
Neuroticism	-0.05	0.04	-1.15	.249	[-0.13, 0.03]
Age	0.01	0.00	1.82	.069	[-0.00, 0.02]
Gender (Women)	-0.01	0.10	-0.06	.953	[-0.21, 0.20]
Ethnicity (Non-white/Caucasian)	0.08	0.11	0.67	.503	[-0.15, 0.30]
Education (University degree)	0.07	0.12	0.61	.544	[-0.16, 0.30]
Employment (Not full-time)	0.08	0.11	0.72	.475	[-0.14, 0.31]
Frequency LinkedIn	0.06	0.05	1.32	.188	[-0.03, 0.16]
Constant	3.99	0.36	11.09	< .001	[3.28, 4.70]
Effect	*B*	*SE*	*t*	*p*	*95% CI*
Model: Job-related outcomes					
Perceived discrimination	0.29	0.04	7.39	< .001	[0.21, 0.37]
Competence-targeted	0.10	0.05	2.05	.041	[0.00, 0.20]
Extraversion	0.10	0.03	3.50	.001	[0.04, 0.15]
Conscientiousness	-0.14	0.05	-3.10	.002	[-0.23, -0.05]
Neuroticism	0.01	0.04	0.20	.842	[-0.06, 0.08]
Age	-0.00	0.00	-1.22	.223	[-0.01, 0.00]
Gender (Women)	0.05	0.09	0.60	.548	[-0.12, 0.22]
Ethnicity (Non-white/Caucasian)	0.18	0.10	1.89	.060	[-0.01, 0.37]
Education (University degree)	0.13	0.10	1.33	.186	[-0.06, 0.33]
Employment (Not full-time)	-0.29	0.10	-3.01	.003	[-0.49, -0.10]
Frequency LinkedIn	0.06	0.04	1.48	.141	[-0.02, 0.14]
Constant	0.20	0.36	0.56	.575	[-0.51, 0.92]

Note. *B* = Unstandardized coefficient, *SE* = Standard error, *t* = t-value, *p* = p-value, *CI* = Confidence Interval. The confidence intervals for the indirect effect are obtained by the bootstrap method with 5000 samples. *Models statistics: F(11, 307)* = 12.18, $p < .001$, $R^2 = .30$

Table 10

Exploratory Factor Analysis for Measures of Impression Management

Variable	Factor 1	Factor 2	Factor 3
IM_1	**.66**	**.52**	.13
IM_2	**.67**	**.51**	.16
IM_3	**.71**	.37	.14
IM_4	**.57**	**.59**	.15
IM_6	**.65**	.12	.04
IM_7	**.81**	-.01	-.02
IM_8	**.77**	-.14	-.12
IM_9	**.85**	-.32	-.23
IM_10	**.83**	-.27	-.23
IM_11	**.57**	.01	.05
IM_5R	-.14	**.57**	-.05
IM_dishonest_1	.25	-.34	**.46**
IM_dishonest_2	.28	**-.43**	**.59**
IM_dishonest_3	.35	**-.51**	**.61**
picture-impression	.33	**.43**	.04
about-impression	.20	**.56**	.15
skills-impression	.05	**.55**	.08
recommendations-impression	-.02	**.55**	.03

Note. Extraction Method: Maximum Likelihood with three factors. Factor loadings > .4 are in bold.

Table 11

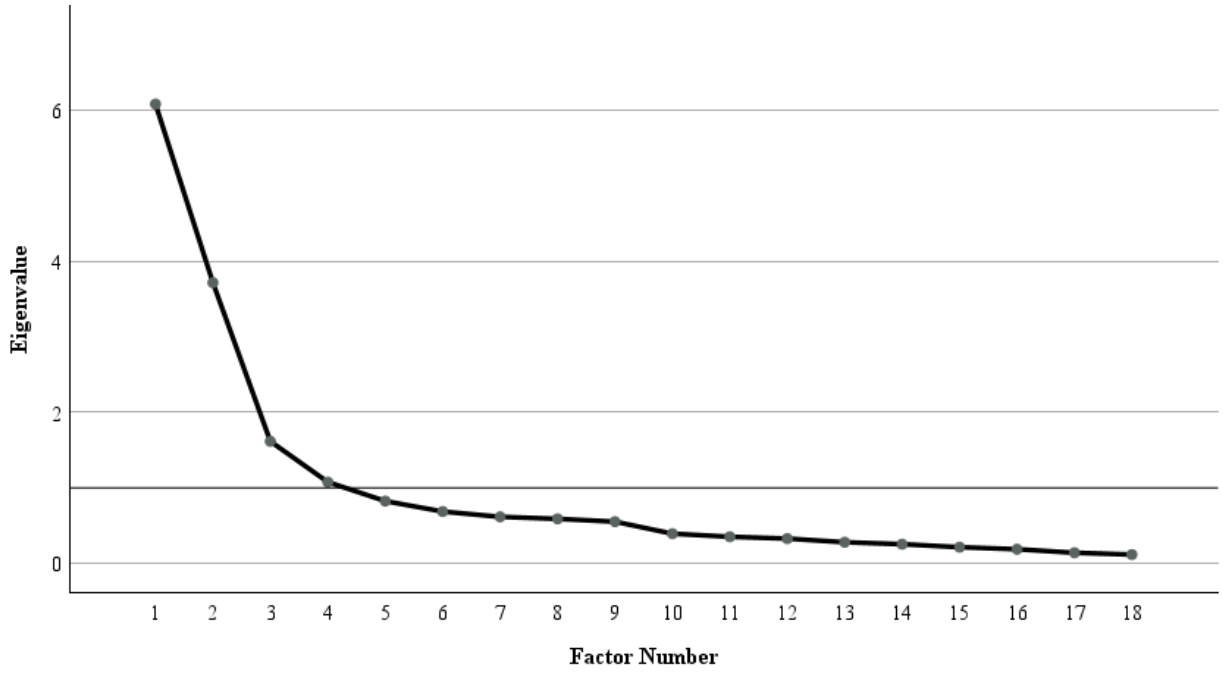
SEM Models with Indicator of Fit for Measures of Impression Management

Model	χ^2 *(p)*	*RMSEA (p)*	*CFI*	*TLI*	*AIC*	*BIC*	Log Likelihood
3 Latent Variables	1037.38 (< .001)	0.16 (< .001)	0.71	0.66	14356.99	14562.47	-7124.50
2 Latent Variables (Dishonest IM alone)	1236.48 (< .001)	0.17 (< .001)	0.64	0.59	14552.09	14749.96	-7224.04
2 Latent Variables (Honest IM alone)	1385.00 (< .001)	0.18 (< .001)	0.60	0.54	14700.61	14898.48	-7298.30
2 Latent Variables (Competence-targeted IM alone)	1363.13 (< .001)	0.18 (< .001)	0.60	0.54	14678.74	14876.61	-7287.37
1 Latent Variable	1552.24 (< .001)	0.19 (< .001)	0.54	0.48	14865.85	15059.91	-7381.92

Note. N = 332. RMSEA: Root Mean Square Error of Approximation. CFI: Comparative Fit Index. TLI: Tucker-Lewis Index. AIC: Akaike Information Criterion. BIC: Bayesian Information Criterion. χ^2 (p): Chi-square with associated p-value.

Figure 1

Scree Plot for Exploratory Factory Analyses for Measures of Impression Management



Note. A line for an Eigenvalue of 1 is shown.

Appendix

Scale to Measure Impression Management Strategies Used on LinkedIn, Adapted from (Stevens & Kristof, 1995)

1. I demonstrate my knowledge and expertise on LinkedIn.
2. I describe my skills and abilities in an attractive way on LinkedIn.
3. I take charge on my profile to get my main points across.
4. I describe my skills and experience on LinkedIn.
5. I give vague or evasive information on my profile. (reverse coded)
6. I find out what kind of person organizations are seeking and explain how I fit in through my LinkedIn profile.
7. I indicate my enthusiasm for working for these organizations in communications and activities on my profile.
8. I share information from organizations I would be interested in working for.
9. I praise organizations I would be interested in working for on LinkedIn posts.
10. I compliment leaders and/or organizations on LinkedIn posts.
11. I smile a lot or use other friendly nonverbal cues on my profile picture.

Navigating Discrimination:

How Job Seekers Proactively Use Impression Management on LinkedIn

Alissone Mendes de Oliveira, Franciska Krings, and Tobias Schlager

Faculty of Business and Economics, University of Lausanne, Switzerland

Abstract

Discrimination against stigmatized individuals (e.g., women and older individuals) during hiring is prevalent and well-documented (Neumark, 2018). We add an often-overlooked perspective by considering job seekers as active agents who react to discrimination. It has been suggested that job seekers use impression management (IM) strategies to overcome stereotypes and reduce negative outcomes (Roberts, 2005; Shih et al., 2013). This paper investigates the impact of perceived discrimination on the use of impression management on professional social media through two experimental studies.

Our lab experiment with university students revealed that the perception of discrimination increased the use of IM strategies, specifically among younger men. Younger men in the high discrimination salience condition invested more effort in constructing their profiles (e.g., included more sections) and used more IM strategies (e.g., mentioned more soft skills) than those in the low salience condition. These efforts led to higher evaluations from independent raters, demonstrating the success of these strategies. However, no similar effect was found among women.

In our second study, conducted online with participants of all ages, we found no significant effect of discrimination salience on the use of IM strategies, and the interaction with gender observed in Study 1 was also absent. We explored potential reasons for these differing results, such as cultural and contextual factors, and discussed the implications for research and practice, particularly the need for tailored strategies to support different stigmatized groups.

Keywords: Discrimination, impression management, ageism, youngism, LinkedIn

Navigating Discrimination: How Job Seekers Proactively Use Impression Management on LinkedIn

Discrimination against members of stigmatized groups— those who experience social disapproval or negative stereotypes due to specific characteristics or attributes (Goffman, 1963) — is well-documented in the literature (Carlsson & Eriksson, 2019; Hangartner et al., 2021; Quillian & Lee, 2023; Zschirnt & Ruedin, 2016). As a result of its detrimental impacts on both physical and mental health (Daftary et al., 2020; Soto et al., 2011; Stein et al., 2019), discrimination is recognized as a significant public health issue (Bhui, 2016). In the workplace, discrimination has adverse financial consequences for these groups, including hindering career advancement (Heilman, 2001) and contributing to wage inequalities (Ozeren, 2014).

Many studies on hiring discrimination portray stigmatized groups as passive recipients of discrimination. There is less understanding, however, of the way discrimination can trigger motivation to counteract unfair treatments. Impression management (IM), which involves constructing a positive image to gain social or financial support (Rosenfeld et al., 2015), may be seen by job seekers from stigmatized groups as a strategy to reduce unfair treatment. It has been proposed that members of these groups use specific IM tactics based on social identities as an active response to perceived discrimination, aiming to challenge and mitigate the effects of stereotypes on others' judgments (Houston & Grandey, 2013; Roberts, 2005). Nonetheless, empirical examination of the causal impact of perceived discrimination on the use of IM has not been tested yet. This study proposes that job seekers’ perceptions of discrimination trigger motivations to engage in IM strategies to counteract prejudicial impressions. However, the outcomes of these strategies are uncertain. While IM techniques like self-promotion can enhance hiring outcomes (Barrick et al., 2009; Chen & Lin, 2014; Zhao & Liden, 2011), they may be

risky for stigmatized group members who might face backlash for behaving contrary to stereotypes (Krings et al., 2023; Rudman et al., 2012; Rudman & Phelan, 2008). Understanding how perceived discrimination influences the use of IM, and thus indirectly affects evaluation received by candidates from stigmatized groups, is important.

This research aims to isolate the causal impact of perceived discrimination on the use of IM with two experiments, one lab experiment with university students and one online study with participants of all ages. We examine perceived youngism, i.e., discrimination for being considered as (too) young (Duncan & Loretto, 2004). These unfair treatments reported by younger people can cause major harm to their early careers but are often understudied (Francioli & North, 2021). Moreover, we focus on IM on professional social media platforms, specifically LinkedIn, which has become the predominant tool for job seekers and recruiters, increasingly competing with traditional methods (Nikolaou, 2014).

Our findings highlight the role of discrimination salience in shaping IM strategies among younger men, while also emphasizing the nuanced differences in how these effects manifest across genders and contexts. These results underscore the complex role of discrimination as a trigger for IM and advocate for its further investigation in future research.

Discrimination Based on Age

Ageism, or discrimination based on age (Butler, 1969), is critical in the workplace, especially as the aging population grows (United Nations Department of Economic and Social Affairs, 2023). Workers aged 50 and above (Finkelstein et al., 2013) face stereotypes questioning their abilities, such as being less motivated, competent, adaptable, healthy, and technologically savvy (Finkelstein et al., 2013; Ng & Feldman, 2012; Posthuma & Campion, 2009). These stereotypes result in older workers being less likely to be called for interviews (Lahey, 2008;

Neumark et al., 2019; Riach & Rich, 2006, 2010). Perceiving age discrimination leads to lower job satisfaction, commitment, and engagement (Furunes & Mykletun, 2010; Macdonald & Levy, 2016).

Contrary to the common belief that age discrimination increases over the course of the lifetime, younger workers, typically those under 30 (Finkelstein et al., 2013), also experience unfair treatment based on their age often referred as youngism (Duncan & Loretto, 2004; Francioli & North, 2021). This form of ageism is often overlooked in research as well as in practice (Schmitz et al., 2023). However, a recent study shows that younger adults receive the least favorable sentiments among all the age groups (Francioli et al., 2024). With population ageing, younger people are becoming a minority and they too are facing mixed stereotypes with both positive and negative elements (Francioli & North, 2021). Younger people are perceived as being entitled, disrespectful, spoiled, arrogant, self-centered, lazy, immature, and inexperienced (Finkelstein et al., 2013; Francioli et al., 2024; Francioli & North, 2021). Positive elements (e.g., tech-savvy, fun, and ambitious) are also associated with younger people but they are perceived with a higher percentage of negative stereotypes compared to positive ones (Francioli et al., 2024).

Stereotypes of younger people overlap with those associated with their generation. Younger workers (i.e., below 30 years old) are part of late Generation Y and Generation Z (Bencsik et al., 2016). They are seen as obsessed with screens, ego-centric, disrespectful, concerned with diversity, equity, and inclusion, creative, and having a short attention span (Kaplan, 2024; Knight, 2024; Schroth, 2019; Smith, 2022). These younger generations are subject to complaints among human resources professionals because they are seen as more demanding than previous generations (Löffler & Giebe, 2021; Racolța-Paina & Irini, 2021).

Research is not yet conclusive on youngism with field experiments in the workplace. However in money-allocation tasks, younger people received significantly less money compared to other age-groups (Bartoš et al., 2023) supporting the hypothesis of a U-shaped distribution of ageism. Importantly, close to 30% of younger workers declare feeling discriminated against because of their young age (Duncan & Loretto, 2004; Gargouri & Guaman, 2017; Raymer et al., 2017). Similar to ageism against older workers, this perceived discrimination negatively impacts job satisfaction among younger employees (Jelenko, 2020).

Research has widely demonstrated that perceived discrimination can lead to negative consequences (Jelenko, 2020). However, the extent to which it might also prompt proactive behaviors aimed at preventing potential unfair treatment is less understood. Members of stigmatized groups frequently attempt to affect how others perceive them in order to mitigate the negative impacts of stereotypical beliefs (Neel et al., 2013; Shih et al., 2013). One potential way of influencing other perception is through the use of IM, strategies "by which people control the impressions others form of them" (Leary & Kowalski, 1990, p. 1). Previous research has proposed IM as a potential tool to reduce chances of discrimination perceived by members of stigmatized groups, but empirical evidence is lacking.

Using IM to Reduce Discrimination

IM at hiring is prevalent in both traditional recruitment contexts, such as interviews (Bolino et al., 2016; Ellis et al., 2002; Roulin et al., 2015) and professional social media (Roulin & Levashina, 2016). Common tactics include self-promotion (highlighting one's qualities), fit-with-organization (showing alignment with the organization), opinion conformity (agreeing with the target's views), other-enhancement (praising the target), and non-verbal behaviors (Stevens & Kristof, 1995).

Members of stigmatized groups often use IM strategies in order to decrease the unfair treatments that they face. These additional strategies have been referred to as Social identity-based IM (SIM). SIM is defined as "the process of strategically influencing others' perceptions of one's own social identity in order to form a desired impression" (Roberts, 2005, p. 694). Unlike traditional IM, SIM focuses on influencing perceptions of social identity groups in addition to individual traits. Two primary categories of SIM are social recategorization and positive distinctiveness (Roberts, 2005). Social recategorization involves aligning behavior with more positively viewed identities, thereby diminishing the prominence of a devalued identity through decategorization or assimilation. Positive distinctiveness aims to elevate the status of the current social identity group by highlighting its positive attributes and challenging negative stereotypes through strategies like integration or confirmation.

In the hiring context, research showed several examples for members of different stigmatized groups (e.g., older people, ethnic and racial minorities) using IM strategies based on their social identities (Derous, 2017; Krings et al., 2021; Roberts et al., 2014). However, what causes the use of these SIM strategies is still unknown. Perceived discrimination is often mentioned as a trigger for these behaviors (Neel et al., 2013; Roberts, 2005; Shih et al., 2013) but its impact has never been experimentally investigated. Understanding what causes the use of SIM is crucial because in the work-context, stakes are high for members of stigmatized groups to improve impressions made on others. Furthermore, the outcome from SIM is uncertain specially in the case of members of stigmatized groups. IM strategies can be effective in improving outcomes in the recruitment context (Barrick et al., 2009; Chen & Lin, 2014). But for members of stigmatized groups, using IM strategies could be more risky since they could face backlash, i.e., economic and social sanctions for behaving counter-stereotypically (Rudman et al., 2012;

Rudman & Phelan, 2008). Therefore, perceptions of discrimination may alternatively indirectly increase or reduce the risk of unfair treatments, as discussed in the following section.

IM Impacts on Hiring Outcomes

The use of IM has often been linked to better hiring outcomes for applicants (Barrick et al., 2009; Chen & Lin, 2014; Levashina et al., 2013; Zhao & Liden, 2011). Ingratiation improved ratings received in application letters (Varma et al., 2006) and during job-interviews (Chen et al., 2008; Zhao & Liden, 2011). Strategies such as self-promotion are specially effective because they increase perception of competence (Amaral et al., 2019). Outcomes were even better when applicants used a combination of both ingratiation and self-promotion compared to when two tactics were used in isolation (Proost et al., 2010).

For members of stigmatized groups however, the use of IM can put them at risk of backlash. Backlash is a form of discrimination that punishes individuals that break stereotypical norms (Rudman & Glick, 1999, 2021; Rudman & Phelan, 2008). Women (Rudman & Glick, 1999; Rudman & Phelan, 2008) and older workers (Krings et al., 2023) face this type of unfair treatment and receive lower evaluations when showing high levels of self-promotion. Stereotypes of younger people often portray them as self-centered and lacking respect for authority. When younger individuals engage in self-promotion, these actions may be interpreted as reinforcing the stereotype of being egocentric and obsessed with self-image (Kaplan, 2024; Knight, 2024). This amplification of negative impressions can lead to harsher judgments and an increased likelihood of backlash. Furthermore, younger people face ambivalent expectations to show low-status behaviors (e.g., obeying superiors) while also displaying agency and initiative (Schmitz et al., 2023), which could exacerbate the risk of backlash they may face.

However, results from the backlash literature are often based on vignette studies describing candidates who show very high level of self-promotion. In real life, very high levels of self-promotion are less likely to occur. This is especially true when job searching through social media because immediate feedback is provided from the audience through comments (Siibak, 2009; Walther, 2007). Using more moderate levels of IM on social media may be effective for members of stigmatized groups as it is for their majority group counterparts.

IM on Professional Social Media

LinkedIn is currently the leading professional social media platform, boasting around 1 billion members across more than 200 countries (Bondar, 2023). Its widespread use has positioned LinkedIn as a vital tool for modern job seekers. Users can create a professional profile that functions as an online resume, featuring sections akin to those in a traditional resume. The headline displays a brief job title or professional tagline, and users can upload a profile picture. The summary (i.e., About) section offers the opportunity to tell their professional history, career goals, and significant achievements. The experience section outlines work history in reverse chronological order, including job titles, company names, employment dates, and role descriptions. The education section lists academic qualifications, institutions attended, dates of attendance, and participation in activities and societies. In the skills and endorsements section, users list key skills that connections can endorse to enhance credibility. The recommendations section includes testimonials from colleagues, supervisors, and clients, attesting to the user's professional abilities and character. Additional sections cover accomplishments (e.g., honors, publications), interests, and volunteer experience (Whitaker, 2021).

These predefined sections on LinkedIn are structured to showcase achievements (e.g., job updates, certifications, awards). By doing so, they encourage IM such as self-promotion. In

addition, LinkedIn facilitates IM by allowing easy modifications of content and provides applicants with more time to craft their messages and refine their strategies (Roulin & Levashina, 2016; Siibak, 2009; Walther, 2007). Importantly, LinkedIn encourage their users to build a network with colleagues, previous and potential employers. Thus, success of IM on LinkedIn is crucial because the strategies displayed on it target not only direct potential recruiters (i.e., as do resumes) but also an entire network, significantly increasing the size of the audience (Paliszkiewicz & Madra-Sawicka, 2016)

However, evidence of the efficacy of IM on professional social media is scarce especially in the case of members of stigmatized groups. On LinkedIn, older jobseekers improved their job-related outcomes by using IM and posting younger-looking pictures of themselves (Krings et al., 2021), indicating that modest levels of SIM can be successful on professional social media. Nevertheless, the impact of perceived discrimination on IM was not tested. For the present research we aim to fill these gaps.

Purpose of the Present Study and Hypotheses

The present research aims to achieve two primary goals. First, we examine the impact of perceived discrimination due to young age on the use of IM on a professional social media platform. Although it has been proposed that the expectation of unfair treatment can prompt individuals to employ IM techniques (Neel et al., 2013; Roberts, 2005), these connections have not been causally identified. In line with this literature, we anticipate that perceived discrimination would lead to an increase in IM tactics. Second, we explored how these IM strategies influence the perceptions and evaluations of profiles. Strategies such as self-promotion often lead to improved outcomes (Barrick et al., 2009; Chen & Lin, 2014; Zhao & Liden, 2011). However, employing these strategies can be risky for members of stigmatized groups due to the

risk of backlash (Krings et al., 2023; Rudman et al., 2012; Rudman & Phelan, 2008). Backlash was primarily observed with high levels of IM in hypothetical scenarios. Moreover, recent evidence suggests that moderate levels of IM can be effective for job seekers from stigmatized groups (Krings et al., 2021). Therefore, we expect the following:

Hypothesis 1 (H1): Perceived discrimination due to being considered as too young will increase the use of IM tactics when creating the profile, that is, participants in the high salience of discrimination condition will use more IM *(H1a)* and their profiles will be evaluated more positively *(H1b)*, compared to participants in the low salience of discrimination condition.

SIM (Roberts, 2005) are tactics grounded in social identities. We thus only expect higher levels of IM when one's own social identity is salient and threatened. Thus, older participants should not change their levels of IM when discrimination against younger people is salient.

Hypothesis 2 (H2): Participant age will moderate the impact of the salience of discrimination due to being young such that it will only increase the use of IM (H2a) and profile evaluation (H2b) for younger but not for older participants

Finally, when the likelihood of discrimination against one's own group is salient, those who strongly identify with the group are more vigilant about how they are perceived by others (Verkuyten et al., 2019). We hypothesize that this increased vigilance would lead to more strategic behavior, i.e., IM.

Hypothesis 3 (H3): Age-group identification will moderate the impact of salience of discrimination salience due to being considered as too young such that among young participants, its effect on IM (*H3a*) and profile evaluation (*H3b*) will be stronger for participants who identify strongly with their age-group than for participants who identify less strongly with their age group.

Overview of the Studies

We tested our hypotheses through two studies employing similar experimental designs. Both studies were designed to test hypothesis H1a and H1b. However, due to differences in participants demographics (i.e., young participants in Study 1 and young and older participants in Study 2), only Study 2 investigated hypothesis H2 and H3.

The first study examined the impact of the salience of discrimination on the use of IM on a professional social media platform (H1a) and its subsequent effect on evaluations (H1b) in a lab study with university students. We manipulated the salience of being discriminated due to one's (too) young age with behavioral outcomes as dependent variables. This was implemented using a professional social media platform specifically created for the study.

The second study was an online study, designed to replicate and extend Study 1. We used a similar discrimination salience manipulation and social media platform. However, the sample included participants of all ages, enabling the testing of Hypothesis 2. Moreover, we included a measure of age identifications investigating the moderating effects of age identification (H3) in Study 2.

Finally, Study 1 was conducted with participants living in Western Europe, i.e., Switzerland, and Study 2 with participants living in the United States. We had no a-priori hypotheses regarding differences between the two samples because they tend to be culturally similar (e.g., Power Distance Index, Masculinity vs. Femininity, and Indulgence vs. Restraint). Significant differences are only observed for Individualism vs. Collectivism, where the USA scores higher (91 vs. 68), and for Long-Term Orientation (74 vs. 26), with Switzerland scoring higher (*Country Comparison Graphs Country Comparison Graphs*, 2014; Hofstede, 1984). Both

countries display similar employment rates among young people in 2023, with 7.9% for the United States and 8.0% for Switzerland (*World Bank Open Data*, 2023).

Study 1

Method

Participants

Study 1 was conducted in the Behavioral laboratory of the Faculty of Business and Economics of the University of Lausanne. We recruited 370 students for an experiment in two parts (see below for more details). To be included, participants had to be younger than 30 years old since the manipulation was designed to increase perceived discrimination for young people. They received 20 CHF for taking part in both parts of the study, and 322 participants completed them. After excluding participants who failed the attention check[1] (17 participants), comprehension check[2] (12 participants) or declared being older than 30 years old (one person), and people that did not identify as men or women (four people), the final sample was 288.

This sample was composed of 57.64% women and an age range from 18 to 30 (M = 21.09, SD = 2.30). The majority (72.92%) described themselves as White/Caucasian, 6.94% as Middle Easterners, 3.47% as Black/African American, 3.13% as Asian, and 13.54% as others. In terms of education, 74.31% had a high-school degree (minimum requirement for being accepted in Swiss universities) and the rest had a university degree. Students came from different fields of study: 29.86% engineering and computer science, 28.82% business and economics, 19.10% social sciences and psychology, 9.03% biology and medicine, 7.64% law: the remaining students came from other faculties (5.55%). Almost half of them had a job in addition to their studies (48.26%) and 43.06% were currently looking for a job.

Design and Procedure

The experiment was conducted in two parts, an online survey and a lab experiment. First, after reading about the study and consenting to take part in it, participants filled out an online questionnaire measuring personality traits and uploaded a picture to be used for their profile, which they would create in the second part.

One week later, we invited them to the lab. They were instructed to create their professional social media profile on a platform similar to LinkedIn. Additionally, they were informed that their profiles would be evaluated by independent raters. After reading a short introduction about LinkedIn, participants were randomly assigned to one of two conditions containing the manipulations of high vs low discrimination salience, developed in a pretest[3]. The two conditions read as follows (differences are in bold):

High salience: "What is the situation in the job market? Statistics show that almost **25% of young people in your age group have felt discriminated against because of their young age when looking for a job (Duncan & Loretto, 2003). Now, the unemployment rate for young people is twice higher than for other adults** (OCDE data, 2022). For this study you are going to complete several tasks. Some of them are about your job search."

Low salience: "What is the situation in the job market? Statistics show that almost **5% of the active population in Switzerland are looking for a job. Now, the active population represents 57% of the total population** (OCDE data, 2022). For this study you are going to complete several tasks. Some of them are about your job search."

After reading the instructions, participants created their professional profiles on our platform, which was created to closely mimic LinkedIn, using Qualtrics. Although the platform was offline, we collected participants' data. Screenshots of the platform used for the experiments are displayed in Appendix B.

Our platform allowed participants to include the following sections: an about section, a skills section, a name and headline section, an education section, and an experience section. Each section was preceded by a description and advice similar to what can be found on LinkedIn, allowing participants to decide whether or not to include it. In the about section, participants could write about themselves.

Participants could include up to five experiences and three education entries. They could detail their education (e.g., school, domain, grades, degree, and a description) and experience (e.g., job type, company, duration, and a description), highly similar to LinkedIn. Somewhat different from LinkedIn, the skills section consisted of five scales representing commonly mentioned skills for business students: communication, teamwork, flexibility/adaptability, problem-solving abilities, and interpersonal skills. If participants chose to include this section, they were asked to rate the extent to which they possessed each skill on a 100-point Likert scale.

Finally, for the picture, we manipulated the profile picture participants uploaded in the first part of the study in three different ways and let them choose: We used a beauty filter (Hollywood by FaceApp) which has been shown to increase attractiveness (Gulati et al., 2024); we maximized facial prominence known to increase perceived competence (Schwarz & Kurz, 1989), and we applied a creative filter using Pencil Sketch on Microsoft Word. Participants could choose to add one of these three options or their original picture to their profile or none at all. Examples of manipulated pictures are displayed in Appendix C. After creating their profiles, participants could see an overview of the profiles they had just created.

Measures

IM Indicators. We included eleven indicators of IM used when creating the profile. First, we counted the *number of sections added* (i.e., picture, about, skills, education, and

experience) to the profile, using 0 when participants did not add a section and 1 when they did such that scores ranged from 0 to 5. Next, we calculated the number of *words*, mentions of *experiences* and of *education* by counting their occurrences in participants' profiles. For *pictures*, we coded as 1 when participant chose their original picture, 2 for the more attractive filter, 3 for the higher facial prominence, and 4 for the Pencil sketch filter.

In addition to these five indicators, two independent raters coded the profiles with respect to six additional elements. More specifically, raters identified mentions of *soft skills* (i.e., interpersonal skills or personal attributes that enable individuals to work well together), *technical skills* (i.e., skills or knowledge that enable the completion of a task), and *learning experiences* (e.g., "This experience taught to manage complicated situations and find compromises"), in the about, experience and education sections. They also identified mentions of *goals* (e.g. "I aim to work in the banking and financial sector."), and *fit-with-organizations*[4] in the entire profile. Mentions of *goals* and *fit-with-organization* were coded as 1 for presence and 0 for absence. Finally, raters coded whether the participants were *smiling* on their picture, coded as 1 for presence and 0 for absence. Inter-rater reliabilities, indicated by Cohen's weighted kappa (Cohen, 1968), were above .80 and thus high (McHugh, 2012), for all elements (see Table 1).

Evaluations of the Profile. Two independent raters evaluated the entire profile on four items: "In general, I think it's a good profile, "This person appears competent in their profile", "This person has made efforts to build their profile", "If I could, I would invite this person for a job interview", using 4-point Likert scales (from 1 = *Strongly* disagree to 4 = *Strongly agree*). Responses on these items were highly correlated (r range from .75 to .88, all ps<.001) and thus combined into a mean score reflecting an overall evaluation ($\alpha = .94$).

Control Variables.

Personality Traits. Because some personality traits have been linked to higher levels of IM (Bourdage et al., 2018) and higher levels of perceived discrimination (Sutin et al., 2016; Xu & Chopik, 2020), we included these traits as control variables in the analyses. Traits were measured using the HEXACO-60 (Ashton & Lee, 2009). Each trait was measured with 10 items: e.g., for honesty-humility "I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.", for emotionality "I sometimes can't help worrying about little things", for extraversion "I prefer jobs that involve active social interaction to those that involve working alone.", for agreeableness "I rarely hold a grudge, even against people who have badly wronged me.", for conscientiousness "I plan ahead and organize things, to avoid scrambling at the last minute.", and for openness to experience "I like people who have unconventional views.". Responses were indicated on a 5-point scale (from 1= *Strongly disagree* to 5= *Strongly agree*). Reliabilities were α = .73, α = .82; α = .74, α = .71, α = .80, and α = .66 for honest/humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience, respectively, indicating mostly acceptable reliability.

Demographic Variables. Moreover, we included participant gender ("What is you gender?", coded as 0 = man; 1 = woman) and ethnicity ("What is your ethnicity?", coded as 0 = White/Caucasian; 1 = other) because members of stigmatized groups already perceive higher levels of discrimination (Bleich et al., 2019; Kobrynowicz & Branscombe, 1997) which could influence their reactions to the salience of youngism.

Results

Analytical Strategy

The correlation matrix and descriptive statistics for the main variables is presented in Tables 2 and 3 respectively. To investigate our hypotheses, we conducted regression analyses

with robust standard errors. We first tested the effect of discrimination salience on IM indicators (H1a) and evaluations (H1b) in model 1 and added the control variables in model 2. Then, we conducted additional exploratory analyses exploring the role of participant gender, using the same model but including the interaction between discrimination salience and gender in model 3. Results are displayed in Tables 4 to 8.

Hypothesis Testing

Impact of Discrimination Salience on the Use of IM. Results of the regressions for each of the 10 IM indicators included in the analyses are displayed in Tables 4-8, columns 1-2 and 4-5 respectively, except for results regarding the picture for which we used multinomial logistic regressions and that are described in the text below. Overall, results show that discrimination salience had no impact on the use of IM as nine out of the 10 coefficients did not reach significance, independently of the inclusion of the control variables. Only the choice of the picture influenced discrimination salience. To analyze how participants chose among four different pictures to include in their profile, we used three models similar to previous variables but a multinomial logistic regression model (Kwak & Clayton-Matthews, 2002), with the original picture as the baseline. Results from our first model (Pseudo $R^2 = .01$, $\chi^2(3) = 5.04$, $p = .170$) indicate that high-discrimination salience significantly decreased the likelihood of choosing the picture modified to increase attractiveness (Hollywood filter; $b = -0.66$, $z = -2.20$, $p = .028$, 95% *CI* [-1.24, -0.07]). There were no significant effects of discrimination salience on choosing the other two modified pictures ($b = -0.32$, $z = -1.00$, $p = .315$; $b = -0.42$, $z = -0.41$, $p = .685$). The results were identical when control variables such as gender, personality traits (extraversion, emotionality, conscientiousness, honesty, openness, agreeableness), and ethnicity were included in the model.

Regarding the control variables, overall, honesty was related to higher levels of IM in three out of the 10 indicators of IM, extraversion in four, conscientiousness in four, and emotionality in one. Gender (being female) was related to marginally more IM in one out of the 10 indicators. See Tables 4 to 8 for details.

Taken together, these results provide no support for H1a.

Impact of Discrimination Salience on Profile Evaluations. Results for external profile evaluations are displayed in Table 8, showing no significant impact of discrimination salience on overall evaluations and thus do not support H1b. Among the control variables, extraversion, honesty, and conscientiousness (marginally) were positively related to better evaluations.

In sum, results provide no support for our initial propositions. In order to explore additional factors that may help understand the results, we conducted additional exploratory analyses.

Exploratory Analyses

To explore the role of participant gender, we included the interaction between discrimination salience and gender in our analyses, for the 10 IM indicators and for overall evaluations. Moreover, we included the same control variables as above. Results are displayed in Tables 4 to 8, model 3 (columns 3 and 6 respectively).

Regarding IM, results revealed a significant interaction between discrimination salience and gender for five out of the 10 indicators: Number of sections, words, soft skills, goals, and the choice of the photo. For mentions of learnings, the interaction was marginally significant. For the remaining indicators (i.e., experiences, education, technical skills and smile), there were no interaction effects.

For the number of sections added to the profile, results showed a positive impact of discrimination salience on the number of sections included by participants in their profiles. Additionally, women added more sections to their profiles compared to men. The results also reveal a significant negative interaction between participant gender and discrimination salience. Pairwise comparison analysis indicates that men, but not women, in the high discrimination salience condition increased the number of sections added, reaching the same level as women (see Figure 1). However, when applying the Bonferroni correction for multiple comparisons, these effects become non-significant.

For the overall number of words, results showed a significant negative interaction between participant gender and discrimination salience. Pairwise comparison analysis shows that women in the high discrimination salience condition use less words compared to the low discrimination salience condition (see Figure 2). However, when applying the Bonferroni correction for multiple comparisons, these effects become non-significant.

For the number of soft skills, results reveal that women mentioned more soft skills compared to men and a significant negative interaction between gender and discrimination salience. Pairwise comparison analysis indicates that women in the low-salience condition mentioned more soft skills compared to men. The gender difference becomes non-significant in the high-salience condition (see Figure 3). However, when applying the Bonferroni correction for multiple comparisons, none of the effects reach significance.

For the number of mentions of goals, results showed a significant negative interaction between candidate gender and the discrimination salience. Pairwise comparison analysis shows that men in the high-salience condition mentioned more goals, but the effect is reversed for

women (see Figure 4). However, when using the Bonferroni correction for multiple comparisons, these effects become non-significant.

For the number of mentions of learnings, results show that participants in the high-salience condition mentioned marginally more learning experiences than those in the low-salience condition. These results also reveal a negative interaction between gender and discrimination salience, similar to previous variables, but this interaction was only marginally significant.

Finally, results of the analyses regarding the choice of the picture (Pseudo $R^2 = .0538$, $\chi^2(30) = 35.03$, $p = .242$) reveal a significant interaction between discrimination salience and candidate gender ($b = -1.57$, $z = -2.49$, $p = .013$, 95% *CI* [-2.81, -0.34]). Pairwise comparisons, corrected for multiple comparisons using Bonferroni corrections, show that women in the low-salience condition chose the modified picture significantly more often than the original picture ($\Delta = -0.30$, $z = -3.85$, $p = .014$, 95% *CI* [-0.57, -0.03]). However, women in the high-salience condition did not show a significant difference between the modified and the original picture ($\Delta = 0.10$, $z = 1.41$, $p = 1.000$, 95% *CI* [-0.15, 0.35]), indicating that high salience diminishes the preference for the modified picture among women.

Regarding overall evaluations of the profile, results of the analyses show that participants in the high discrimination salience condition were evaluated more positively compared to those in the low-salience condition. They also reveal a significant negative interaction between participant gender and discrimination salience. Pairwise comparison analysis shows that men, but not women, in the high-salience condition received better evaluations (see Figure 5). However, these effects become non-significant when using the Bonferroni correction for multiple comparisons.

In sum, results of these exploratory analyses show that for several indicators of IM, men were more likely to react to discrimination salience with an increase in IM than women. Often, men engaged in less IM than women in the low discrimination salience condition and reached women's level when discrimination was highly salient.

Discussion

The aim of Study 1 was to causally identify the impact of discrimination salience on the use of IM on LinkedIn and its subsequent effects on evaluations received. While our findings did not uniformly support the hypothesis that discrimination salience leads to increased IM (Gioaba & Krings, 2017; Neel et al., 2013; Roberts, 2005), they do suggest that this causal relationship exists for certain populations, particularly those who typically experience less discrimination (i.e., younger men).

Despite the theoretical basis for anticipating a strong link between perceived discrimination and the use of IM strategies, our results did not show a significant overall impact of discrimination salience on IM behaviors or profile evaluations. Several factors might explain these non-significant findings. First, it is possible that participants were already engaging in high levels of IM, leading to a ceiling effect where additional salience of discrimination could not further increase IM behaviors. This might particularly apply to younger individuals who are already highly aware of the competitive job market and accustomed to social media. Second, not all participants may perceive the salience of discrimination uniformly. Personal experiences and individual differences in sensitivity to discrimination could lead to varied responses, diluting the overall effect. Third, the artificial setting of the study might not fully capture the stakes involved in real-world job searching, potentially limiting the strength of participants' responses to the discrimination salience manipulation. The context of a lab experiment may not evoke the same

level of motivation and pressure as actual job market conditions. This could be particularly true as our sample consisted of students who do not have an immediate need to find a job, meaning their engagement with IM strategies might have been less intense compared to those actively seeking employment.

Our exploratory analysis revealed a notable interaction between gender and perceived discrimination salience. Specifically, young men—but not young women—in the high discrimination salience condition invested more effort in their profiles, used more IM tactics, and received better evaluations compared to those in the low-salience condition. This indicates an intersectional effect, where the interplay of age and gender shapes the experience and response to discrimination. Intersectional studies (Cole, 2009) suggest that young women might face different forms of ageism compared to young men, possibly because women anticipate gender-based discrimination and consistently engage in higher levels of IM. An alternative explanation could be that men, feeling more confident than women (Best et al., 2023; Kamas & Preston, 2012; Lundeberg et al., 1994), believe they can manage the job search with less effort. As a result, they invest less in the low-salience condition compared to women. These two possibilities could explain why women in the low-salience condition already employed significant IM strategies, resulting in a ceiling effect.

Regarding the outcomes of IM strategies, our results indicate that younger men facing higher discrimination salience received better evaluations for their profiles by independent raters compared to those facing low salience, suggesting that their efforts and IM strategies paid off. This finding aligns with existing literature (Barrick et al., 2009; Zhao & Liden, 2011), which suggests that IM strategies can enhance job seekers' prospects and positively influence recruiters' perceptions.

Before drawing more firm conclusions regarding the impact of perceived discrimination on IM, we tested this relationship in a second study with a general population. Additionally, the mechanism by which perceiving discrimination might increase IM remains unexplored. The literature on stereotype threat suggests that self-efficacy and evaluation serve as mediators in the impact of identity threat on behavior (Spencer et al., 1999; Steele & Aronson, 1995). An alternative explanation is that reading about discrimination salience could potentially heighten perceived job market competition or general perceived discrimination, even for participants who do not belong to the threatened identity. This explanation would not be directly linked to identities, which is a central argument of SIM (Roberts, 2005). Moreover, there is limited knowledge on how individual differences might moderate these effects. For instance, identification with the threatened identity could amplify reactions to perceived discrimination salience. In sum, Study 2 aims to replicate the findings from Study 1 and extend them, shedding light on these questions.

Study 2

Method

Participants

We recruited 565 participants on Prolific. To be included, they had to be younger than 30 years old or between 50 to 65 and U.S. residents. They received £7.8 for taking part in the two parts of the study (for details see below). Among them, 457 participants completed both parts. After excluding participants who failed the attentions checks[5] (36 participants), stated that their answer should not be kept for the study (12 participants), took less than 5 minutes to complete the study (five participants), failed the comprehension check[6] (24 participants) or declared being

between 31 to 49 years old (four people). The final sample consisted of 380 participants (50.26% were younger than 30 and 49.74% older than 50 years old).

Among the 191 participants younger than 30 years old (M = 25.55, SD = 3.06), 39.27% were women. The majority (53.40%) described themselves as White/Caucasian, 12.57% as Black/African American, 16.23% as Asian, 10.99% as Hispanic/Latino, and 6.81% as others. In terms of education, 49.21% had a bachelor's degree, 7.85% a master's degree, 2.62% a doctoral degree and the rest did not have a university degree (40.32%). In terms of employment, 47.64% had a full-time job, 19.90% were unemployed, 6.28% were self-employed, 8.38% had a part-time job, and 3.66% several part time jobs. The remaining were students. They worked on average 35.37 hours (SD = 10.47). In their job, 33.85% had some supervision duties.

The older sample included 189 participants aged 50 and above, with an average age of 56.28 years (SD = 4.58). Of these, 50.79% were women. Most participants identified as White/Caucasian (72.49%), followed by Black/African American (15.87%), Asian (4.23%), Hispanic/Latino (4.76%), and other ethnicities (2.65%). Regarding educational background, 37.04% held a bachelor's degree, 21.69% a master's degree, and 3.17% a doctoral degree, while 38.10% had other educational qualifications. Employment status varied, with 50.26% working full-time, 10.58% being unemployed, 15.34% self-employed, 11.11% employed part-time, and 2.12% holding multiple part-time jobs. The remainder were either students or retired. On average, participants worked 36.87 hours per week (SD = 9.86). Additionally, 56.21% had supervisory responsibilities in their roles.

Design and Procedure

Study 2 used a similar design than Study 1, consisting of two parts, and using the same platform allowing to create a professional social media. However, the platform for Study 2, did

not allow to include a profile picture. The experimental design was a between-subjects design with 2 (discrimination salience: high vs. low) × 2 (age groups: younger vs. older). Similar to Study 1, participants responded to a survey in part 1, including measures of personality traits and identification with age. Then, about seven days later, participants first read the same short introduction about LinkedIn as used in Study 1 and were then randomly assigned to one of two conditions. The manipulation of discrimination salience was similar to the one used in Study 1 but adapted to the U.S. context and developed in a pre-test[7]: The text read as follows (differences are in bold):

High salience: "What is the situation like on the job market? Statistics show that almost **25% of young workers (typically, 25 years old or younger) feel discriminated because of their young age when looking for a job (Duncan & Loretto, 2004). Indeed, the unemployment rate for young people is significantly higher than for other adults. Among the unemployed young people, 20% are long-term unemployed (U.S. Bureau of Labor Statistics, 2022).** For this study you are going to complete several tasks. Some of them are about your job search."

Low salience: "What is the situation like on the job market? Statistics show that **about 4% of the active population in the USA are looking for a job. The active population are all people who supply labor for the production of economic goods and services (World Bank, 2004). They represent 63% of the total population (U.S. Bureau of Labor Statistics, 2022).** For this study you are going to complete several tasks. Some of them are about your job search."

Measures

Main Measures. For measures of IM, we used the same coding procedure and included the same indicators as in Study 1, except for the IM linked to the picture because participants

could not include any picture in their profile. We decided to exclude this possibility for technical reasons and because the Prolific sample might be more sensitive to the protection of their image and refuse to take part in the study, leading to a selection bias. For overall evaluations of the profile, we applied the same coding using the same four items as in Study 1. Inter-rater reliabilities were high for all indicators (see Table 9).

To test Hypothesis 3, we included a measure of *identification with one's age group* in the first part of the study (Doosje et al., 1995; van Breen et al., 2017), using four items (i.e., "I identify with this group", "I have strong ties with this group", "This group is an important part of my self-image", and "Being a member of this group is an important part of how I see myself"; α=.96) on a 7-point scale (from 1 = *Fully disagree* to 7 = *Fully agree*).

Additional Exploratory Measures. To explore the mechanism behind the impact of discrimination salience on IM, we included some additional variables in part 2 of the study. *Evaluation apprehension* (Spencer et al., 1999) was measured with four items (e.g.,, "If I don't find a job people will look down on me."; α=.97) on a 7-point Likert scale (from 1 = *Fully disagree* to 7 = *Fully agree*). *Self-efficacy* (Spencer et al., 1999) was measured with five items (e.g., "I am concerned about whether I have enough ability to do well on a job search"; α=.90) on a 7-point Likert scale (from 1 = *Fully disagree* to 7 = *Fully agree*). *Perceived discrimination* was measured using three items (e.g., "To what extent do you expect to experience discrimination or unfair treatment because of your age, while looking for new job opportunities?"; α=.94; partially adapted from Scheim & Bauer, 2019) on a 7-point Likert scale (from 1 = *Never or almost never* to 7 = *Always or almost always)*. Finally, *perceived job market competitiveness* was measured with two items (i.e., **"**In your opinion, how competitive is the job market today?", and "If you were to lose your job today, how quickly, in your opinion, would you be able to find a new one?"

(reverse-coded) on a 7-point Likert scale (from 1 = *Not at all.* to 7 = *Very).* Correlation between the items was $r = .25$, $p < .001$.

Control Variables. We included participant gender ("What is your gender?"; 0 = man; 1 = woman) and ethnicity ("What is your ethnicity?"; 0 = White/Caucasian; 1 = other) as control variables because members of stigmatized groups already face higher levels of discrimination (Bleich et al., 2019; Kobrynowicz & Branscombe, 1997) which could influence their reactions to the salience of youngism. Similar to Study 1, personality traits were measured with HEXACO-60 (Ashton & Lee, 2009) because some personality traits have been linked to higher levels of IM (Bourdage et al., 2018) and higher levels of perceived discrimination (Sutin et al., 2016; Xu & Chopik, 2020).

Results

Analytical Strategy

The correlation matrix and descriptive statistics for the main variables are presented in Tables 10 and 11 respectively. As in Study 1, we conducted regressions using robust standard errors to test our hypotheses. To examine the effect of discrimination salience due to being considered as too young and its interaction with participant age (Hypothesis 2), we first tested the interactive effect of discrimination salience and participant age on IM indicators (H2a) and evaluations (H21b) in model 1 and added the control variables in model 2 (see Tables 12-14). In addition, as in Study 1, we explored the role of participant gender in a third model including the interaction between participant gender and discrimination salience. To replicate analysis from Study 1, we conducted these regressions only on younger participants. Finally, to investigate the proposed moderator effect of age identification (Hypothesis 3), we conducted a regression

analysis with interaction between age identification and salience of youngism focusing only on the young sample (see Tables 15-17).

Hypotheses Testing

We conducted several regression analyses to test H2a, for each of the eight indicators of IM (see Tables 12-14). In none of the analyses, the interaction between age and young age discrimination salience reached significance, independently of whether the control variables were included or not in the model. Thus, we found no support for H2a.

When inspecting the main effects of young age discrimination salience on the eight indicators of IM, we found that discrimination salience reduced the number of experiences and soft skills (see Tables 12 and 13) and had no impact on the remaining indicators.

When inspecting main effects of participant age, we found that older participants added fewer sections (see Table 12), less educations (see Table 13), and fewer goals (see Table 14) but used more words (see Table 12) compared to younger participants. Regarding control variables, women included more experiences and educations. Extraversion was positively related to the number of sections added, and openness was positively associated with higher education and technical skills mentioned.

Results of the regression with external profile evaluations as the dependent variable (see Table 14) again show no interaction between participant age and young age discrimination salience and thus do not support H2b. We found that older participants received significantly lower evaluation for their profiles compared to younger participants. Among the control variables, women received higher evaluations in the second model only. Extraversion and openness were related to more positive evaluations.

Finally, results of the regression testing the proposed moderation effect of identification with age (H3) for younger participants only on IM are displayed in Tables 15-17, (model 1, 3, and 5). They reveal a significant negative interaction between the discrimination salience and identification with age for number of words and soft skills. Predictive margins are displayed in Figures 6 and 7 to further illustrate these interactions. Results indicate that in the low discrimination salience condition, identification with age was positively related to the number of words used and soft skills mentioned, and negatively related to these indicators in the high salience condition. Together, these results do not support H3. Moreover, none of the remaining interactions between identification with age and discrimination salience reached significance.

Exploratory Analysis

Interaction between Gender and Discrimination Salience. Similar to Study 1, we explore the interaction between young age discrimination salience and participant gender for younger participants only (see Tables 15-17, models 2, 4, and 6). Results show no significant interaction for the number of sections added, words used, experiences, education, soft skills, technological skills, and learnings mentioned. For goals mentioned, results revealed a negative interaction that we further qualified with a pairwise comparison using Bonferroni correction for multiple comparison. Result show that for low discrimination salience only, men mentioned marginally less goals compared to women ($\Delta = 0.24$, $SE = 0.09$, $t(178) = 2.57$, $p = .066$, 95% CI [-0.01, 0.49]). Similar to results for indicators of IM, results show no interaction between discrimination salience and gender for evaluations received (see Table 17).

Self-efficacy, Evaluation Apprehension, Perceived Competitiveness and Discrimination. We explore the impact of discrimination salience on self-efficacy and evaluation apprehension (see Table 18), two mediators often developed in the stereotype threat

literature (Spencer et al., 1999). Results show no significant impact of discrimination salience or the interaction between salience and age on evaluation apprehension and self-efficacy. Older participants reported significantly lower levels of evaluation apprehension.

For perceived competitiveness (see Table 18), results revealed that high discrimination salience has a significant positive impact on perceived competitiveness. Age alone and the interaction between discrimination salience and age do not significantly affect perceived competitiveness.

Finally, results for perceived discrimination (see Table 18) also show that both high discrimination salience and being older significantly increase perceived discrimination. The negative interaction between salience and age is also significant. To further qualify this interaction, we conducted a pairwise comparison using Bonferroni correction for multiple comparisons. Results show that high discrimination salience increased perceived discrimination for younger participants ($\Delta = 0.91$, $SE = 0.23$, $t(178) = 3.91$, $p = .001$, 95% CI [0.29, 1.53]) but not for older ($\Delta = -0.25$, $SE = 0.22$, $t(178) = -1.11$, $p = 1.000$, 95% CI [-0.84, 0.34]).

Discussion

The second study aimed to replicate the findings from Study 1, extend them to participants who were not members of the threatened group (i.e., older participants), and examine potential moderators (e.g., identification with age) and mediators (e.g., self-efficacy, evaluation apprehension, perceived discrimination, and perceived market competitiveness). We used the same platform as in Study 1 and recruited U.S. participants online.

Results of Study 2 found little support for our initial hypotheses, largely replicating findings of Study 1. While, as expected, young age discrimination salience did not affect older participants' use of IM, the same was true for younger participants. For most variables, higher

age discrimination salience did not increase younger participants' use of IM strategies, nor did it improve the evaluations of their profiles. These findings suggest that the relationship between perceived discrimination and proactive IM may be more complex than initially thought. We will come back to this point in the General Discussion.

Additionally, results from our exploratory analyses indicate that both older and younger participants perceive high levels of competitiveness in the job market. However, only younger participants perceived higher levels of discrimination under high discrimination salience, reinforcing the idea that this salience primarily impacts younger individuals.

Overall, these findings suggest that the mechanisms driving IM in response to perceived discrimination are not straightforward and may be influenced by factors such as cultural context, prior experiences with discrimination, and sample characteristics. This variability in response, particularly in different cultural contexts, highlights the importance of considering how discrimination and the responses to it can differ across regions and populations (Quillian et al., 2019; Quillian & Lee, 2023).

General Discussion

The aim of this project was to examine the impact of discrimination salience on the use of IM on professional social media and its effect on profile evaluations. We conducted two studies: one with Swiss university students and another with U.S. participants to explore these effects.

We did not observe a significant main effect of discrimination salience on the overall use of IM strategies across all participants, contradicting previous literature (Gioaba & Krings, 2017; Neel et al., 2013; Roberts, 2005; Shih et al., 2013). While older participants’ absence of reaction was expected, the primary question that arises is why younger participants did not respond to higher discrimination salience despite this discrimination being targeted to one of their identities.

Several factors could explain this outcome. It is possible that participants, particularly the younger ones, were already employing a high level of IM strategies in their profiles due to the competitive nature of the job market. This could be especially relevant on LinkedIn because professional social media platforms already encourage self-promotion leaving little room to alternative types of personal expression and resulting in consistently high levels of IM. If these participants were already optimizing their online presence to the fullest, the increased salience of discrimination might not have provided additional motivation to enhance their efforts further, leading to a ceiling effect. Another consideration is the variability in how discrimination is perceived and reacted to by different individuals. Those with less sensitivity to discrimination or with limited past experiences may not view heightened discrimination salience as a significant enough trigger to alter their IM behavior. Additionally, the artificial nature of the experimental setting—whether online or in a lab—might not fully replicate the pressures and stakes of a real-world job search. This could reduce the impact of the manipulation itself. Findings from our two pretests show that our manipulations increased perceived discrimination, and results from Study 2 indicate that younger participants reported higher levels of perceived discrimination in the high-salience condition. However, due to the low stakes in these artificial settings, these effects may not have been strong enough to translate into actual behaviors. Moreover, participants may not experience the same urgency or need to respond to discrimination salience in an experimental context, which could also weaken the observed effects.

In Study 1, we found that younger men, in particular, significantly increased their use of IM strategies when discrimination salience was heightened, leading to better evaluations of their profiles. This suggests that, unlike young women who might already perceived discrimination and consistently apply IM strategies, young men, who may be less accustomed to facing

discrimination, reacted more strongly when discrimination was made salient, thereby matching the IM efforts of women. This gender-specific response aligns with the literature on SIM, which suggests that perceiving discrimination can motivate members of stigmatized groups to employ IM strategies to mitigate bias (Roberts, 2005). Additionally, men's higher levels of confidence (Best et al., 2023; Kamas & Preston, 2012; Lundeberg et al., 1994) may explain why they invest less effort when creating their profiles in the low-salience condition compared to women. It is possible that both factors (i.e., women's perceived gender discrimination and men's confidence) could combine to explain the differences in responses to discrimination salience. As a result, younger men in the high-salience condition received better evaluations, demonstrating that IM can indeed be effective in improving evaluations received (Barrick et al., 2009; Zhao & Liden, 2011).

One key difference between Study 1 and Study 2 is the lack of significant interactions between participant gender and discrimination salience observed in Study 2. This contrast may be due to cultural and contextual factors. As discussed in Study 1, younger men—typically less accustomed to discrimination—reacted more strongly to discrimination salience. In the U.S., where discussions of discrimination and civil rights are pervasive, participants, particularly younger men, may be more sensitive to discrimination, potentially leading to different responses. This familiarity could reduce their reliance on IM as a coping mechanism in an online study.

The difference in sample composition between Study 1 (students) and Study 2 (a general population sample) may also explain these findings. Students nearing the completion of their university degrees might feel more empowered to overcome discrimination, increasing their efforts when discrimination is made salient. Additionally, the online nature of Study 2 may have

reduced participants' motivation to perform well, compared to a lab experiment or a real job-seeking context where the stakes are higher, potentially weakening the observed effects.

Finally, while we initially had no strong hypotheses regarding cultural differences between the two samples due to similarities in dimensions such as Power Distance, Masculinity vs. Femininity, and Indulgence vs. Restraint, notable differences exist in Individualism vs. Collectivism and Long-Term Orientation. The U.S. scores significantly higher in Individualism, suggesting a more self-reliant culture, whereas Switzerland scores higher in Long-Term Orientation, indicating a greater focus on perseverance and future planning (*Country Comparison Graphs Country Comparison Graphs*, 2014; Hofstede, 1984). These cultural differences might explain why the interaction observed among younger men in Switzerland did not replicate in the U.S. context. The higher level of Individualism in the U.S. could mean that younger men are more accustomed to managing their professional image independently, making them less responsive to the experimental manipulation of discrimination salience. Conversely, the Swiss context, with its higher Long-Term Orientation, might have encouraged younger men to engage more in IM strategies when discrimination was made salient, as part of a broader effort to secure long-term professional success.

The results of these studies provide nuanced insights into the role of perceived discrimination in shaping the behaviors of job seekers from stigmatized groups. In sum, our results shed light on the agency of job seekers from stigmatized groups who not only perceive discrimination but also adapt their behaviors to mitigate it. However, they also highlight the complexity of perceived discrimination and its implications and show that the impact of perceived discrimination as a motivator to use IM could be context dependent.

Implications for Practice

Our results suggest that perceived discrimination can have an ambivalent impact on members of stigmatized groups. On one hand, perceived discrimination is associated with mental and physical health issues for these individuals. On the other hand, it can act as a motivator to employ IM strategies and thus overcome bias at hiring. However, our findings indicate that this motivational effect was primarily observed among younger men, who may not be as frequently subjected to discrimination compared to other groups.

Given this, it is crucial to develop more tailored approaches that consider the specific needs and experiences of different stigmatized groups. Women and ethnic minorities, who may face more persistent and multifaceted forms of discrimination, might require different strategies and support mechanisms. Training programs should be designed to help these individuals select and effectively use IM strategies that are best suited to their unique circumstances, while also minimizing the risk of backlash.

For organizations, these findings highlight the importance of transparency and fairness in recruitment processes. By reducing perceived discrimination, organizations can help alleviate the pressure on individuals to overcompensate with IM strategies, fostering a more equitable and inclusive hiring environment. More transparent practices would be particularly beneficial for women, who may not react to perceived discrimination by increasing their use of IM strategies.

In summary, while perceived discrimination poses significant challenges, it also highlights the resilience and adaptive strategies of stigmatized individuals. These findings emphasize the need for personalized approaches in both training and organizational practices. Organizations and training programs can play a pivotal role in supporting these efforts, ultimately leading to a fairer job market.

Limitations and Directions for Future Research

This study has several limitations that should be acknowledged. First, our findings are based on experimental designs conducted either online or in a laboratory setting. Future research should seek to replicate these results in field settings to enhance their generalizability.

Second, although we aimed to create a realistic environment by using a platform that mimics LinkedIn, and participants were aware that their profiles would be evaluated by external reviewers, the quality of their profiles had no direct consequences for them. Future research could incentivize the construction of profiles (e.g., by offering a bonus for the best profiles) to examine how such incentives might alter the results.

Additionally, our experiments were conducted in Switzerland and the U.S.. As indicated by the results from Study 2, cultural differences may influence the perception of discrimination and its impact on IM. Therefore, future research should replicate our findings in various countries to enhance their generalizability.

Finally, our research involved students and the general population in the U.S. While some of the U.S. participants may have been actively searching for a job, it seems likely that in both samples, the urgency of seeking employment was low or moderate. However, this urgency may particularly motivate job seekers from stigmatized groups to engage in IM. Future research should replicate our findings through field experiments involving actual job seekers.

Conclusion

Reducing discrimination remains a significant challenge for organizations and governments. Despite numerous efforts, instances of unfair treatment are still reported and experienced by members of stigmatized groups. In the hiring context, addressing these treatments is crucial, as they can motivate individuals to adopt strategies to improve how they are perceived by others.

Our findings underscore the complex and context-dependent role of perceived discrimination as a motivator for members of stigmatized groups to use IM strategies to enhance their outcomes. However, this effect was not universal; it was primarily observed among younger men in Switzerland, suggesting that not all individuals react to perceived discrimination in the same way. This highlights the need for more nuanced and tailored approaches in supporting different groups.

These insights are valuable for organizations and policymakers aiming to create fairer and more inclusive hiring practices. While IM strategies can serve as a tool for some individuals to bridge the gap in professional opportunities and outcomes, it is crucial to recognize that other groups, such as younger women and potentially other stigmatized populations, may require different forms of support. By understanding these varying responses, organizations can better tailor their efforts to reduce disparities in the professional sphere and foster a more equitable environment for all.

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Endnotes

[1] The attention check question was “Please choose "slightly oppose" to this question, to show that you are attentive.” Participants had to select the right answer from seven options in order to be eligible for the final sample.

[2] The comprehension check question depended on the condition in which participants were randomly assigned. In the high discrimination salience condition, participants had to remember how many young people had declared they felt discriminated when looking for a job. In the low salience condition, participant had to remember which percentage of the Swiss population is looking for a job. Participants had to select the right answer from three options in order to be eligible for the final sample.

[3] The pre-study aimed to select the manipulation that would increase perceived discrimination based on young age. Following stereotype threat literature (Spencer et al., 1999; Steele & Aronson, 1995), we created three control conditions and three manipulations (see Appendix A). Using true facts to avoid deception, we tested these on 263 young French speakers on Prolific (60% women, 70.72% white/Caucasian, M_{age} = 22.71; SD_{age} = 1.88; Min_{age} = 18; Max_{age} = 30). Perceived discrimination was measured with a 5-point Likert scale (e.g., “Because of my young age, I could have problems finding or keeping a job”; Scheim & Bauer, 2019). We selected the conditions with the largest difference: high salience (M = 3.52, SD = 0.14) and low salience (M = 3.02, SD = 1.09). The difference was significant (F(1) = 5.65, p = 0.019).

[4] Mentions of fit with organizations were very rare in the profiles (M= 0.00; SD = 0.06). Thus, we did not include this variable in the analysis in Study 1 and 2.

[5]The attention check question was similar to Study 1

[6] The comprehension check question was similar to Study1

[7] The pre-study aimed to replicate the manipulation from Study 1 for a US sample, ensuring it increased perceived discrimination for younger participants but not for older ones. We tested two conditions on 301 US participants from Prolific (50.17% women, 56.15% white/Caucasian, *M*age = 39.54*; SD*age = 17.09; age range: 18-65). Discrimination was measured using three items on a 7-point Likert scale: "To what extent do you expect to face challenges in finding or maintaining employment, because of your age?", "To what extent do you expect other people in your age group to experience discrimination or unfair treatment because of their age, while looking for a job?", and "To what extent do you expect to experience discrimination or unfair treatment because of your age, while looking for new job opportunities?" Results showed that younger participants reported higher levels of perceived discrimination after reading the youngism salience compared to the control condition ($b = 0.61$, $SE = 0.29$, $t(107) = 2.13$, $p = 0.035$, 95% *CI* [0.04, 1.18]). However, the manipulation had no effect on older participants ($b = 0.06$, $SE = 0.28$, $t(109) = 0.20$, $p = 0.84$, 95% *CI* [-0.51, 0.62]).

Table 1

Inter-reliability for Indicators in Study 1

Variable	Kappa
Soft skills (about)	.89
Soft skills (experience)	.83
Soft skills (education)	.82
Technological skills (about)	.91
Technological skills (experience)	.88
Technological skills (education)	.81
Goals	.91
Learning experiences	.89
Smile	.80
General	.62
Competence	.62
Efforts	.65
Interview	.63

Note. Cohen's weighted Kappas

Table 2

Correlation Matrix of the Main Variables of Interest for Study 1

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Condition	-											
2. Gender	.03	-										
3. Sections	.05	.13**	-									
4. Words	-.02	.02	.47***	-								
5. Experiences	.05	.12**	.28***	.41***	-							
6. Education	.02	.06	.24***	.28***	.28***	-						
7. Soft Skills	.02	.08	.35***	.43***	.18***	.15***	-					
8. Tech. Skills	-.10*	-.07	.18***	.36***	.14**	.16***	.22***	-				
9. Goals	-.02	.05	.19***	.34***	.10	.04	.16***	.07	-			
10. Learnings	.07	-.05	.09	.23***	.03	.04	.13**	.12**	.15***	-		
11. Smile	.02	.18***	.07	.11*	.08	.05	.01	.06	.03	.02	-	
12. Evaluation	.06	.05	.57***	.69***	.57***	.43***	.36***	.33***	.22***	.20***	.23***	-

Note. $N = 288$; * $p < .1$. ** $p < .05$. ***$p < .01$.

Table 3

Descriptive Statistics for the Main Variables of Interest in Study 1

Variable	*N*	*M*	*SD*	*Min*	*Max*
Sections	288	3.52	0.73	0	4
Words	288	77.77	64.38	0	442
Experiences	288	1.14	1.21	0	5
Education	288	0.90	0.73	0	2
Soft Skills	287	1.94	2.22	0	11
Tech. Skills	288	0.94	1.71	0	10
Goals	288	0.21	0.40	0	1
Learnings	288	0.20	0.64	0	4.5
Smile	288	0.71	0.43	0	1
Evaluation	288	2.58	0.65	1	4

Note. M = Mean; *SD* = Standard Deviation; *Min* = Minimum; *Max* = Maximum.

Table 4

Regression Analysis for Number of Sections and Poisson Regressions for Words Used in Study 1

	Sections added			Words		
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Salience (High salience)	0.07	0.07	0.32**	-0.03	-0.04	0.24
	(0.09)	(0.08)	(0.15)	(0.10)	(0.09)	(0.15)
Gender (Women)		0.12	0.34**		0.01	0.24
		(0.10)	(0.14)		(0.13)	(0.16)
Salience#Gender			-0.43**			-0.48**
			(0.18)			(0.19)
Extraversion		0.10	0.11		0.17**	0.17**
		(0.10)	(0.10)		(0.08)	(0.08)
Emotionality		-0.00	-0.00		-0.05	-0.05
		(0.07)	(0.07)		(0.08)	(0.08)
Conscientiousness		0.07	0.06		0.17**	0.16**
		(0.08)	(0.08)		(0.08)	(0.08)
Honesty		0.22***	0.22***		0.29***	0.29***
		(0.07)	(0.07)		(0.06)	(0.06)
Openness		0.00	0.01		-0.05	-0.04
		(0.07)	(0.07)		(0.08)	(0.08)
Agreeableness		-0.10	-0.10		0.02	0.02
		(0.08)	(0.08)		(0.09)	(0.09)
Ethnicity (Non-White/Caucasian)		0.04	0.04		-0.07	-0.07
		(0.09)	(0.09)		(0.13)	(0.13)
Intercept	3.49***	2.40***	2.26***	4.37***	2.46***	2.31***
	(0.07)	(0.51)	(0.51)	(0.07)	(0.64)	(0.64)
F / Wald Chi^2	0.63	1.91	2.26	0.09	40.31	48.98
R^2 / Pseudo R^2	0.00	0.06	0.08	0.00	0.08	0.10

Note. Robust standard errors in parentheses; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 5

Regression Analysis for Experiences and Educations Mentioned in Study 1

	Experiences			Educations		
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Salience (High salience)	0.11	0.11	0.19	0.02	0.02	0.06
	(0.14)	(0.14)	(0.20)	(0.09)	(0.09)	(0.13)
Gender (Women)		0.30*	0.38*		0.12	0.15
		(0.16)	(0.21)		(0.10)	(0.15)
Salience#Gender			-0.15			-0.06
			(0.28)			(0.18)
Extraversion		0.05	0.06		0.04	0.04
		(0.14)	(0.14)		(0.09)	(0.09)
Emotionality		-0.11	-0.11		-0.08	-0.08
		(0.10)	(0.10)		(0.07)	(0.07)
Conscientiousness		0.30**	0.30**		0.16**	0.16**
		(0.12)	(0.12)		(0.07)	(0.07)
Honesty		0.11	0.11		0.00	0.00
		(0.13)	(0.13)		(0.08)	(0.08)
Openness		0.12	0.12		-0.04	-0.04
		(0.11)	(0.11)		(0.07)	(0.07)
Agreeableness		-0.05	-0.05		0.01	0.01
		(0.14)	(0.15)		(0.08)	(0.08)
Ethnicity (Non-White/Caucasian)		-0.02	-0.02		0.01	0.01
		(0.16)	(0.16)		(0.10)	(0.10)
Intercept	1.08***	-0.64	-0.69	0.89***	0.46	0.44
	(0.10)	(0.94)	(0.95)	(0.06)	(0.53)	(0.53)
F	0.64	1.78	1.62	0.07	0.82	0.73
R^2	0.00	0.06	0.06	0.00	0.02	0.02

Note. Robust standard errors in parentheses; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 6

Regression Analysis for Number of Soft and Technical Skills Mentioned in Study 1

	Soft skills			Technical skills		
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Salience (High salience)	0.08	0.04	0.62	-0.33	-0.32	-0.25
	(0.26)	(0.25)	(0.39)	(0.20)	(0.20)	(0.36)
Gender (Women)		0.31	0.82**		-0.27	-0.21
		(0.29)	(0.39)		(0.29)	(0.40)
Salience#Gender			-1.02**			-0.11
			(0.51)			(0.43)
Extraversion		0.48**	0.50**		-0.05	-0.04
		(0.22)	(0.22)		(0.21)	(0.22)
Emotionality		-0.10	-0.10		-0.13	-0.13
		(0.20)	(0.20)		(0.17)	(0.17)
Conscientiousness		0.24	0.24		0.14	0.14
		(0.19)	(0.19)		(0.17)	(0.17)
Honesty		0.71***	0.71***		0.28	0.28
		(0.21)	(0.21)		(0.20)	(0.20)
Openness		-0.21	-0.20		0.04	0.04
		(0.20)	(0.21)		(0.15)	(0.14)
Agreeableness		0.17	0.16		-0.10	-0.11
		(0.22)	(0.23)		(0.20)	(0.20)
Ethnicity (Non-White/Caucasian)		-0.46*	-0.46*		0.15	0.15
		(0.27)	(0.27)		(0.25)	(0.25)
Intercept	1.90***	-2.47	-2.80	1.11***	0.52	0.48
	(0.18)	(1.50)	(1.48)	(0.16)	(1.16)	(1.22)
F	0.10	2.87	3.32	2.71	1.09	0.98
R^2	0.00	0.08	0.10	0.01	0.03	0.03

Note. Robust standard errors in parentheses; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 7

Regression Analysis for Number of Goals and Learnings Mentioned in Study 1

	Goals			Learnings		
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Salience (High salience)	-0.02	-0.02	0.12*	0.09	0.10	0.27*
	(0.05)	(0.05)	(0.07)	(0.07)	(0.07)	(0.14)
Gender (Women)		0.00	0.12		-0.09	0.06
		(0.06)	(0.07)		(0.07)	(0.08)
Salience#Gender			-0.24**			-0.29*
			(0.09)			(0.16)
Extraversion		-0.04	-0.03		0.10*	0.10*
		(0.04)	(0.04)		(0.05)	(0.05)
Emotionality		0.04	0.04		0.04	0.04
		(0.04)	(0.04)		(0.05)	(0.05)
Conscientiousness		0.04	0.03		0.10**	0.10**
		(0.04)	(0.04)		(0.05)	(0.05)
Honesty		-0.03	-0.03		-0.06	-0.06
		(0.04)	(0.04)		(0.08)	(0.08)
Openness		0.00	0.00		-0.06	-0.05
		(0.04)	(0.03)		(0.06)	(0.06)
Agreeableness		-0.01	-0.01		-0.04	-0.04
		(0.04)	(0.04)		(0.06)	(0.06)
Ethnicity (Non-White/Caucasian)		0.01	0.01		0.02	0.02
		(0.05)	(0.05)		(0.09)	(0.09)
Intercept	0.22***	0.21	0.14	0.15***	-0.10	-0.19
	(0.03)	(0.27)	(0.26)	(0.04)	(0.43)	(0.42)
F	0.12	0.55	1.24	1.50	1.09	0.97
R^2	0.00	0.02	0.04	0.01	0.03	0.04

Note. Robust standard errors in parentheses; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 8

Regression Analysis for Smile and Evaluations Received in Study 1

	Smile			Evaluations		
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Salience (High salience)	0.02	0.01	-0.04	0.08	0.08	0.27**
	(0.05)	(0.05)	(0.08)	(0.08)	(0.07)	(0.12)
Gender (Women)		0.09	0.04		0.02	0.19
		(0.06)	(0.08)		(0.09)	(0.13)
Salience#Gender			0.09			-0.33**
			(0.10)			(0.15)
Extraversion		0.08*	0.08*		0.20***	0.21***
		(0.05)	(0.05)		(0.08)	(0.07)
Emotionality		0.09**	0.09**		-0.01	-0.01
		(0.04)	(0.04)		(0.06)	(0.06)
Conscientiousness		0.03	0.03		0.11*	0.11*
		(0.04)	(0.04)		(0.07)	(0.06)
Honesty		0.06	0.06		0.17***	0.17***
		(0.05)	(0.05)		(0.06)	(0.06)
Openness		0.01	0.01		0.07	0.07
		(0.04)	(0.04)		(0.06)	(0.06)
Agreeableness		0.01	0.01		-0.06	-0.06
		(0.05)	(0.05)		(0.07)	(0.07)
Ethnicity (Non-White/Caucasian)		-0.07	-0.07		0.02	0.02
		(0.06)	(0.06)		(0.09)	(0.09)
Intercept	0.70***	-0.27	-0.24	2.54***	0.83	0.73
	(0.04)	(0.30)	(0.30)	(0.06)	(0.45)	(0.46)
F	0.13	2.82	2.55	1.09	4.00	3.92
R^2	0.00	0.08	0.08	0.00	0.09	0.11

Note. Robust standard errors in parentheses; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 9

Inter-reliability for Indicators in Study 2

Variable	Kappa
Soft skills (about)	.71
Soft skills (experience)	.95
Soft skills (education)	1.00
Technological skills (about)	.93
Technological skills (experience)	.90
Technological skills (education)	.81
Goals	.96
Learning experiences	1.00
General	.88
Competent	.86
Effort	.90
Interview	.90

Note. Cohen's weighted Kappas

Table 10

Correlation Matrix for Main Variables of Interest in Study 2

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Condition	-											
2. Age	-.01	-										
3. Id. with age	.05	.02	-									
4. Sections	-.06	-.03	.09	-								
5. Words	-.05	.11**	.01	.39***	-							
6. Experience	-.11**	.08	.08	.57***	.41***	-						
7. Education	-.08	-.05	.07	.66***	.30***	.41***	-					
8. Soft Skills	-.14**	.09	-.00	.31***	.56***	.23***	.23***	-				
9. Tech Skills	-.03	.09	-.07	.51***	.42***	.38***	.49***	.30***	-			
10. Goals	-.02	-.20***	-.06	.25***	.18***	.15***	.17***	.24***	.25***	-		
11. Learnings exp.	-.03	-.09	.02	.09*	.11**	.08	.10**	.19***	.22***	.21***	-	
12. Evaluation	-.06	-.03	.07	.83***	.41***	.59***	.60***	.31***	.55***	.20***	.09*	-

Note. N = 288; * $p < .1$, ** $p < .05$, *** $p < .01$

Table 11

Descriptive Statistics for the Main Variables of Interest in Study 2

Variable	*N*	*M*	*SD*	*Min*	*Max*
Age	380	40.83	15.87	18	65
Id. with age	380	4.61	1.59	1	7
Sections	380	2.64	1.35	0	4
Words	380	59.04	96.60	1	893
Experience	380	0.96	1.00	0	6
Education	380	0.84	0.71	0	3
Soft Skills	380	0.40	0.83	0	5
Tech Skills	380	1.33	1.53	0	11
Goals	380	0.10	0.30	0	1
Learnings exp.	380	0.04	0.46	0	7
Evaluation	380	2.65	1.09	1	4

Note. *M* = Mean; *SD* = Standard Deviation; *Min* = Minimum; *Max* = Maximum.

Table 12

Regression Analysis for Number of Sections and Experiences Mentioned and Poisson Regressions for Words Used in Study 2

	Sections added		Words		Experiences	
Variable	(1)	(2)	(4)	(5)	(1)	(2)
Salience (High salience)	-0.22 (0.19)	-0.27 (0.19)	-0.18 (0.25)	-0.22 (0.26)	-0.22* (0.12)	-0.26** (0.12)
Age (Older)	-0.18 (0.20)	-0.41** (0.21)	0.43** (0.22)	0.32 (0.22)	0.15 (0.16)	-0.02 (0.16)
Salience#Age	0.13 (0.28)	0.26 (0.28)	0.02 (0.33)	0.11 (0.35)	-0.00 (0.21)	0.09 (0.21)
Gender (Women)		0.22 (0.16)		-0.12 (0.19)		0.25** (0.12)
Ethnicity (Non-White/Caucasian)		0.11 (0.15)		0.23 (0.20)		-0.14 (0.10)
Extraversion		0.24** (0.11)		0.03 (0.11)		0.07 (0.08)
Emotionality		0.22* (0.12)		0.16 (0.17)		0.13 (0.09)
Conscientiousness		0.14 (0.12)		0.27* (0.15)		0.03 (0.10)
Honesty		-0.00 (0.11)		0.02 (0.11)		0.07 (0.09)
Openness		0.23* (0.12)		0.04 (0.13)		0.10 (0.08)
Agreeableness		-0.01 (0.12)		0.04 (0.15)		-0.04 (0.08)
Intercept	2.82*** (0.14)	-0.03 (0.79)	3.92*** (0.14)	1.96** (0.89)	1.00*** (0.09)	-0.19 (0.54)
F / Wald Chi^2	0.73	2.57	7.33	23.46	2.33	2.44
R^2 / Pseudo R^2	0.01	0.06	0.03	0.06	0.02	0.07

Note. Robust standard errors in parentheses; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 13

Regression Analysis for Number of Educations, Soft Skills and Technological Skills Mentioned in Study 2

	Educations		Soft skills		Technical skills	
Variable	(4)	(5)	(1)	(2)	(4)	(5)
Salience (High salience)	-0.09 (0.09)	-0.10 (0.09)	-0.32*** (0.11)	-0.29*** (0.11)	-0.07 (0.19)	-0.09 (0.19)
Age (Older)	-0.06 (0.11)	-0.23** (0.11)	0.06 (0.14)	-0.01 (0.14)	0.26 (0.22)	-0.03 (0.25)
Salience#Age	-0.07 (0.15)	-0.01 (0.14)	0.17 (0.17)	0.19 (0.17)	-0.04 (0.32)	0.06 (0.33)
Gender (Women)		0.22*** (0.08)		0.02 (0.09)		0.01 (0.20)
Ethnicity (Non-White/Caucasian)		-0.07 (0.07)		0.11 (0.09)		0.13 (0.16)
Extraversion		0.05 (0.06)		0.06 (0.06)		0.13 (0.15)
Emotionality		0.03 (0.06)		0.11 (0.08)		0.00 (0.16)
Conscientiousness		0.08 (0.07)		0.15* (0.08)		0.22 (0.13)
Honesty		0.02 (0.06)		0.03 (0.08)		0.18 (0.13)
Openness		0.16** (0.06)		-0.02 (0.07)		0.38*** (0.12)
Agreeableness		-0.01 (0.07)		0.05 (0.08)		-0.21 (0.17)
Intercept	0.93*** (0.07)	-0.25 (0.35)	0.49*** (0.10)	-0.86* (0.45)	1.24*** (0.14)	-1.15 (0.99)
F	1.53	3.18	6.00	2.39	0.96	2.78
R^2	0.01	0.08	0.03	0.06	0.01	0.06

Note. Robust standard errors in parentheses; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 14

Regression Analysis for Number of Goals and Learning Mentioned and Evaluation Received in Study 2

	Goals		Learnings		Evaluations	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Salience (High salience)	-0.02 (0.05)	-0.02 (0.05)	-0.07 (0.09)	-0.07 (0.10)	-0.19 (0.15)	-0.20 (0.15)
Age (Older)	-0.12*** (0.04)	-0.14*** (0.05)	-0.12 (0.08)	-0.15 (0.09)	-0.18 (0.16)	-0.44*** (0.16)
Salience#Age	0.02 (0.06)	0.02 (0.06)	0.08 (0.10)	0.09 (0.11)	0.14 (0.22)	0.23 (0.22)
Gender (Women)		0.06 (0.04)		0.00 (0.06)		0.35*** (0.12)
Ethnicity (Non-White/Caucasian)		-0.01 (0.03)		0.04 (0.06)		0.01 (0.12)
Extraversion		0.02 (0.03)		0.03 (0.04)		0.18* (0.09)
Emotionality		0.01 (0.03)		0.05 (0.03)		0.13 (0.10)
Conscientiousness		0.05* (0.03)		0.05 (0.04)		0.17 (0.11)
Honesty		-0.02 (0.03)		0.00 (0.04)		-0.01 (0.09)
Openness		-0.01 (0.02)		0.00 (0.03)		0.21** (0.09)
Agreeableness		0.01 (0.03)		-0.01 (0.02)		0.03 (0.10)
Intercept	0.16*** (0.04)	-0.08 (0.19)	0.12 (0.08)	-0.30 (0.17)	2.81*** (0.11)	0.35 (0.63)
F	4.47	1.82	0.00	0.50	0.84	3.97
R^2	0.04	0.06	0.01	0.02	0.01	0.09

Note. Robust standard errors in parentheses; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 15

Regression Analysis with Interactions for Number of Sections and Experiences Mentioned and Poisson Regressions for Words Used in Study 2

	Sections added		Words used		Experiences	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Salience (High salience)	0.44 (0.72)	-0.34 (0.27)	1.84*** (0.63)	0.02 (0.34)	0.32 (0.43)	-0.26** (0.13)
Identification with age	0.13 (0.10)		0.20** (0.10)		0.09 (0.07)	
Salience#Identification	-0.15 (0.14)		-0.45*** (0.12)		-0.12 (0.09)	
Gender (Women)	0.20 (0.21)	0.13 (0.31)	-0.30 (0.25)	-0.07 (0.28)	0.17 (0.14)	0.17 (0.20)
Salience#Gender		0.17 (0.38)		-0.61 (0.43)		0.03 (0.27)
Ethnicity (Non-White/Caucasian)	0.06 (0.19)	0.06 (0.19)	0.09 (0.25)	0.07 (0.24)	-0.14 (0.13)	-0.14 (0.13)
Extraversion	0.21 (0.14)	0.26* (0.14)	-0.06 (0.20)	0.04 (0.17)	0.10 (0.12)	0.14 (0.10)
Emotionality	0.38** (0.17)	0.39** (0.18)	0.49** (0.22)	0.47** (0.24)	0.17 (0.11)	0.17 (0.11)
Conscientiousness	0.19 (0.16)	0.19 (0.16)	0.37** (0.15)	0.38*** (0.14)	0.09 (0.10)	0.09 (0.10)
Honesty	0.02 (0.13)	0.01 (0.13)	0.01 (0.13)	0.02 (0.14)	0.12 (0.10)	0.12 (0.11)
Openness	0.16 (0.16)	0.16 (0.16)	-0.06 (0.24)	-0.04 (0.24)	0.07 (0.10)	0.06 (0.10)
Agreeableness	0.13 (0.19)	0.10 (0.18)	0.31 (0.20)	0.20 (0.20)	-0.00 (0.12)	-0.03 (0.11)
Intercept	-1.45 (1.12)	-0.91 (1.08)	-0.64 (1.06)	0.31 (1.20)	-1.19 (0.85)	-0.79 (0.82)
F / Wald Chi²	2.14	2.04	61.13	40.91	1.71	1.86
R^2 / Pseudo R^2	0.10	0.09	0.16	0.11	0.12	0.10

Note. Standard errors in parenthesis; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 16

Regression Analysis with Interactions for Education soft skills and Technological Skills Mentioned in Study 2

	Educations		Soft skills		Technological skills	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Salience (High salience)	-0.20 (0.32)	-0.06 (0.11)	0.42 (0.33)	-0.17 (0.12)	-0.02 (0.66)	0.09 (0.22)
Identification with age	0.01 (0.05)		0.05 (0.06)		-0.04 (0.08)	
Salience#Identification	0.02 (0.06)		-0.15** (0.07)		-0.02 (0.13)	
Gender (Women)	0.29*** (0.11)	0.34** (0.16)	0.02 (0.12)	0.19 (0.20)	-0.08 (0.22)	0.17 (0.30)
Salience#Gender		-0.09 (0.19)		-0.30 (0.22)		-0.49 (0.39)
Ethnicity (Non-White/Caucasian)	-0.09 (0.09)	-0.08 (0.09)	0.11 (0.11)	0.09 (0.11)	0.38 (0.21)	0.36 (0.21)
Extraversion	0.13 (0.08)	0.13 (0.08)	0.03 (0.09)	0.04 (0.09)	0.39*** (0.14)	0.37*** (0.14)
Emotionality	0.06 (0.08)	0.06 (0.08)	0.29** (0.12)	0.25** (0.11)	0.16 (0.20)	0.12 (0.19)
Conscientiousness	0.14* (0.07)	0.14* (0.07)	0.14* (0.08)	0.15* (0.08)	0.46*** (0.15)	0.47*** (0.15)
Honesty	0.06 (0.08)	0.06 (0.08)	-0.06 (0.11)	-0.04 (0.11)	0.16 (0.14)	0.18 (0.15)
Openness	0.13 (0.08)	0.13 (0.08)	-0.07 (0.10)	-0.07 (0.10)	0.35** (0.16)	0.35** (0.16)
Agreeableness	-0.06 (0.10)	-0.05 (0.10)	0.19 (0.12)	0.15 (0.12)	-0.54*** (0.19)	-0.56*** (0.18)
Intercept	-0.66 (0.48)	-0.69 (0.44)	-1.58** (0.72)	-1.25* (0.70)	-1.96 (1.34)	-2.07 (1.31)
F	3.27	3.52	2.16	1.71	2.44	2.79
R^2	0.16	0.16	0.15	0.13	0.18	0.18

Note. Standard errors in parenthesis; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 17

Regression Analysis with Interactions for Goals and Learnings Mentioned and Evaluations in Study 2

	Goals		Learnings		Evaluations	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Salience (High salience)	0.08 (0.17)	0.07 (0.06)	0.58 (0.44)	0.06 (0.11)	0.18 (0.53)	-0.31 (0.21)
Identification with age	-0.01 (0.02)		0.07 (0.06)		0.09 (0.07)	
Salience#Identification	-0.02 (0.03)		-0.14 (0.10)		-0.08 (0.10)	
Gender (Women)	0.12 (0.07)	0.24** (0.09)	-0.00 (0.13)	0.18 (0.23)	0.36** (0.17)	0.24 (0.24)
Salience#Gender		-0.23** (0.11)		-0.31 (0.24)	0.24 (0.30)	0.24 (0.30)
Ethnicity (Non-White/Caucasian)	0.04 (0.06)	0.03 (0.06)	0.10 (0.11)	0.09 (0.12)	0.08 (0.15)	0.09 (0.15)
Extraversion	0.05 (0.05)	0.04 (0.05)	0.03 (0.06)	0.06 (0.08)	0.14 (0.11)	0.19 (0.11)
Emotionality	0.09 (0.05)	0.07 (0.05)	0.10 (0.07)	0.07 (0.06)	0.10 (0.14)	0.12 (0.14)
Conscientiousness	0.04 (0.04)	0.05 (0.04)	0.08 (0.06)	0.09 (0.07)	0.34** (0.14)	0.34** (0.14)
Honesty	-0.07 (0.04)	-0.06 (0.04)	-0.01 (0.10)	-0.00 (0.10)	-0.08 (0.11)	-0.08 (0.11)
Openness	0.01 (0.04)	0.01 (0.04)	-0.01 (0.05)	-0.01 (0.05)	0.21 (0.14)	0.21 (0.14)
Agreeableness	0.06 (0.06)	0.05 (0.06)	0.02 (0.05)	-0.01 (0.05)	-0.03 (0.14)	-0.04 (0.14)
Intercept	-0.47 (0.33)	-0.48 (0.33)	-0.99 (0.66)	-0.64 (0.44)	-0.18 (0.94)	0.18 (0.92)
F	1.40	1.72	0.44	0.47	3.14	3.25
R^2	0.08	0.10	0.05	0.04	0.15	0.14

Note. Standard errors in parenthesis; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 18

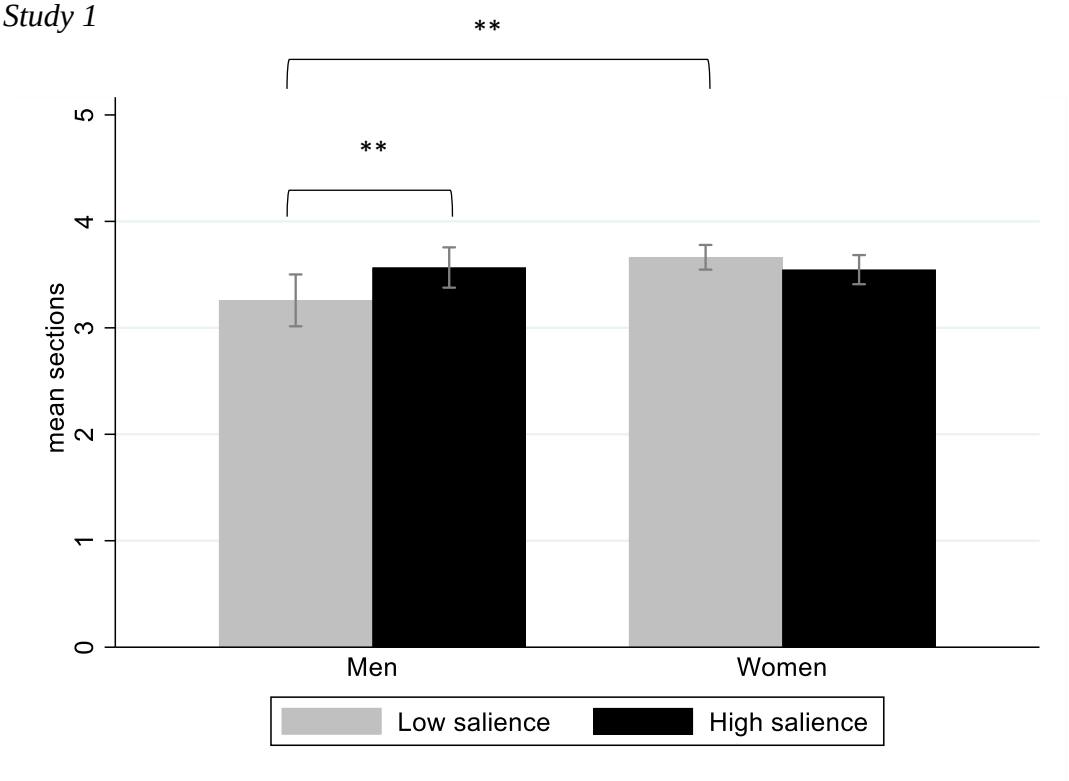
Exploratory Regressions Analysis for Salience and Age in Study 2

Variable	Self-Efficacy	Evaluation Apprehension	Perceived Competitiveness	Perceived Discrimination
Salience (High salience)	0.11	0.17	0.34**	0.91***
	(0.19)	(0.19)	(0.16)	(0.23)
Age (Older)	0.10	-0.97***	-0.10	2.17***
	(0.21)	(0.24)	(0.16)	(0.23)
Salience#Age	-0.31	-0.33	-0.15	-1.16***
	(0.28)	(0.33)	(0.22)	(0.32)
Gender (Women)	0.11	-0.27	-0.06	0.03
	(0.15)	(0.19)	(0.12)	(0.19)
Ethnicity (Non-White/Caucasian)	0.01	-0.15	0.20	0.12
	(0.14)	(0.17)	(0.12)	(0.17)
Extraversion	-0.76***	-0.55***	-0.42***	-0.21
	(0.12)	(0.13)	(0.10)	(0.14)
Emotionality	0.17	0.27*	0.22**	0.32**
	(0.13)	(0.14)	(0.11)	(0.14)
Conscientiousness	-0.58***	-0.07	0.10	-0.14
	(0.13)	(0.14)	(0.10)	(0.16)
Honesty	-0.16	-0.45***	0.10	0.12
	(0.12)	(0.14)	(0.11)	(0.14)
Openess	0.08	0.51***	0.01	0.03
	(0.12)	(0.14)	(0.09)	(0.13)
Agreeableness	-0.06	0.03	-0.01	-0.09
	(0.12)	(0.15)	(0.10)	(0.14)
Constant	7.65***	6.24***	4.74***	2.73***
	(0.78)	(0.92)	(0.67)	(0.98)
F	15.66	12.15	6.81	13.34
R^2	0.29	0.27	0.15	0.26

Note. Standard errors in parenthesis; *** $p < .01$, ** $p < .05$, * $p < .1$.

Figure 1

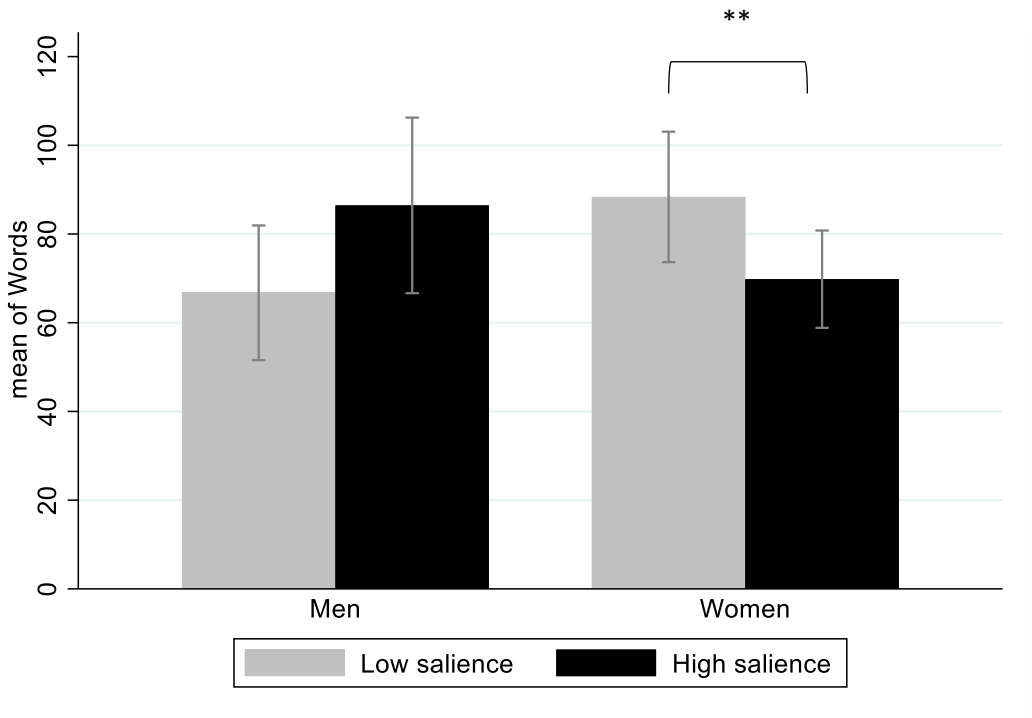
Interaction Between Discrimination Salience and Participant Gender for Sections Added in Study 1



Note. 95% *CI are shown;* **p* < .1, ***p* < .05, ****p* < .01

Figure 2

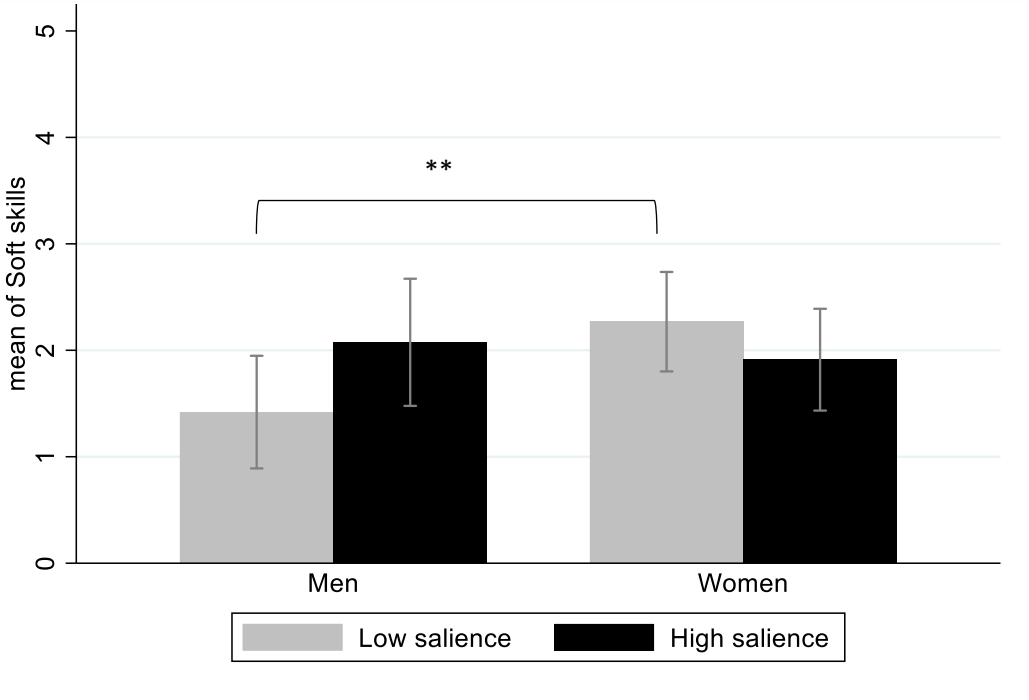
Interaction between Discrimination Salience and Candidate Gender for Words Mentioned in Study 1



Note. 95% *CI* are shown; *$p < .1$, **$p < .05$, ***$p < .01$

Figure 3

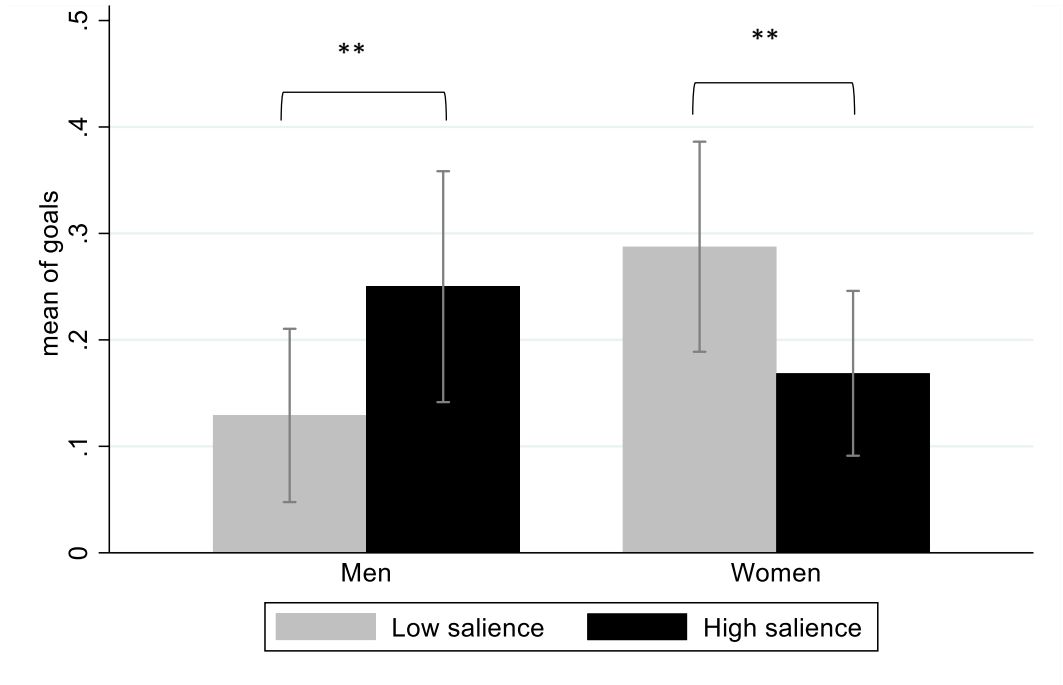
Interaction between Discrimination Salience and Gender for Number of Soft Skills Mentioned in Study 1



Note. 95% *CI* are shown; *$p < .1$, **$p < .05$, ***$p < .01$

Figure 4

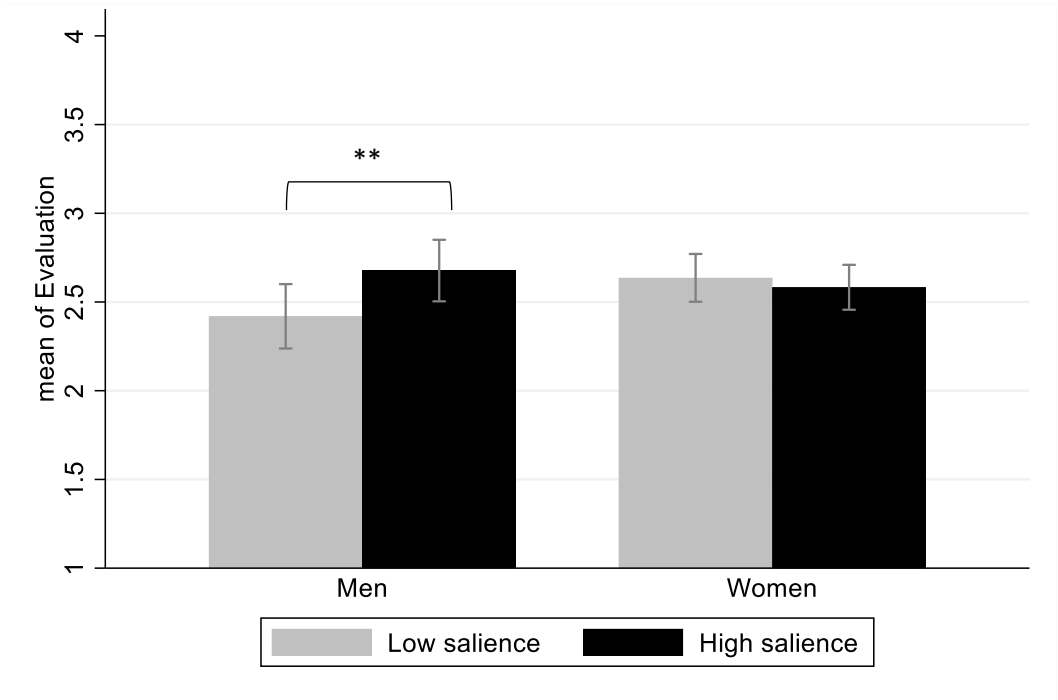
Interaction between Discrimination Salience and Gender for Goals Mentioned in Study 1



Note. 95% *CI* are shown; *$p < .1$, **$p < .05$, ***$p < .01$

Figure 6

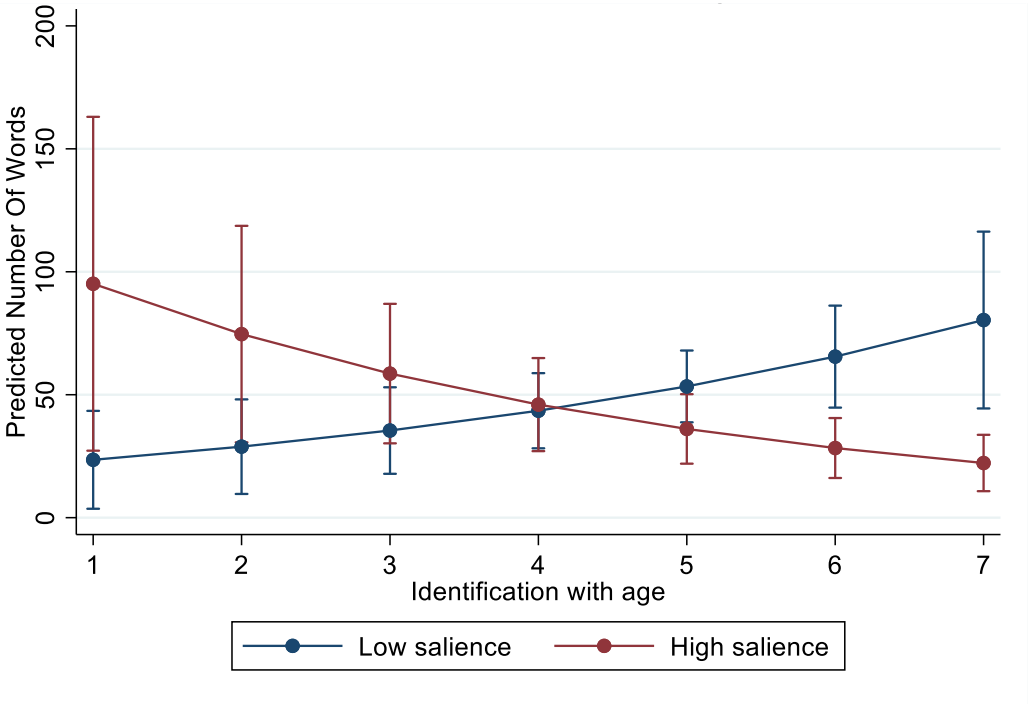
Interaction between Discrimination Salience and Gender for Evaluation in Study 1



Note. 95% *CI* are shown; *$p < .1$, **$p < .05$, ***$p < .01$

Figure 6

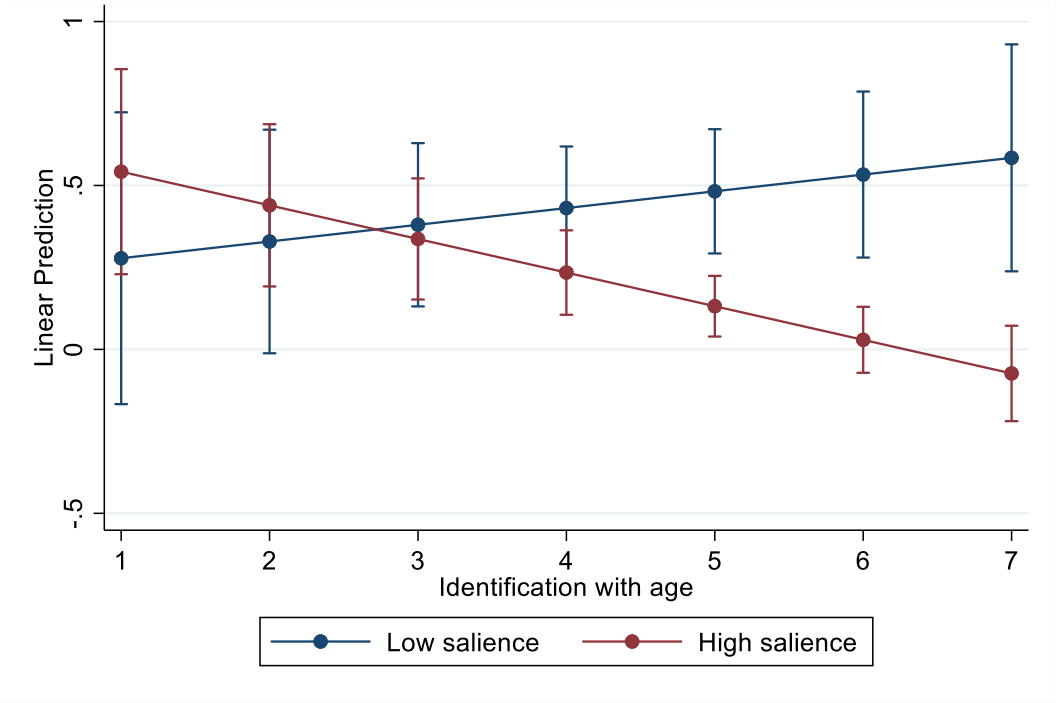
Predictive Margins for the Interaction between Discrimination Salience and Identification with Age in Study 2



Note. Predictive margins, 95% *CI* are shown

Figure 7

Predictive Margins for the Interaction between Discrimination Salience and Identifications with Age in Study 2



Note. Predictive margins, 95% *CI* are shown

Appendix A

Conditions Pre-tested for Study 1

High salience 1: The aim of this study is to see if people differ in their presentation during job searches. It is widely believed that young job seekers are less motivated. We will see if young job seekers are indeed less motivated than older job seekers. People of different ages will take part in this study.

Low salience 1: The aim of this study is to see if people differ in their presentation during job searches. People of different ages will take part in this study.

High salience 2: What is the situation in the job market? Statistics show that almost 25% of young people in your age group have felt discriminated against because of their young age when looking for a job (Duncan & Loretto, 2003). Now, the unemployment rate for young people is twice higher than for other adults (OCDE data, 2022). For this study you are going to complete several tasks. Some of them are about your job search.

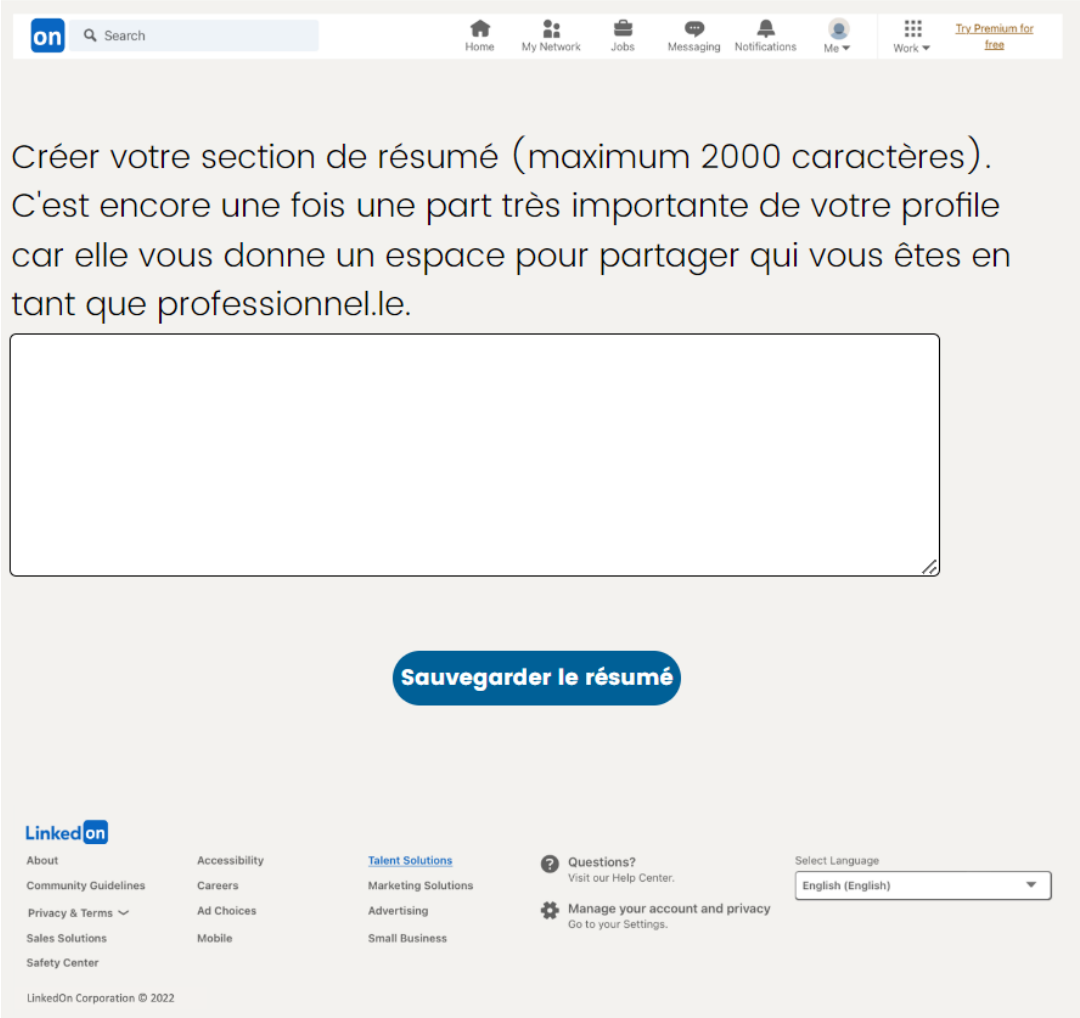
Low salience 2: What is the situation in the job market? Statistics show that almost 5% of the active population in Switzerland are looking for a job. Now, the active population represents 57% of the total population (OCDE data, 2022). For this study you are going to complete several tasks. Some of them are about your job search.

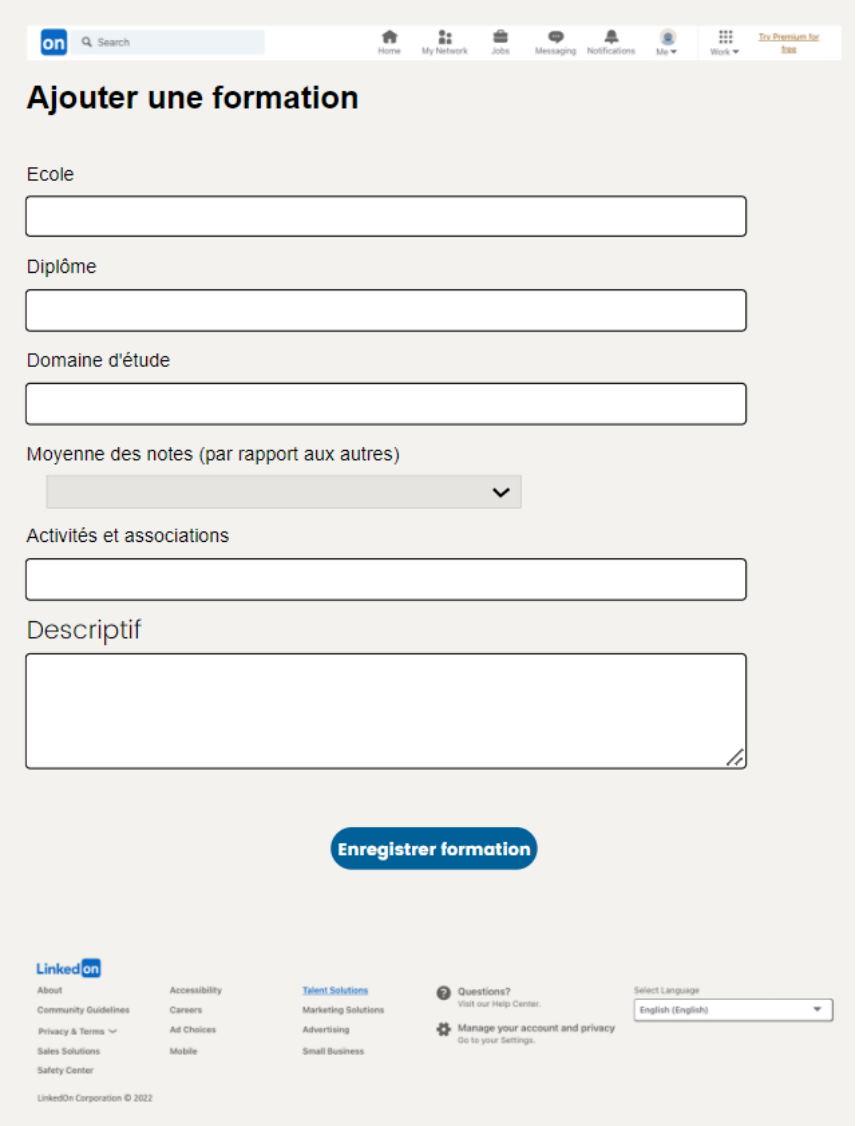
High salience 3: Studies have shown that young job seekers are less motivated than older job seekers (Ng et al., 2012). Only 20% of young people report being very motivated at work (EY, 2016). For this study, you will complete a series of tasks. Some tasks concern your presentation during job searches.

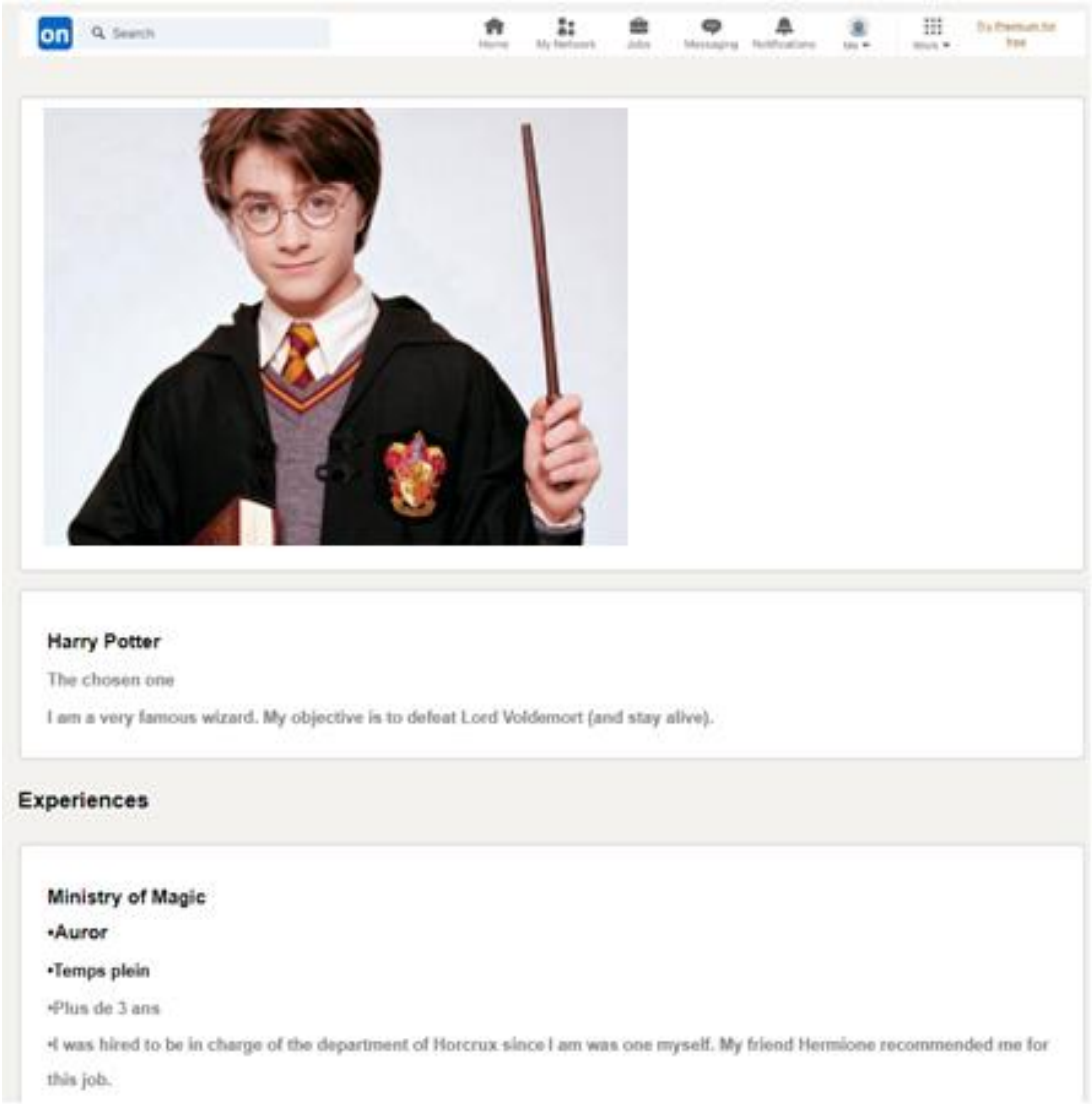
Low salience 3: For this study, you will complete a series of tasks. Some tasks concern your presentation during job searches.

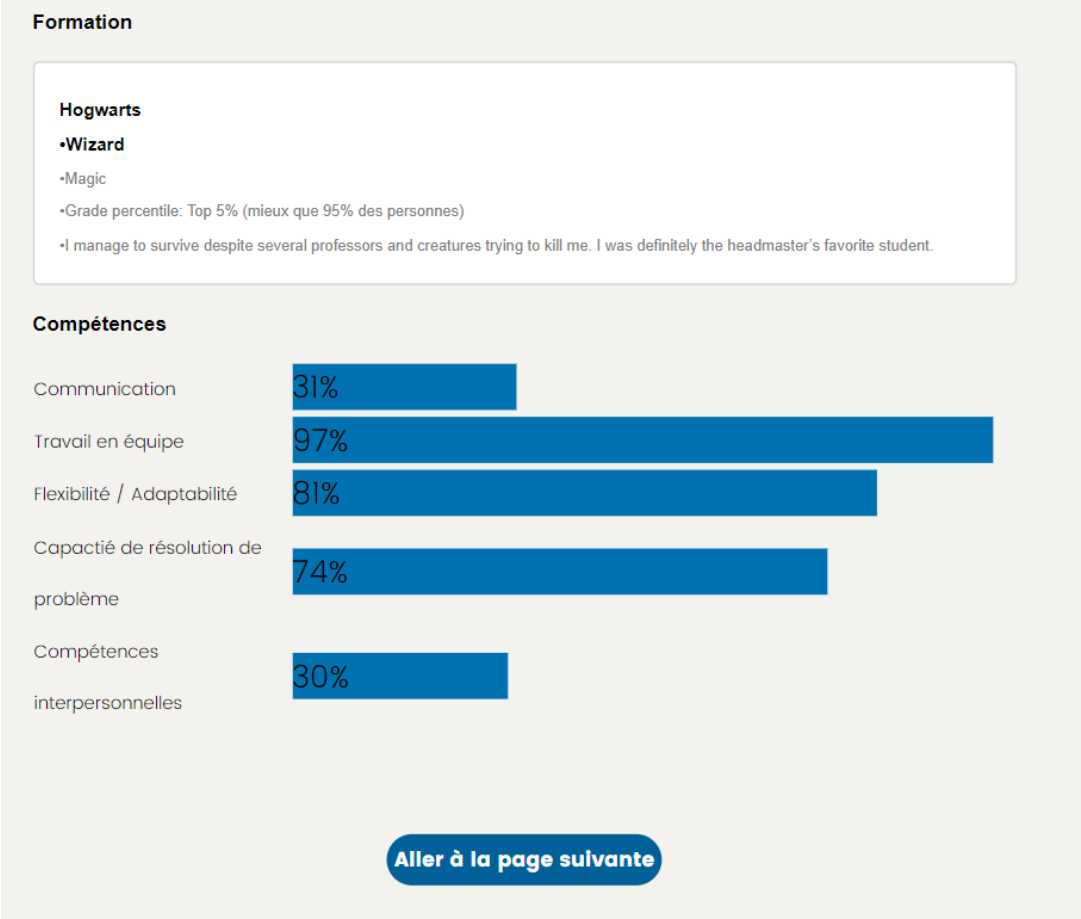
Appendix B

Screenshots from the Professional Social Media Platform




Search
Home
My Network
Jobs
Messaging
Notifications
Me
Work
Try Premium for free
Ajouter une formation
Ecole
Diplôme
Domaine d'étude
Moyenne des notes (par rapport aux autres)
Activités et associations
Descriptif
Enregistrer formation
About
Accessibility
Talent Solutions
Questions?
Visit our Help Center.
Select Language
English (English)
Community Guidelines
Careers
Marketing Solutions
Privacy & Terms
Ad Choices
Advertising
Manage your account and privacy
Go to your Settings.
Sales Solutions
Mobile
Small Business
Safety Center
LinkedIn Corporation © 2022


Search
Harry Potter
The chosen one
I am a very famous wizard. My objective is to defeat Lord Voldemort (and stay alive).
Experiences
Ministry of Magic
•Auror
•Temps plein
•Plus de 3 ans
•I was hired to be in charge of the department of Horcrux since I am was one myself. My friend Hermione recommended me for this job.


Formation
Hogwarts
•Wizard
•Magic
•Grade percentile: Top 5% (mieux que 95% des personnes)
•I manage to survive despite several professors and creatures trying to kill me. I was definitely the headmaster's favorite student.
Compétences
Communication
31%
Travail en équipe
97%
Flexibilité / Adaptabilité
81%
Capactié de résolution de problème
74%
Compétences interpersonnelles
30%
Aller à la page suivante

Appendix C

Example of Modified Pictures for Study 1

Figure C1

Original Picture

Figure C2

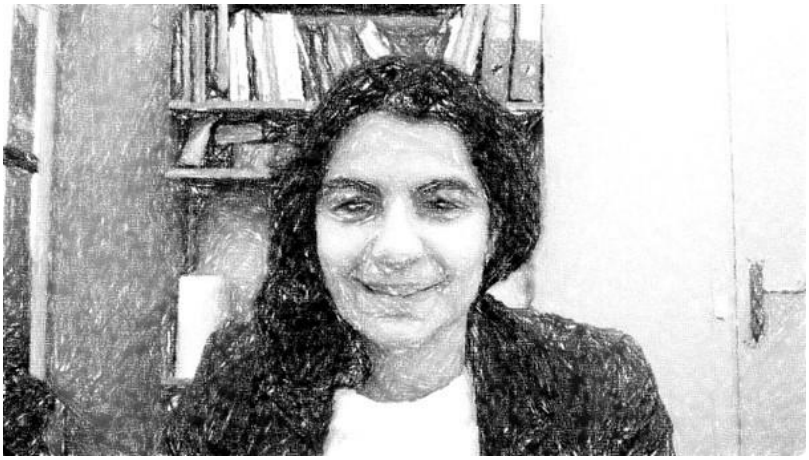
FaceApp Hollywood Filter

Figure C3

Maximized Facial Prominence

Figure C4

Creative Filter



Context Matters: The Role of Technological Tool Descriptions in Age and Gender Intersectional Discrimination

Alissone Mendes de Oliveira

Faculty of Business and Economics, University of Lausanne, Switzerland

Abstract

When it comes to intersectional discrimination (discrimination considering more than one identity), two hypotheses are described in the literature: double jeopardy (i.e., that people with several subordinate identities suffer more discrimination; Beal, 2008) and Intersectional Invisibility (i.e., that people with several subordinate identities suffer less discrimination; Purdie-Vaughns & Eibach, 2008). One potential explanation for the conflicting literature could be that stereotypes depend on context. For this project, we investigate the following question: How does the description made by a company of a technological tool used in the workplace impact the intersectional discrimination for age and gender when evaluating potential teammates? To answer this question, we employed a between-subjects experimental design based on vignettes with 8 conditions: 2 teammate genders (female vs male) X 2 teammate ages (younger vs older) X 2 descriptions of technological tools (communication vs high-tech). To understand the impact of incentives on evaluations, we conducted two studies, using incentives or not for participant answers. While there were no differences between the two studies in terms of duration and or attention, results regarding the teammate evaluations differed remarkably. When participants were asked for their personal opinion (non-incentivized study), we found a significant effect of teammate age, with older teammates receiving poorer evaluations. When participants were incentivized to predict the evaluation given by others, significant interactions emerged: older individuals and women were rated more positively when the tool was described as communication compared to high-tech, supporting a context-dependent view of stereotypes. However, across our studies, no intersectional effects were found.

Keywords: Intersectionality, age, gender, technology, incentives

Context Matters: The Role of Technological Tool Descriptions in Age and Gender Intersectional Discrimination

Discrimination has attracted significant attention from both researchers and the general public in recent decades. Research on discrimination has advanced by incorporating various identities, such as gender, age, ethnicity, and sexual orientation, and employing diverse research methodologies (Neumark, 2018). However, most of these efforts have primarily focused on examining the impact of single identities in isolation. This approach is limiting because individuals with multiple intersecting identities often face unique challenges and compounded forms of discrimination that are not captured when considering only one identity. Intersectional studies aim to address this gap by simultaneously examining the intersections of multiple identities, providing a more comprehensive understanding of the complexities of discrimination.

Due to its complexity, the literature on intersectionality often presents mixed findings. For this research project, we investigate one potential explanation: the context-dependence of stereotypes. We focused on stereotypes surrounding technology competence, very relevant stereotypes for today's workplace, and investigate their impacts on discrimination. Moreover, we focused on the intersection of gender and age. Gender is arguably the most commonly researched identity when it comes to discrimination, as it represents the discrimination faced by the most people, and age discrimination is increasingly important with population ageing worldwide (United Nations, 2022). The ageing population is expected to have major impact on the workplace (White et al., 2018) and especially for older women whose participation in the workplace continues to grow (Toossi & Morisi, 2017). Understanding the unique challenges faced by individuals at the intersections of age and gender is essential for overcoming workplace discrimination.

For the present research, we rely on the context-dependence of stereotype (Casper et al., 2010) and the lack of fit model (Heilman, 1983; Heilman, 1995) to explore how cues in the context can activate stereotypes and modify the evaluation of teammates at the intersections of age and gender. To answer this question, we conducted two experiments using a vignettes-design replicating the process of team selection. To capture participants reactions broadly, we used non-incentivized and incentivized outcome measures. This allowed us to compare two different perceptions: evaluators own judgements and what they think about how others would evaluate the situation. Taken together, our research provides a deeper understanding of how context influences intersectional discrimination and helps identify potential strategies to reduce bias in workplace evaluations.

Discrimination Studies and Intersectionality

Social identity theory (Tajfel, 1978) posits that individuals categorize themselves and others in specific groups that serves as identities. These categorizations lead to biases where people tend to favor their in-group and discriminate against the out-group (Tajfel et al., 1971). Discrimination is “unfair or prejudicial treatment of people and groups based on characteristics such as race, gender, age, or sexual orientation.” (American Psychological Association, 2022). This definition explicitly opposes different identities despite the fact that everyone is part of multiple groups. Isolating identities could hinder the full understanding of the experiences of individuals who have several stigmatized identities (Kulik et al., 2007; Reid & Comas-Diaz, 1990). The intersectional framework “illuminates unique outcomes that stem from membership in two or more demographic categories” (Hall et al., 2019, p. 11). Intersectionality has been developed in several fields of research and allows for a better understanding of how these intersections jointly shape discrimination (Cole, 2009). When it comes to workplace

discrimination, this understanding is crucial for policy-making but is currently lacking (Ruwanpura, 2008).

Initially, intersectionality was developed by black feminists studying black women and women of color, emphasizing how their experiences of discrimination differ from those of white women and black men (Almquist, 1975; Beal, 2008; Crenshaw, 1997). As a result of this early interest, intersections between gender and ethnicity is often referred as the most developed area of intersectional discrimination (Browne & Misra, 2003) and intersectionality, described as "the most important theoretical contribution that women's studies, in conjunction to other fields, has made so far" (McCall, 2005, p.1). The intersectional framework was then applied to a wide range of identities such as sexual orientation (Hancock & Daigle, 2021), disabilities (Warner & Brown, 2011), and age (Holman & Walker, 2021).

Two main hypotheses are discussed in the intersectionality literature. First, double jeopardy theory (Beal, 2008; Smith & Stewart, 1983) argues that individuals with multiple subordinate identities will face more discrimination compared to those with only one subordinate identity. The double jeopardy has been derived in two different models: the additive model (Almquist, 1975) where discrimination for subordinated identities sum up or the interactive model (Settles, 2006) where people experience these identities as one. Both models predict higher levels of discrimination for people that have more stigmatized identities.

In contrast, intersectional invisibility (Purdie-Vaughns & Eibach, 2008) posits that individuals with multiple subordinate identities are less prototypical of their identity groups and thus become invisible. This invisibility brings disadvantages since members of multiple subordinate groups struggle to be recognized and understood. Conversely, prototypical members of identity groups suffer more discrimination. With intersectional invisibility, members of

multiple subordinated groups can at least partly escape discrimination. Advantages from intersectional invisibility have been identified in previous research (Levin et al., 2002).

In workplace contexts, the literature shows mixed results that support both double jeopardy and intersectional invisibility. Correspondence studies have found stronger discrimination against older women compared to older men (Neumark et al., 2019). Resumes from Arabic women applying for high-cognitive jobs received worse evaluation compared to resumes from both native/Belgian women and Arab men (Derous & Pepermans, 2019), supporting double jeopardy. However, Arab women were rated better in resume rating for job with higher levels of client contact compared to Arab men (Derous et al., 2015). Black women received less backlash for displaying agentic behaviors compared to black men (Livingston et al., 2012), in-line with intersectional invisibility. These mixed findings suggest that the double jeopardy and intersectional invisibility hypotheses are alternatively supported by the literature, depending on the specific context and identities involved.

Intersectionality for Age and Gender

In this research, we focus on the intersections between age and gender. These intersections are particularly compelling for several reasons. Firstly, sexism arguably affects the largest number of people among all forms of discrimination and is a longstanding issue (Ford et al., 2021). Secondly, the effects of population aging are undeniable. The United Nations project that the number of people over 65 years old will more than double by the year 2050 (United Nations Department of Economic and Social Affairs, 2023). In addition to this, ageism (i.e., unfair treatment because of one's age) is a form of prejudice that could potentially impact anyone in their lifetime. It is therefore very relevant to focus on the intersections between these two identities.

Gender stereotypes can be summarized with two dimensions (Fiske et al., 2002): women are perceived as warmer compared to men, and men as more competent compared to women. Two interesting parallels can be made between the content of the stereotypes for age and gender. First, like women, older people are perceived as warmer but less competent than younger individuals (Fiske, 2017; Posthuma & Campion, 2009). Second, both older people and women are perceived as less-tech savvy and more technophobic (Finkelstein et al., 2013; Lemons & Parzinger, 2007). This is particularly alarming because technology has been increasingly important in the workplace (Marsh et al., 2022). Older workers, i.e., workers above 50 (Finkelstein et al., 2013) and older technologies share common stereotypes of being outdated and unfashionable (Xi et al., 2022). Because of these common points, older workers are often associated with older technologies and are stereotypically perceived as less tech-savvy and technophobic (Finkelstein et al., 2013, 2015; Neves & Amaro, 2012). In a survey in New Zealand, 49% of employees agreed that older workers are more likely to have problems with technology (McGregor & Gray, 2002) despite the fact that older people are equally as trainable with new technology as younger people (Broady et al., 2010).

Women too suffer from negative stereotypes regarding technology. They have been historically underrepresented in professional domains related to technology (White & Massiha, 2016). This difference is mainly explained by negative stereotypes and preconceptions about women in technology (Lemons & Parzinger, 2007, 2001) which despite the current need for IT professionals. still limit the number of women engaging and staying in technology-related careers.

Discrimination at the intersections between age and gender are often referred to as Gendered Ageism (Krekula et al., 2018; Rochon et al., 2021). Similar to other studies on

intersectionality, findings for the intersections between age and gender are equivocal, alternately supporting both hypotheses: intersectional invisibility and double jeopardy. Some of them argue for a double standard of aging (Sontag, 1997) in line with the double jeopardy hypothesis where ageism has a higher impact on women compared to men (Krings et al., 2023; Lauzen & Dozier, 2005; Neumark et al., 2019). By contrast, others researches find opposite effects (Martin et al., 2019; Narayan, 2008), supporting the idea of an intersectional invisibility with older women escaping discrimination.

Context-dependence of Stereotypes and Impacts on Evaluation

One potential explanation for these mixed findings could be that stereotypes at the intersections between age and gender are context-dependent. Common models of stereotyping develop how individuals categorize targets based on visible cues (Schneider, 2005). This categorization automatically activates attributes (i.e., stereotypes) for these categories which then guide perceptions and behaviors towards the target (Fiske, 1998). The context-by-category interaction model of automatic stereotype activation (Casper et al., 2010) argues that stereotype activation is moderated by cues present in the context. In line with this model, older people are evaluated differently depending on the life domains, e.g., older people were associated with more positive stereotypes in the family and partnership domain compared to the financial situation and money managing domains (Kornadt & Rothermund, 2011).

In the case of so-called multiple-category problem (i.e., intersectional identities), cues in the environment activate or inhibit categories, impacting evaluations (Kulik et al., 2007). Indeed, for intersections between age and gender (Kornadt et al., 2013), older women faced more negative stereotypes in the domains of work compared to older men (in-line with the double jeopardy) but more positive ones in the domain of friendship. In the workplace, context

influences both the activation of the stereotypes associated with individuals and perceptions of the requirements they are expected to meet for doing the work. The lack of fit model (Heilman, 1983; Heilman, 1995), predicts that the expected success of a target would depend on the perceived fit between their attributes (i.e., activated stereotypes) and the job's requirements. In-line with this theory, Arab men received lower evaluation compared to Arab women, Dutch women and Dutch men for a job requiring contact with clients (Derous et al., 2015). For a high-cognitive domain job, Arab women faced a double jeopardy problem (Derous & Pepermans, 2019). However, little is known on how context-dependence of stereotypes affects individuals at the intersections of age and gender and how their perceived fit would impact team selection.

As mentioned above, being less tech-savvy is an important part of the stereotype associated with both women and older workers. However, technology can be characterized in various ways. In qualitative research with an Italian sample (Comunello et al., 2017), two distinct narratives emerged among elderly participants reporting their use of mobile phones: mobile phones were described either as a simple communication tool or as a high-tech device. Researchers emphasized how these different descriptions led to multifaced age and gender stereotypes among participants. When the technology was described as a high-tech device, age-based stereotypes highlight younger people's good skills, while gendered stereotypes emphasize women's perceived lack of competencies. Conversely, when the mobile phone is regarded as a communication tool, age-based stereotypes criticize younger people for their poor manners, while gendered stereotypes portray women as social groomers (i.e., individuals who use communication to maintain and strengthen social bonds). These multifaceted stereotypes are in-line with the stereotype content model where women and older people are described as being high on warmth but low in competencies (Fiske, 2017; Fiske et al., 2002). This qualitative

research provides pertinent insights on how technology framing could impact stereotypes for intersections between age and gender but, to our knowledge, has not yet been empirically tested.

Purpose of the Present Study and Hypothesis

For the present research, we built on the context-dependence of stereotypes (Casper et al., 2010; Kornadt et al., 2013) and the lack of fit model (Heilman, 1983; Heilman, 1995) to investigate how contextual cues can activate stereotypes and modify the evaluation of potential teammates at the intersections of age and gender. We manipulate contextual cues using two narratives for the same technology: high-tech or communication tools (Comunello et al., 2017). The two distinct narratives activate different stereotypes based on age and gender. Our overall research question can be summarized as follows: How does the description made by a company of a technological tool used in the workplace impact the intersectional discrimination for age and gender during team selection?

We rely on the two descriptions of technology, i.e., as a communication or a high-tech tool (Comunello et al., 2017) and hypothesize that this distinction will impact the evaluations received by targets. Given that both women and older people are perceived higher in interpersonal warmth but as less competent and able (Fiske et al., 2002), we expect both targets to be evaluated more positively when the tool is described as communication compared to high-tech tool.

Hypothesis 1: The impact of target age and gender on evaluations will be moderated by the way the technological tool is described such that female (older and younger; *H1a*) and older individuals (men and women; *H1b)* will be evaluated more positively when the tool is described as a communication tool compared to a high-tech tool.

Social desirability bias, i.e., the tendency for participants to provide socially acceptable answers (Edwards, 1953), is often argued to be one of the most compromising in terms of survey validity (Fisher, 1993). Experimental designs are also threatened by it (Nederhof, 1985). Studies about discrimination should be especially concerned by this issue given the sensitive nature of the topic. Social desirability is likely to underestimate true levels of discrimination for members of stigmatized groups (Stier & Hinshaw, 2007). In addition, vignette studies are often criticized for lack of realism and consequential decisions (e.g., incentives) for participants (Lonati et al., 2018). We therefore conducted our research in two studies, one with and one without incentives. In Study 2, we incentivized participants (see Method section for details) to focus on others' responses (i.e., second-order beliefs) using the Krupka-Weber method (Krupka & Weber, 2013). Because incentivized questions could decrease social desirability bias (Nosenzo & Görges, 2020) and second-order beliefs are stronger predictors of behavior (Jachimowicz et al., 2018), we expect the earlier hypothesized differences to be larger when using incentives (Study 2), compared to when there are no incentives (Study 1).

Hypothesis 2 (H2): Differences in evaluation between potential teammates will be stronger when participant receive a bonus for guessing the most given answer from other participants.

In addition to these hypotheses, we aim to explore how the description of the technological tool impacts evaluations within an intersectional framework. We propose that intersectional discrimination is dynamic, contrasting with the static models of double jeopardy and intersectional invisibility. Especifically, we suggest that contextual cues will activate stereotypes, subsequently modifying the evaluations received by potential teammates. More specifically, we argue that when technology is described as a communication tool, older women -

despite having two stigmatized identities – would receive better evaluations compared to older men, younger men, and younger women, because both of an older woman's identities are associated with positive stereotypes about communication. Furthermore, when the technological tool is described as a high-tech tool, we expect older women to be evaluated less favorably than older men, younger men and younger women, because both of these identities are associated with lower competence in technology. Nevertheless, the case where a potential team member embodies two intersecting identities, one that aligns with a stereotype and one that does not, (e.g., younger women and older men) remains open for further investigation. If gender stereotypes in technology are stronger, older men could receive better evaluations compared to younger women when the tool is described as high-tech. If age stereotypes are stronger, then the effects could go in the other direction. Alternatively, the interaction of these intersecting identities may not follow a clear additive or interactive pattern (e.g., one identity may become the primary focus). Given these complexities and the lack of strong theoretical guidance, we refrain from formulating hypotheses, and we will investigate the intersections between age and gender through exploratory analysis.

Finally, because perceived warmth and competence are important dimensions of perceptions of both older and female workers (Fiske, 2017; Fiske et al., 2002) and are directly related to communication and proficiency with complex technology, we aim to explore how descriptions of technological tools influence these ratings. As our study investigates the context-dependence of stereotypes, it is essential to see how different descriptions of technological tools (communication vs. high-tech) affect perceptions of warmth and competence. For instance, a communication tool might enhance perceptions of warmth, particularly benefiting those stereotyped as warmer (e.g., women and older individuals). Conversely, a high-tech tool might

amplify perceptions of competence, affecting evaluations of those stereotyped as more competent (e.g., men and younger individuals). Given that the literature has not directly studied this intersection, it is difficult to predict specific outcomes, which is why we chose to explore these variables rather than formulate specific hypotheses.

Overview of the Studies

We tested our hypotheses and research questions in two experimental studies both designed to causally identify the impact of the description of the technological tool used in the workplace on evaluations of potential teammates at the intersection between age and gender (i.e., younger women, younger men, older women, and older men). Both studies use the same material, included participants with similar demographic characteristics, and explored the same variables. While the first study focused on participants' own personal evaluations and did not use incentives, the second study incentivized evaluations so that participants focused on their beliefs about other people's evaluations (so-called second order normative beliefs). Second order-normative beliefs are highly relevant in the selection context because they can be better predictors for behaviors compared to first-order personal beliefs (Jachimowicz et al., 2018). To understand how these different framings impact evaluations, we compared the results of the studies in the final section of the results.

Study 1

Method

Participants

We recruited 1174 participants through Prolific. To qualify for taking part in the experiment participants had to be between 18 to 65 years old (i.e., working age range in many

countries) and have some experience in recruitment. Participants were paid a fixed wage of £2.1 for their participation.

Twelve participants were excluded for taking less than two minutes for completing the experiment (four participants), for failing the attention check (i.e., failing to select "Rarely" among other propositions; four participants) or declaring they did not think we should keep their data for our experiment (four participants). We further excluded 168 participants for failing the comprehension check for the type of technology used in the workplace. Finally, we excluded 40 participants for failing the attention check for the profile (i.e., the age and gender) of the target described in the vignette. [1]

The final sample consisted of 954 participants composed of 40.04% women and an age range from 19 to 65 (M = 41.97; SD = 11.48). Most of the participants were White/Caucasian (70.75%), 11.22% were Black/African American, 8.18% Asian, 6.29% Hispanic/Latino. The remaining participants identified as Other. A majority was working (i.e., 67.51% full-time, 9.75% self-employed, 7.02% had one and 2.94% several part-time jobs). The rest of the participants were students (1.99%), retired (4.72%), or unemployed (6.08%). In terms of education, 63.42% had a university degree (minimum bachelor). They reported high levels of engagement for the study (M = 6.75; SD = 0.75).[2]

Design and Procedure

We used a full between subject design with eight conditions: 2 (descriptions of the technological tool: communication vs high-tech tool) X 2 (potential teammate gender: female vs male) X 2 (potential teammate age: younger vs older). After consenting to take part in the study, participants were randomly assigned to one of the conditions and instructed to complete an evaluation task. They read a vignette where they had to imagine themselves in a managerial role

at a bank, responsible for assembling a team of bank clerks from current employees.. We chose the job bank clerk because it is age and gender neutral (Krings et al., 2023), thus avoiding any bias related to the job itself.

The vignette text read as follows (elements in bold were manipulated depending on the condition): “Imagine that you are working in a bank. As a manager, you have been asked to assemble a team to work with from the current employees. Your team will consist of bank clerks and will be responsible for handling clerical duties. In your company, bank clerks work regularly with a **communication / high-tech** software allowing them to handle bank accounts. This **communication / high-tech** software is their primary work tool.”. We pretested this manipulation to ensure that the technological tools were indeed perceived as communication or high-tech.[3]

After reading about the job and the technological tool associated with it, participants learnt that their assistant made a summary of potential teammates for their team and were presented with a candidate for the team profile. We manipulated the gender of the potential teammate (i.e., man or women) by modifying their names and pronouns through the description. In addition, we manipulated the age of the potential teammate (23 or 61 years old) twice in the text. The names were selected to be common for individuals of the respective age and gender. To have comparable candidates for the team, we specified that they had 2 years of experience in the company and that they also had previous professional experience, unrelated to the current position. Descriptions of the potential teammate read as follows (elements in bold were manipulated depending on the condition): “**Michael / Lisa / Jacob / Emily** is **61 / 23** years old. **He / She** holds a bachelor’s degree in finance. **He / She** has been working for 2 years for this

bank**. His / Her** previous manager was satisfied with his/her work. While **he / she** also possesses previous professional experiences, they are not relevant to this position."

Measures

Evaluation. Participants had to evaluate potential teammates on four dimensions (i.e., person-job fit, qualification, as a valuable element for the team, and probability to select for the team) on a 7-point scale (1= *Not at all* to 7 = *Very*). The above dimensions were respectively assessed with "To what extent do you think this person will fit with the future job?", "How qualified does this person appear to you?", "To what extent do you think this person will be a valuable addition to your team?" and "How likely are you to include this person in your team, based on what you have just read?". Evaluation was measured by computing the mean of the four elements (α= .94).

Perceived Warmth. Perceived warmth (Fiske et al., 2002) was assessed with 6 items (e.g., "According to the scenario you just read, how warm does this person appear to you?") on a 7-point scale (1= *Not at all* to 7 =*Very*). Internal reliability of the scale was high (α= .95).

Perceived Competence. Perceived competence (Fiske et al., 2002) was assessed with 6 items (e.g., "According to the scenario you just read, how competent does this person appear to you?") on a 7-point scale (1= *Not at all* to 7 =*Very*). Internal reliability of the scale was high (α= .94).

Control Variables. Demographic variables i.e., participant gender ("What is you gender"), age ("What is your age? Please indicate your age in years."), and ethnicity ("What is your ethnicity?"), were measured as control variables because shared experiences of discrimination can impact relationships with other stigmatized groups (Cortland et al., 2017). Categorical variables were dummy coded: gender (0 = man; 1 = woman) and ethnicity (0 =

White/Caucasian; 1 = other). Additionally, experience with communication software (i.e., "What experience do you have with communication software?") and high-tech software ("What experience do you have with high-tech softwares?") were included as control variables because higher use of these technologies could impact perceptions about them and were measured on a 7-point scale (from 1 = *No experience at all* to 7 = *A lot of experience*). Finally, because we investigate intersectionality between age and gender, we included participants identification with their age group and their gender group as control variables. Identification with age and gender (Doosje et al., 1995; van Breen et al., 2017) were measured with 4 items for each group (i.e., "I identify with this group", "I have strong ties with this group", "This group is an important part of my self-image", and "Being a member of this group is an important part of how I see myself") on a 7-point scale (from 1 = *Fully disagree* to 7 = Fully agree). Internal reliability for both identification with age (α= .95) and gender were high (α= .95).

Results

Analytical Strategy

Descriptive statistics for main variables of interest are shown in Table 1. The correlation matrix for these variables is displayed in Table 2. To investigate our hypotheses, we conducted linear regressions and tested four models for each outcome variable. The first model contained only the three manipulations (i.e., the technology description, potential teammate gender, and potential teammate age). The two-way interactions between the description of tool and teammates' gender and age were added in model 2, the three-way interaction and interaction between teammates' age and gender in model 3, and control variables (i.e., participant's gender, age, ethnicity, age identification, gender identification, experience in communication and experience in high-tech) in model 4.

Hypotheses Testing

The results of the regression analyses to investigate the interaction between the description of the tool and the teammate's gender (H1a) and age (H1b) are displayed in Table 3. Firstly, regarding the impact of teammate age, models 1, 3, and 4 show that older teammates received significantly lower evaluations compared to younger teammates. Additionally, model 1 reveals that teammates received lower evaluations when the tool was described as high-tech compared to when it was described as a communication tool. Secondly, results show no significant interactions between teammate age and teammate gender in terms of the tool description. Thus, H1a and H1b are not supported. Among the control variables, participant age, identification with age, and experience with high-tech software were positively associated with the evaluations given. Other control variables, including participant gender, ethnicity, identification with gender, and experience with communication tools, were unrelated to the evaluations received by the teammate.

Exploratory Analysis

Results of the exploratory analysis on perceived warmth are displayed in Table 4. In models 1 and 2, both teammate age and gender positively impact perceived warmth. However, these effects become nonsignificant when three-way interactions (model 3) and control variables (model 4) are included. None of the interactions between tool description and gender or tool description and age are significant. Among the control variables, participant age was negatively related to perceived warmth while identification with age and gender were positively related to perceived warmth.

Results of the exploratory analysis on perceived competence are displayed in Table 5. They show no impact of the manipulations (tool description, teammate age, and teammate

gender) or their interactions on perceived competence. For the control variables, participant age, gender, identification with age and gender, and experience with high-tech software were positively related to perceived competence.

In all analyses, none of the three-way interactions between tool description, teammate age and teammate gender reached significance (models 4 in Tables 3, 4, and 5). Similarly, the interaction between teammate age and gender was non-significant. Therefore, there was no evidence to support conclusions about the intersectionality of age and gender on evaluations.

Discussion

Results of the first study provide little evidence for the hypothesized effects. Contrary to our initial proposition, we found no significant interactions between teammates' age, gender, and the type of technology described (communication vs. high-tech). Our exploratory analysis regarding perceived warmth and gender did not provide evidence for interactive effects between technology description and teammate age and/or gender either. Taken together, we found no evidence for intersectional bias in evaluations and perceptions.

The absence of interactions between gender and technology description in our results contrasts with studies about gender bias in technological work domains (Lemons & Parzinger, 2007, 2001). However, we did observe that older teammates consistently received lower evaluations, regardless of the technology description and aligning with the stereotypes related to technology against older workers (Finkelstein et al., 2015). These results were true even when the technological tool was described as a communication software. This suggests that ageism against older workers is pervasive, even when the technology is described as a communication tool, i.e., in line with a positive stereotype associated with older people (Fiske, 2017).

Study 2

The main goal of Study 2 is to investigate the same questions as Study 1. However, Study 2 focuses on participants' responses regarding other people's evaluations (i.e., second-order normative beliefs) by incentivizing their answers.

Method

Participants

We recruited 1178 US-participants for Study 2. Requirements for taking part in this study were similar to Study 1 (i.e., between 18 to 65 years old, having some experience in recruitment, and being a US-resident). Recruitment was again conducted via Prolific. Participants received a fixed compensation of £1.75 for their participation and were informed in the consent form that they would have the opportunity to earn a £0.7 bonus.

Three participants were excluded because they declared their data should not be included in our study, six participants were left out of the sample because they took less than 120 seconds to complete the study, and six failed the attention check. In addition, 160 participants were excluded because they failed the comprehension check about the description of the tool mentioned in the vignette and 46 wrongly answered the comprehension check about the age and gender of the teammate. The attention and comprehension checks were identical to Study 1.

The final sample comprised 957 participants, of whom 40.16% were women, with an age range of 20 to 65 years (M = 41.88, SD = 10.88). The majority of participants were White/Caucasian (71.47%), followed by Black/African American (9.93%), Asian (8.46%), and Hispanic/Latino (6.48%). The remaining participants identified as *Other.* Most participants were employed, with 72.31% working full-time, 9.75% self-employed, 6.58% holding one part-time job, and 2.19% holding multiple part-time jobs. Additionally, 1.88% were students, 2.72% were retired, and 6.58% were unemployed. Regarding educational background, 71.15% had attained a

university degree (minimum bachelor's). Participants reported high levels of engagement in the study (M = 6.74, SD = 0.70).

Design, Procedure, and Measures

All items (i.e., evaluation, perceived warmth, and perceived competence) and control variables were identical to those used in Study 1. However, measures of evaluation (i.e., qualification, fit for the job, valuable element, and likelihood to hire for the team) were incentivized using the Krupka-Weber method (Krupka & Weber, 2013). This strategy, based on the coordination game (Cooper, 1999), elicit second-order beliefs and provides extrinsic motivation for participants to focus on what others may answer and thus, decreases response bias (Nosenzo & Görges, 2020). In our study, participants were informed that another similar sample had taken the same experiment. Moreover, they could earn a bonus, in addition to the fixed pay, by answering the items with the mode of the answers provided by the previous sample. The text read as follows: “For the following questions, we would like you to think again about the scenario you just read. We presented the following questions to another group of participants. You can earn a total bonus of £0.7 if your response matches their most commonly selected answer.”. By asking participants to find the mode answer given by the previous sample, we decrease the incentives to answer in the mid-point of the scale compared to the case where participants would have to find the mean answer. Among our entire sample for this study, 31.41% of the participants received a bonus.

Results

Analytical Strategy

Descriptive statistics for the main variables of interest are shown in Table 6. The correlation matrix for these variables is displayed in Table 7. To investigate our hypotheses, we used the same analytical strategy as for Study 1.

Hypotheses Testing

Results of the regression analyses to investigate the interaction between the description of the tool and teammate gender (H1a) and age (H1b) with incentives are displayed in Table 8 (model 2, 3, and 4). First, regarding the impact of teammate age, models 1, 2, and 3 show that older teammates received significantly lower evaluations compared to younger teammates. The description of a high-tech tool positively influences evaluation scores, but this main effect is moderated by teammates age and gender. Specifically, results of model 2 show significant negative interactions between the description of the tool and teammate age and gender respectively. To further qualify these interactions, we conducted pairwise comparisons and applied a Bonferroni correction for multiple comparisons. Women in the high-tech condition received marginally poorer evaluations compared to women in the communication condition ($\Delta b = -0.27$; $SE = 0.10$; $t(927) = -2.57$; $p = .062$; *95% CI* [-0.54, 0.01]) confirming hypothesis H1a. Similarly, older teammates were evaluated marginally worse in the high-tech condition compared to the communication condition ($\Delta b = -0.27$; $SE = 0.11$; $t = -2.54$; $p = .068$; *95% CI* [-0.56, 0.01]) in-line with hypothesis H1b. In addition, older teammates received significantly lower evaluations compared to younger teammates in the high-tech condition ($\Delta b = -0.63$; $SE = 0.10$; $t(927) = -6.13$; $p < .001$; *95% CI* [-0.90, -0.36]). Among the control variables, participant age, identification with age, and experience with high-tech tools were positively associated with the evaluations.

Exploratory Analysis

Results of regressions analysis to explore the impact of condition, teammate age and gender on perceived warmth are displayed in Table 9. Across models, women teammates were perceived as warmer compared to men. Model 2 and 3 reveal a significant negative interaction between the description of the tool and teammate gender. Pairwise comparison using Bonferroni correction for multiple comparisons show that in the communication condition, women were perceived as warmer compared to men (Δb = 0.31; *SE* =0.09; $t(927)$ = 3.40; $p < .01$; *95% CI* [0.07, 0.54]; see Figure 5). Regarding age, results from model 2 show a significant positive interaction between description of the tool and age, however, this effect disappears in model 3 and 4 (See Figure 4). Among control variables, identification with age and gender were positively related to perceptions of warmth.

Results of regression analyses exploring the impacts of description of the tool, teammate age, and gender on perceived competence are displayed in Table 10. Across all models, female potential teammates were consistently perceived as more competent compared to males. In models 2 and 3, the interaction between teammate gender and description of the tool was marginally significant. Pairwise comparisons using Bonferroni correction for multiple comparisons (see Figure 7) indicated that when the tool was described as a communication software, female teammates were perceived as more competent than male teammates (Δb = 0.19; *SE* = 0.08; $t(927)$ = 2.39; p = 0.102; *95% CI* [-0.02, 0.39]). However, this effect was only marginally significant, indicating a weak effect. Regarding age, results from model 1 and 2, reveal that older teammates were perceived as less competent compared to younger teammates. Regarding control variables, participant's identification with age and gender, greater age, and being a woman were related to higher ratings of perceived competence.

Finally, in all the analyses above, none of the three-way interactions between technology description, teammate age and teammate gender were significant (model 4 in Tables 8, 9, and 10). Similarly, the interactions between teammate age and teammate gender were also non-significant. Therefore, there was no evidence to support conclusions about the intersectionality of age and gender. [4]

Discussion

Study 2 used the same experimental design as Study 1; however, evaluations were incentivized using the Krupka-Weber method. Results from our analysis show that older teammates received lower evaluations compared to younger teammates, as in Study 1. Unlike Study 1, the interactions between the description of the tool and teammate age and gender respectively were significant, showing that both older teammates and women were better evaluated in the communication condition compared to the high-tech condition. These results confirm our hypotheses and align with context-dependence of stereotypes (Casper et al., 2010) and the lack of fit model (Heilman, 1983; Heilman, 1995). When the same technology was described as a communication software, individuals holding identities associated with high warmth and lower competence stereotypes (Fiske et al., 2002) received better evaluations compared to when technology was described as a high-tech tool.

These results were also reflected in perceptions of warmth and competence, though the results were less clear, and limited to gender. Women were perceived as warmer than men in the communication software condition but not in the high-tech software description. These results show that when the same technology emphasizes communication aspects rather than technical aspects, women are perceived as warmer compared to men. However, there was no such effect for older individuals. Also, regarding competence, women were perceived as more competent

than men across models. While these results were somewhat unexpected, they align with literature showing that stereotypes about women have changed, and the difference in perceptions of competence between men and women has decreased (Eagly et al., 2020).

Because overall, these results differ from those found in Study 1, and therefore would lead to different conclusions, we decided to compare the two studies more systematically before drawing more general conclusions (see below).

However, results of Study 2 converge with those of Study 1 regarding the role of intersectionality. As in Study 1, across our models, neither interactions between teammate age and gender nor the three-way interactions with technology description were significant. Thus, also when using measures of second-order beliefs in Study 2, there was no evidence for intersectional effects in the way potential teammates were evaluated. This is notable, given that second-order beliefs have been shown to be stronger predictors of behavior compared to first-order beliefs (Jachimowicz et al., 2018). Hence, across two experiments, we found no indication for intersectional discrimination between age and gender. One potential explanation for these results is that intersectionality may not be explained solely by additive (i.e., double jeopardy) or diminishing models (i.e., intersectional invisibility). Previous research has argued that intersections between identities from distinct groups, each associated with their own stereotypes and prescriptions, are not necessarily in line with traits associated with single identities (Cole, 2009; Hall et al., 2019). In our findings, although the evaluations of older people and women were influenced by the description of the tool, there was no significant interaction between these variables. One potential explanation is that, while both groups face technology-related stereotypes, their intersectional identities (e.g., older women) do not encounter the same stereotypes as older people and women individually.

As mentioned above, despite similar findings regarding (the absence of) intersectionality in Studies 1 and 2, several findings differed remarkably. Because the design and measures were identical, with the only difference being the incentive evaluation measure used in Study 2, we decided to compare the two studies, on several dimensions.

Comparison between Studies 1 and 2

Method

To compare the two studies, we first focused on measures of performance in participating in the studies (i.e., duration, performance on attention checks, comprehension checks about the teammate profile, and technology) and on self-reported engagement while completing the study. Then, in a second step, we compared results from both regression models regarding the evaluation measure using Seemingly Unrelated Estimation (SUEST).

Duration was extracted from the survey platform (i.e., Qualtrics) and measured in seconds. For both studies, duration was counted from the moment the participant started the study (by reading the consent form) to the submission of their responses. The attention check, the two comprehension checks, and the engagement measure are described in the Methods section above. For comparing the two studies, we dummy-coded performance for attention and comprehension checks (i.e., 1 if the participants answered correctly and 0 if not).

Results

Results of the regression analyses comparing performance during the studies are displayed in Table 11. The absence or the presence of incentives (Study 1 or Study 2) had no impact on duration, performance to attention and comprehension checks and self-reported engagement levels during the study.

Results of the SUEST regression show no significant difference in coefficient for teammates age (χ^2 = 0.07; p = .790) and gender (χ^2 = 1.32; p = .250) between the two studies. The results do not support our hypothesis H2. However, they reveal a significant difference between the models in the effect of the "High-tech" description of the tool on evaluations (χ^2 = 3.61; p = .058). In the presence of incentives (Study 2), the High-tech description of the tool increases evaluations, while it has no effect in the absence of incentives (Study 1).

General Discussion

Across two studies, using the same design and variables, however, partly incentivized in Study 2, we found only limited support for our hypotheses and no support for intersectional effects. More specifically, in Study 2, both older individuals and women were evaluated more positively when the tool was described as a communication tool compared to a high-tech tool. Thus, as expected, teammates holding identities associated with high warmth were better evaluated when the same technology was described by highlighting its communication rather than its technical aspects, i.e., when stereotypes associated with their identity aligned with the description of the technology. Exploratory analysis regarding perceived warmth provides some additional support for this contention. We found that women were perceived as warmer than men when the technology was described as a communication tool. However, this pattern was not found for older individuals, suggesting that different processes may be involved when evaluating older compared to female teammates.

These results only emerged in Study 2. Thus, the impact of the description of technology used in the workplace and teammate age and gender interacted only when participants were incentivized to select others' answers. The SUEST comparison showed that indeed the impact of the description of the technology was higher in Study 2 than in Study 1. However, in terms of

indicators of performance (i.e., comprehension checks and attention checks), time spent on the study, and engagement, the two samples were comparable. Thus, including incentives had no impact on indicators of answer quality. One potential explanation for the differences in results between the two studies is that in Study 2, participants were incentivized to focus more on the context to try to gather information and match the previous sample's answers as closely as possible. This would explain why the description of the tool (i.e., high-tech software or communication software) had a significant different impact between the models with or without incentives.

Differences between the results of the two studies could also be explained by the differences in perspective taken by the participants. In Study 1, participants reported their personal opinions. In comparison, in Study 2, when incentivized to select the answer from a previous sample, they focus on second order normative beliefs (i.e., beliefs about other people's beliefs). These can be interpreted as two different perspectives. However, both perspectives are relevant because in the evaluation and selection context it seems likely that both are used by recruiters and managers. Interindividual differences in the adherence to other-stereotypes i.e., "beliefs about the characteristics, attributes, and behaviors of members of certain groups" (Hilton & Hippel, 1996, p.240) are at the center of the process of discrimination in classical models because they influence a wide range of behaviors towards members of stigmatized groups (Fiske, 1998). Nevertheless, they are individual first-order beliefs and in the context of recruiting or evaluating potential teammates, second-order beliefs play a crucial role. Within organizations, team selection decisions are not made in isolation; they are influenced by and have significant implications for multiple stakeholders. Decision-makers must consider not only their own assessments of a potential teammate's abilities (first-order beliefs) but also how others within the

organization might perceive the selection (second-order beliefs). This setting is close to coordination games (Cooper, 1999) where decision makers have an incentive to coordinate their evaluations which focused on second-order normative beliefs. In addition, second order-normative beliefs have been shown to be better predictors for behaviors compared to first-order personal beliefs (Jachimowicz et al., 2018), suggesting that they may be highly relevant also for explaining discrimination in an evaluation and selection context.

Despite their differences, results from our two experimental studies consistently found bias against older teammates, demonstrating that age discrimination is pervasive. These negative perceptions and expectations could be mitigated by presenting technology differently; as for instance, older potential teammates received better evaluations when the technological tool was presented as communication software.

Finally, our results did not provide evidence for intersectional effects of age and gender. This underscores the complexity of intersectionality and supports the argument that intersections of identities can create unique experiences that differ from those associated with individual identities. The complexity of intersectionality involves multiple layers of identity and corresponding stereotypes, which can interact in ways that might not be fully captured by our experimental design or within the scope of our measured variables. Stereotypes related to age and gender may not always combine additively, and certain contexts or descriptions might activate one stereotype over another, masking potential interactions. For example, the way technology was framed in our study might have activated stereotypes about age more strongly than those about gender, or vice versa. Our findings might also be specific to the particular context of technological tools in the workplace, and intersectional effects might emerge more clearly in different settings or with different types of tasks and evaluations. These points

highlight the need for further research to better understand the nuanced ways in which intersecting identities influence perceptions and evaluations, providing deeper insights into the mechanisms of discrimination and helping to develop more effective strategies to combat it.

Implications for Practice

While these results rely on experimental data and should be replicated in the field, they show the importance of job-descriptions when it comes to discrimination during selection. More importantly, wording used in job-descriptions may modify evaluation for members of stigmatized groups only. Recruiters should then be careful when writing their task descriptions for recruitment because they could be double-edged.

On the bright side, these descriptions could be used to fight against hiring discrimination in organizations. Carefully designing job descriptions could be an interesting tool for diversity recruitment for two reasons. First, because they depend only on the person writing them and managers can take time to reflect when writing them, automatic activation of stereotypes could be potentially mitigated (Devine, 1989). Second, these types of intervention would be highly cost-efficient. Even if the effects measured would be small, when multiplied by the large number of members of stigmatized groups, the total effect could be substantial for a measure that would be virtually free.

Limitations and Directions for Future Research

The present research has some limitations that should be acknowledged. Our experimental design manipulated age by opposing younger teammates to older teammates. By doing so, we ignored middle-aged teammates (i.e., those between 30 to 50 years old). Further research could add to our findings by including this age group in the manipulation. This would be particularly relevant because ageism is often described as a U-shaped discrimination with

younger and older people facing more discrimination compared to middle-aged candidates (Becker & Fiske, 2022; Fasbender, 2020). Including middle-aged candidates could allow to compare members of stigmatized groups to their majority group counterparts.

We manipulated the description of the technological tool by describing it as a communication or a high-tech software. These two dimensions were linked to different evaluations for identities at the intersections between age and gender in qualitative findings (Comunello et al., 2017). Our design only allows for a comparison between these two dimensions but do not include any baseline. Further research could extend our finding by including a condition that would only mention a technological tool and serve as a baseline.

Additionally, this study focused solely on age and gender, without exploring other intersecting identities such as ethnicity or disability. Future research should consider these additional dimensions to provide a more comprehensive understanding of intersectional discrimination. This is particularly important as our current study was unable to isolate the intersectional effects of age and gender. By comparing with other identities, future studies may reveal how different intersections respond differently to stereotypes. Furthermore, apart from demographic groups (e.g., age and gender), future research could explore intersections with other individual characteristics related to specific workplace behaviors. For example, extraversion levels have been associated with leadership emergence and leadership effectiveness (Judge et al., 2002; Zaccaro et al., 2018). Given the gender gap in leadership (Hill et al., 2016), examining the intersection between extraversion and gender and how it influences leadership emergence could be insightful. As the groups considered (i.e., extraverted and introverted individuals) are closely linked to workplace behaviors, the results from examining these intersections may produce stronger effects than those found for other social groups.

Finally, Study 2 used the Krupka-Weber method to elicit second-order beliefs, which are better predictors of real-life behaviors compared to first-order beliefs (Jachimowicz et al., 2018). However, our results are still relying on hypothetical situations and should be replicated in field studies to improve generalizability. Additionally, the use of incentives could introduce demand effects, i.e., “changes in behavior by experimental subjects due to cues about what constitutes appropriate behavior” (Zizzo, 2010, p. 75). This could increase bias in participants' responses if the incentives are not aligned with the research context (Eckerd et al., 2021). To address this concern, further research should investigate the mechanisms by which these incentives influence participants' responses and how their predictions align with real-life decisions in field settings.

Conclusion

This research suggests that subtle differences in the description of a technological tool used in the workplace can significantly influence the evaluations received by candidates at the intersection of age and gender. Our results were observed only when evaluations focused on participants' beliefs about other people’s behaviors rather than their personal opinions. Specifically, members of stigmatized groups received more favorable evaluations when the described technology aligned with stereotypical expectations associated with their identities. These findings suggest a potentially cost-efficient tool for mitigating discrimination in selection. Future research should build on these results by conducting field experiments to further investigate and validate these solutions.

Finally, our challenge to isolate interactions between age and gender underscores the complexity of intersectionality. This complexity highlights the need for further investment in understanding intersectionality, as it can provide deeper insights into the mechanisms of discrimination faced by members of several stigmatized groups. A better grasp of

intersectionality will not only improve our comprehension of the biases these groups encounter but also enhance our ability to develop effective strategies to mitigate such discrimination.

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Endnotes

[1] To ensure that our participants read and understood our vignettes. We included two comprehension checks after the evaluation measures (i.e., “In the scenario you just read, what type of software is used for the described position?” And “In the scenario you have just read, which potential teammate was described?”).

[2] Engagement for the study was measured with one item “How engaged were you when answering the questions?” on a 7-point scale (1= *Not at all* to 7 = *A lot*).

[3] We recruited 110 US-participants (43% women; *Mage* = 39.88 and *SD* = 11.19) on Prolific using the same requirements as the main experiment. Participant were randomly assigned to one of the two condition and had to evaluation the type of skills needed for the person hired in the scenario (“According to what you just read, to what extent do you agree with the following sentences? For the job described in the scenario, the person hired will need...”) on a 7-point scale (1 = *Fully disagree* to 7 = *Fully agree*). Participants had to evaluate 3 types of skills (i.e., good skills with communication tools; good skills in handling bank accounts; good skills with high-tech tools.). Finally, to ensure that both conditions were equally good, participants evaluate the scenarios on clarity, professionalism and realism on a 7-point scale (1 = *Not at all* to 7 = *Very much*). Results from our regression analysis showed that scenario describing the technological tool as a high-tech or a communication software were equals in terms of clarity, professionalism, realism or skills in handling bank account. However, when the technological tool was described as a communication software, participants reported need for higher levels of skills with communication ($b = 1.33$; $p < .001$; *95% CI* [0.84, 1.89]) compared to when to the high-tech tool. Similarly, when the tool was described as a high-tech software,

participants declared that worker would need higher levels of skills with high-tech tools (b = -1.78; $p < .001$; *95% CI* [-2.20, -1.38]). Results of this pretest are displayed in Figure 1.

[4] To gain an overview of potential intersectional tendencies in the results, pairwise comparisons with Bonferroni correction for multiple comparisons were computed (see Appendix). However, given the non-significance of the interaction between the type of technological tool, teammate age, and gender, these results should be interpreted with caution and considered only exploratory.

Table 1

Descriptives Statistics for Main Variables in Study 1

Variables	*N*	*M*	*SD*	Min	Max
Evaluation	954	5.44	1.15	1	7
Perceived warmth	954	5.21	0.98	1	7
Perceived competence	954	5.56	0.89	1.83	7
Teammate age	954	0.49	0.50	0	1
Teammate gender	954	0.50	0.50	0	1
Tool description	954	0.53	0.50	0	1
Id. with age	954	4.59	1.55	1	7
Id. with gender	954	5.30	1.53	1	7
Exp. With communication	954	4.93	1.68	1	7
Exp. With high-tech	954	4.85	1.69	1	7
Participant age	954	41.97	11.48	19	65
Participant gender	954	0.43	0.53	0	2

Table 2

Correlation Matrix for the Main Variables in Study 1

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Evaluation	-											
(2) Perceived warmth	.34***	-										
(3) Perceived competence	.69***	.63***	-									
(4) Teammate age	-.12***	.06*	-.03	-								
(5) Teammate gender	.02	.07**	.01	.01	-							
(6) Tool description	-.08**	-.01	-.01	-.02	.02	-						
(7) Id. with age	.13***	.21***	.18***	.02	.00	-.03	-					
(8) Id. with gender	.11***	.19***	.19***	-.02	.03	.06*	.55***	-				
(9) Exp. with communication	.02	.05	.00	.02	.03	.01	.06*	.05	-			
(10) Exp with high-tech	.08**	.04	.03	.04	.01	.04	.02	.02	.75***	-		
(11) Participant age	.13***	-.08**	.08**	.02	.04	-.04	-.02	.05	-.05	.01	-	
(12) Participant gender	.07**	.05	.14***	-.01	.02	.06*	.03	.25***	-.07**	-.14***	.03	-

Note. ***$p < .01$, **$p < .05$, *$p < .1$

Table 3

Regression Analysis for Evaluation Received by Potential Teammates in Study 1

Variable	(1)	(2)	(3)	(4)
Tool description (High-tech)	-0.18**	0.01	-0.07	-0.07
	(0.07)	(0.12)	(0.13)	(0.14)
Teammate age (Older)	-0.29***	-0.17	-0.28**	-0.32**
	(0.07)	(0.10)	(0.14)	(0.14)
Teammate gender (Women)	0.04	0.12	-0.00	-0.03
	(0.07)	(0.10)	(0.13)	(0.13)
Tool description#Teammate age		-0.23	-0.09	-0.11
		(0.15)	(0.21)	(0.21)
Tool description#Teammate gender		-0.14	0.01	-0.05
		(0.15)	(0.19)	(0.20)
Teammate age#Teammate gender			0.23	0.23
			(0.20)	(0.20)
Tool description#Age#Gender			-0.29	-0.17
			(0.29)	(0.29)
Participant age				0.01***
				(0.00)
Participant gender (Women)				0.14
				(0.08)
Ethnicity (Non-white)				-0.11
				(0.09)
Id. with age				0.10**
				(0.03)
Id. with gender				0.02
				(0.03)
Exp. with communication				-0.07
				(0.03)
Exp. with high-tech				0.11***
				(0.03)
Intercept	5.65***	5.56***	5.61***	4.34***
	(0.07)	(0.08)	(0.09)	(0.23)
N	954	954	954	939
F	6.98	4.53	3.44	5.44
R^2	0.02	0.03	0.03	0.08

Note. Robust standard errors in parentheses; Teammate gender: 0 = men; 1 = women; Tools description: 0 = Communication; 1 = High-tech; Teammate age: 0 = young; 1 = older; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 4
Regressions Models for Perceived Warmth in Study 1

Variable	(1)	(2)	(3)	(4)
Tool description (High-tech)	-0.01	0.15	0.14	0.09
	(0.06)	(0.11)	(0.12)	(0.13)
Teammate age (Older)	0.12*	0.21**	0.16	0.18
	(0.06)	(0.09)	(0.13)	(0.13)
Teammate gender (Women)	0.13**	0.20**	0.15	0.11
	(0.06)	(0.09)	(0.13)	(0.13)
Tool description#Teammate age		-0.17	-0.15	-0.20
		(0.13)	(0.18)	(0.18)
Tool description#Teammate gender		-0.15	-0.12	-0.07
		(0.13)	(0.18)	(0.17)
Teammate age#Teammate gender			0.10	0.10
			(0.18)	(0.18)
Tool description#Age#Gender			-0.04	-0.00
			(0.25)	(0.25)
Participant age				-0.01**
				(0.00)
Participant gender (Women)				0.00
				(0.07)
Ethnicity (Non-white)				0.06
				(0.07)
Id. with age				0.10***
				(0.03)
Id. with gender				0.07**
				(0.03)
Exp. with communication				0.01
				(0.03)
Exp. with high-tech				0.01
				(0.03)
Intercept	5.09***	5.01***	5.04***	4.40***
	(0.06)	(0.08)	(0.09)	(0.20)
N	954	954	954	939
F	2.69	2.27	1.68	4.73
R^2	0.01	0.01	0.01	0.08

Note. Robust standard errors in parentheses; Teammate gender: 0 = men; 1 = women; Tools description: 0 = Communication; 1 = High-tech; Teammate age: 0 = young; 1 = older; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 5
Regressions Models for Perceived Competence in Study 1

Variable	(1)	(2)	(3)	(4)
Tool description (High-tech)	-0.02	0.00	-0.03	-0.06
	(0.06)	(0.09)	(0.10)	(0.10)
Teammate age (Older)	-0.04	-0.03	-0.09	-0.11
	(0.06)	(0.08)	(0.11)	(0.11)
Teammate gender (Women)	0.02	0.03	-0.03	-0.08
	(0.06)	(0.08)	(0.12)	(0.11)
Tool description#Teammate age		-0.02	0.05	-0.01
		(0.12)	(0.16)	(0.16)
Tool description#Teammate gender		-0.03	0.04	0.06
		(0.12)	(0.16)	(0.15)
Teammate age#Teammate gender			0.12	0.12
			(0.17)	(0.16)
Tool description#Age#Gender			-0.14	-0.04
			(0.23)	(0.23)
Participant age				0.01**
				(0.00)
Participant gender (Women)				0.21***
				(0.06)
Ethnicity (Non-white)				-0.03
				(0.07)
Id. with age				0.08***
				(0.02)
Id. with gender				0.05**
				(0.02)
Exp. with communication				-0.04
				(0.03)
Exp. with high-tech				0.06**
				(0.03)
Intercept	5.58***	5.57***	5.57***	4.60***
	(0.05)	(0.06)	(0.06)	(0.18)
N	954	954	954	939
F	0.25	0.16	0.21	4.96
R^2	0.00	0.00	0.00	0.07

Note. Robust standard errors in parentheses; Teammate gender: 0 = men; 1 = women; Tools description: 0 = Communication; 1 = High-tech; Teammate age: 0 = young; 1 = older *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 6

Descriptives Statistics for the Main Variables in Study 2

Variables	*N*	*M*	*SD*	*Min*	*Max*
Evaluation	957	5.37	1.16	1	7
Perceived warmth	957	5.21	1.00	1	7
Perceived competence	957	5.49	0.91	1	7
Teammate age	957	0.50	0.50	0	1
Teammate gender	957	0.50	0.50	0	1
Tool description	957	0.53	0.50	0	1
Id. with age	957	4.58	1.54	1	7
Id. with gender	957	5.36	1.51	1	7
Exp. With communication	957	4.96	1.69	1	7
Exp. With high-tech	957	4.86	1.70	1	7
Participant age	957	41.88	10.88	20	65
Participant gender	957	0.46	0.53	0	2

Table 7

Correlation Matrix for the Main Variables in Study 2

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Evaluation	-											
(2) Perceived warmth	.32***	-										
(3) Perceived competence	.56***	.68***	-									
(4) Teammate age	-.20***	.02	-.10***	-								
(5) Teammate gender	.00	.11***	.07**	.02	-							
(6) Tool description	-.03	-.03	-.04	-.01	-.02	-						
(7) Id. with age	.11***	.23***	.19***	.03	.01	.02	-					
(8) Id. with gender	.12***	.22***	.22***	-.00	.05	-.00	.52***	-				
(9) Exp. with communication	.05	.08**	.07**	.00	.07**	.00	.07**	.06*	-			
(10) Exp with high-tech	.06*	.07**	.06**	-.00	.08**	.03	.03	.01	.78***	-		
(11) Participant age	.15***	.03	.14***	.00	-.02	-.03	.04	.08**	-.05	-.01	-	
(12) Participant gender	.06*	-.01	.09***	.01	.05*	.04	.01	.15***	-.14***	-.18***	.05*	-

Note. *** $p < .01$, ** $p < .05$, * $p < .1$

Table 8

Regression Models for Evaluation Received by Potential Teammates in Study 2

Variable	(1)	(2)	(3)	(4)
Tool description (High-tech)	-0.08	0.32***	0.30*	0.29*
	(0.07)	(0.12)	(0.13)	(0.13)
Teammate age (Older)	-0.46***	-0.26**	-0.26*	-0.23
	(0.07)	(0.11)	(0.15)	(0.15)
Teammate gender (Women)	0.01	0.23**	0.22	0.19
	(0.07)	(0.11)	(0.15)	(0.15)
Tool description#Teammate age		-0.37**	-0.33	-0.37*
		(0.15)	(0.20)	(0.21)
Tool description#Teammate gender		-0.42**	-0.37*	-0.35*
		(0.15)	(0.20)	(0.20)
Teammate age#Teammate gender			0.00	-0.02
			(0.20)	(0.20)
Tool description#Age#Gender			-0.08	-0.04
			(0.29)	(0.29)
Participant age				0.01***
				(0.00)
Participant gender (Women)				0.14
				(0.08)
Ethnicity (Non-white)				-0.11
				(0.09)
Id. with age				0.10**
				(0.03)
Id. with gender				0.02
				(0.03)
Exp. with communication				-0.07
				(0.03)
Exp. with high-tech				0.11***
				(0.03)
Intercept	5.65***	5.56***	5.61***	4.34***
	(0.07)	(0.08)	(0.09)	(0.23)
N	954	954	954	939
F	13.02	11.12	7.94	7.05
R^2	0.04	0.05	0.06	0.10

Note. Robust standard errors in parentheses; Teammate gender: 0 = men; 1 = women; Tools description: 0 = Communication; 1 = High-tech; Teammate age: 0 = young; 1 = older; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 9
Regression Models for Perceived Warmth in Study 2

Variable	(1)	(2)	(3)	(4)
Tool description (High-tech)	-0.05	-0.06	-0.03	-0.03
	(0.06)	(0.11)	(0.12)	(0.12)
Teammate age (Older)	0.03	-0.12	0.03	0.03
	(0.06)	(0.09)	(0.13)	(0.13)
Teammate gender (Women)	0.21***	0.34***	0.48***	0.42***
	(0.06)	(0.09)	(0.13)	(0.12)
Tool description#Teammate age		0.27**	0.20	0.17
		(0.13)	(0.19)	(0.18)
Tool description#Teammate gender		-0.24*	-0.31*	-0.28
		(0.13)	(0.18)	(0.17)
Teammate age#Teammate gender			-0.29	-0.24
			(0.19)	(0.18)
Tool description#Age#Gender			0.14	0.14
			(0.26)	(0.25)
Participant age				0.00
				(0.00)
Participant gender (Women)				-0.02
				(0.07)
Ethnicity (Non-white)				0.07
				(0.07)
Id. with age				0.09***
				(0.03)
Id. with gender				0.09***
				(0.03)
Exp. with communication				0.02
				(0.03)
Exp. with high-tech				0.01
				(0.03)
Intercept	5.11***	5.12***	5.05***	3.89***
	(0.06)	(0.08)	(0.09)	(0.22)
N	957	957	957	942
F	3.87	4.11	3.47	6.43
R^2	0.01	0.02	0.02	0.09

Note. Robust standard errors in parentheses; Teammate gender: 0 = men; 1 = women; Tools description: 0 = Communication; 1 = High-tech; Teammate age: 0 = young; 1 = older; *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 10
Regression Models for Perceived Competence in Study 2

Variable	(1)	(2)	(3)	(4)
Tool description (High-tech)	-0.07	0.03	0.05	0.03
	(0.06)	(0.09)	(0.10)	(0.10)
Teammate age (Older)	-0.19***	-0.20**	-0.14	-0.13
	(0.06)	(0.08)	(0.12)	(0.11)
Teammate gender (Women)	0.12**	0.24***	0.30***	0.25**
	(0.06)	(0.08)	(0.11)	(0.11)
Tool description#Teammate age		0.03	-0.01	-0.02
		(0.12)	(0.17)	(0.17)
Tool description#Teammate gender		-0.22*	-0.26*	-0.24
		(0.12)	(0.15)	(0.15)
Teammate age#Teammate gender			-0.13	-0.13
			(0.16)	(0.16)
Tool description#Age#Gender			0.08	0.12
			(0.23)	(0.23)
Participant age				0.01***
				(0.00)
Participant gender (Women)				0.16***
				(0.06)
Ethnicity (Non-white)				-0.02
				(0.07)
Id. with age				0.06***
				(0.02)
Id. with gender				0.08***
				(0.03)
Exp. with communication				0.02
				(0.03)
Exp. with high-tech				0.02
				(0.03)
Intercept	5.56***	5.51***	5.47***	4.11***
	(0.06)	(0.07)	(0.08)	(0.20)
N	957	957	957	942
F	4.56	3.78	2.82	6.24
R^2	0.02	0.02	0.02	0.10

Note. Robust standard errors in parentheses; Teammate gender: 0 = men; 1 = women; Tools description: 0 = Communication; 1 = High-tech; Teammate age: 0 = young; 1 = older; *** $p < .01$, ** $p < .05$, * $p < .1$

Table 11

Regression Models for Performance Variables across Studies

Variables	(1) Duration (seconds)	(2) Attention check	(3) Comp. check (profile)	(4) Comp. check (technology)	(5) Engagement
Incentives	15.06	-0.00	0.00	0.01	-0.03
	(17.85)	(0.00)	(0.01)	(0.01)	(0.03)
Constant	400.99***	1.00***	0.94***	0.86***	6.72***
	(9.45)	(0.00)	(0.01)	(0.01)	(0.02)
N	2,352	2,352	2,352	2,352	2,352
R^2	0.00	0.00	0.00	0.00	0.00

Note. Robust standard errors in parentheses; Incentives: 0 = no incentives (study 1), 1 = with incentives (study 2); *** $p<.01$, ** $p<.05$, * $p<.1$

Figure 1

Results Pretest of the Description of the Technological Tool

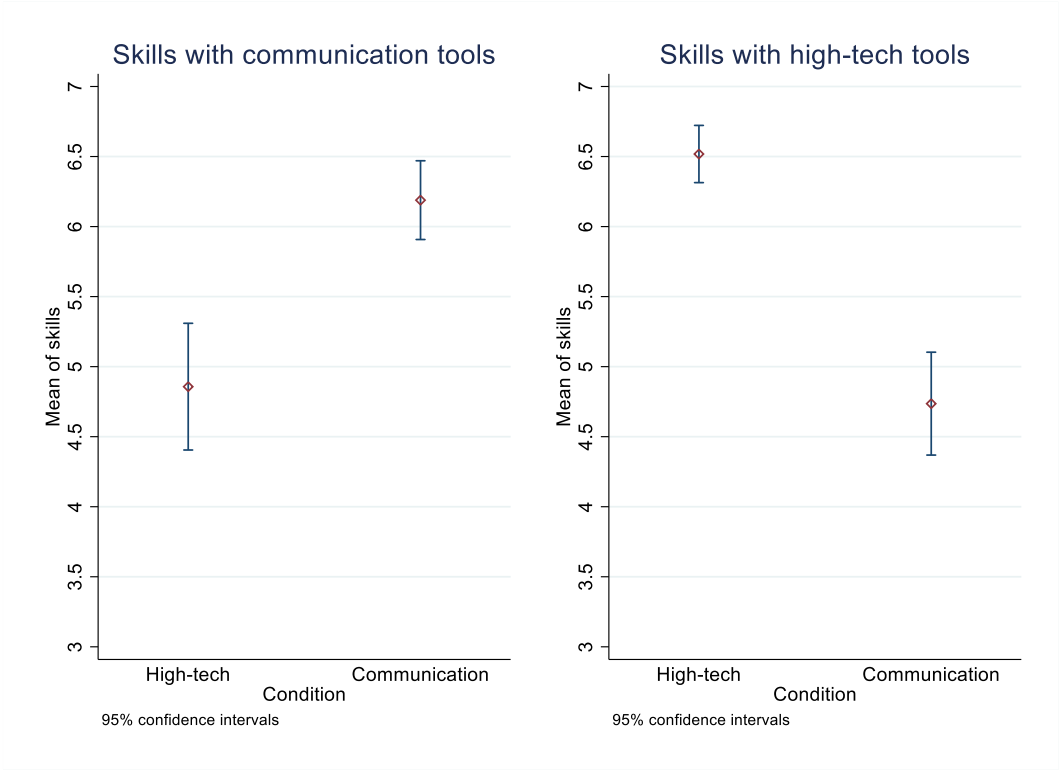
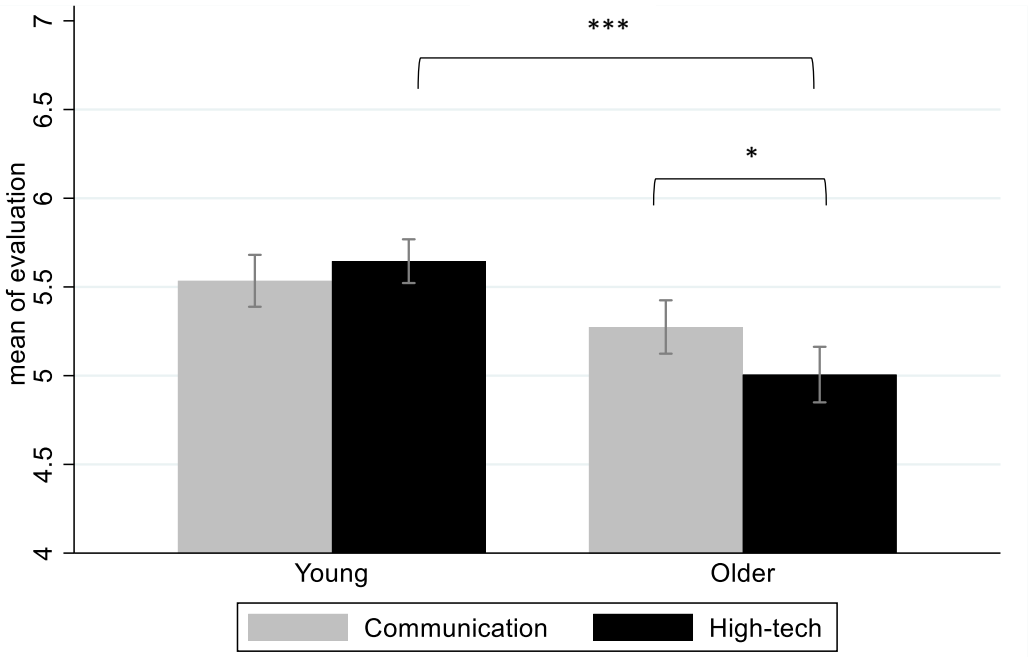


Figure 2

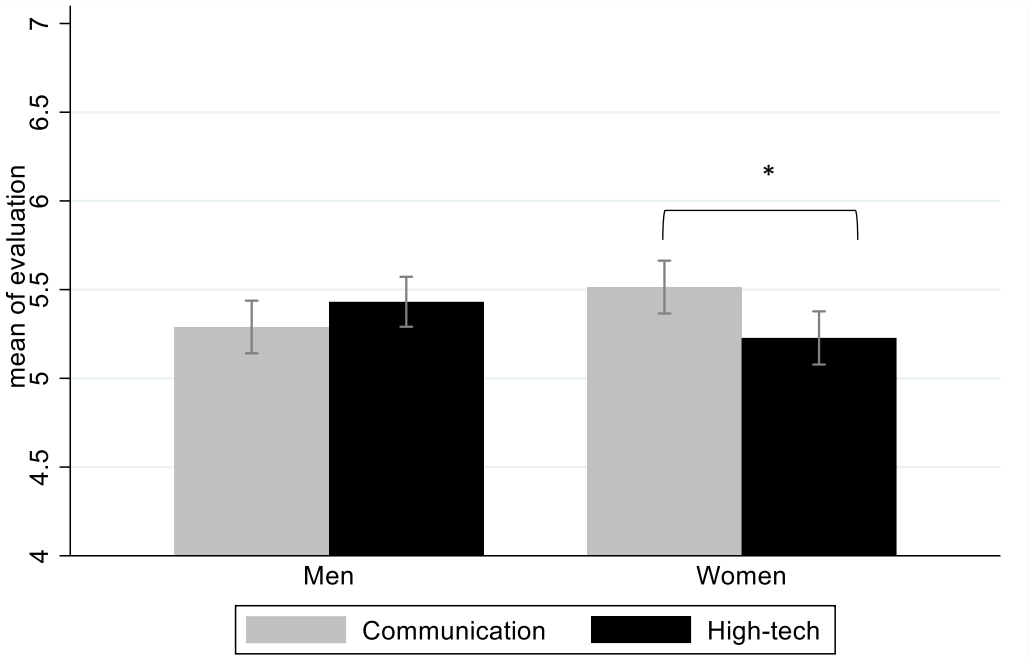
Evaluation Received for Tool Description and Teammate Age in Study 2 with 95% CI



Note. Bonferroni correction applied; control variables: participant age, gender, ethnicity, identification with age and gender and experience with communication and high-tech software*;* *** $p < .01$, ** $p < .05$, * $p < .1$.

Figure 3

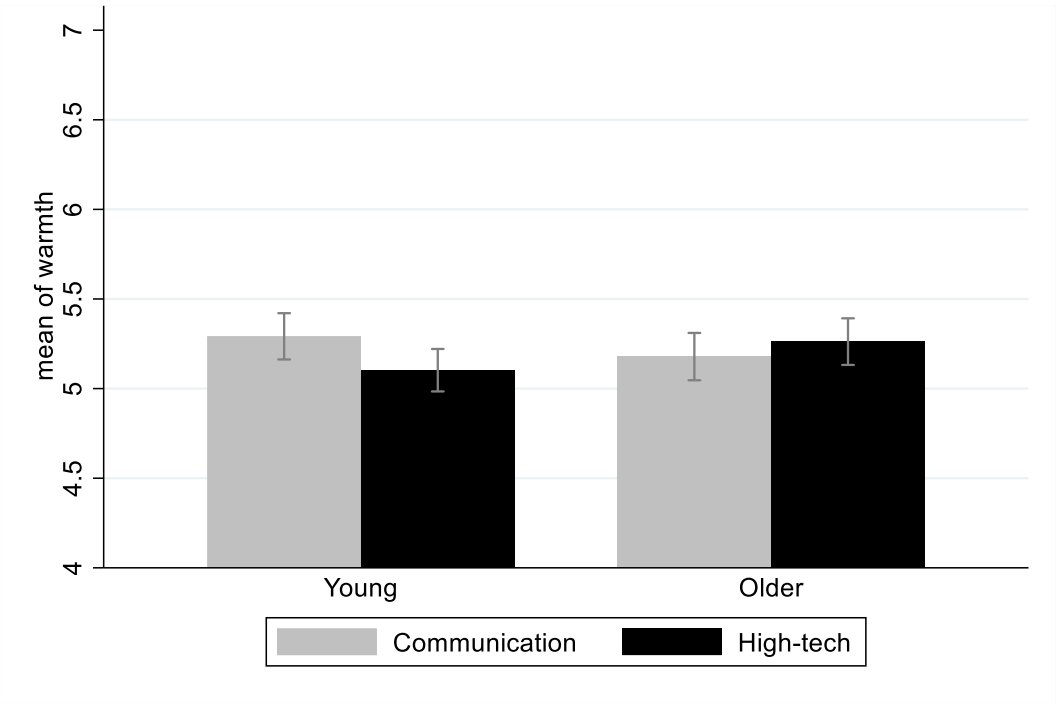
Evaluation Received for Tool Description and Teammate Gender in Study 2 with 95% CI



Note. Bonferroni correction applied; control variables: participant age, gender, ethnicity, identification with age and gender and experience with communication and high-tech software*;* *** $p < .01$, ** $p < .05$, * $p < .1$

Figure 4

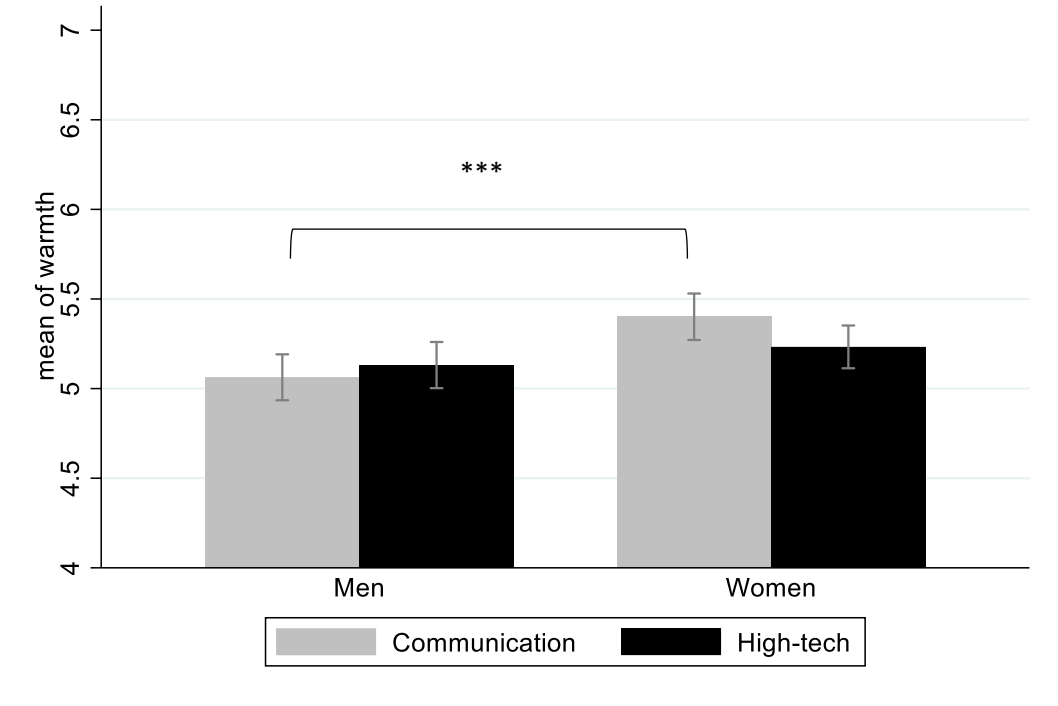
Interactions Between Tool Description and Candidate Age for Perceived Warmth in Study 2



Note. Bonferroni correction applied; *** $p < .01$, ** $p < .05$, * $p < .1$

Figure 5

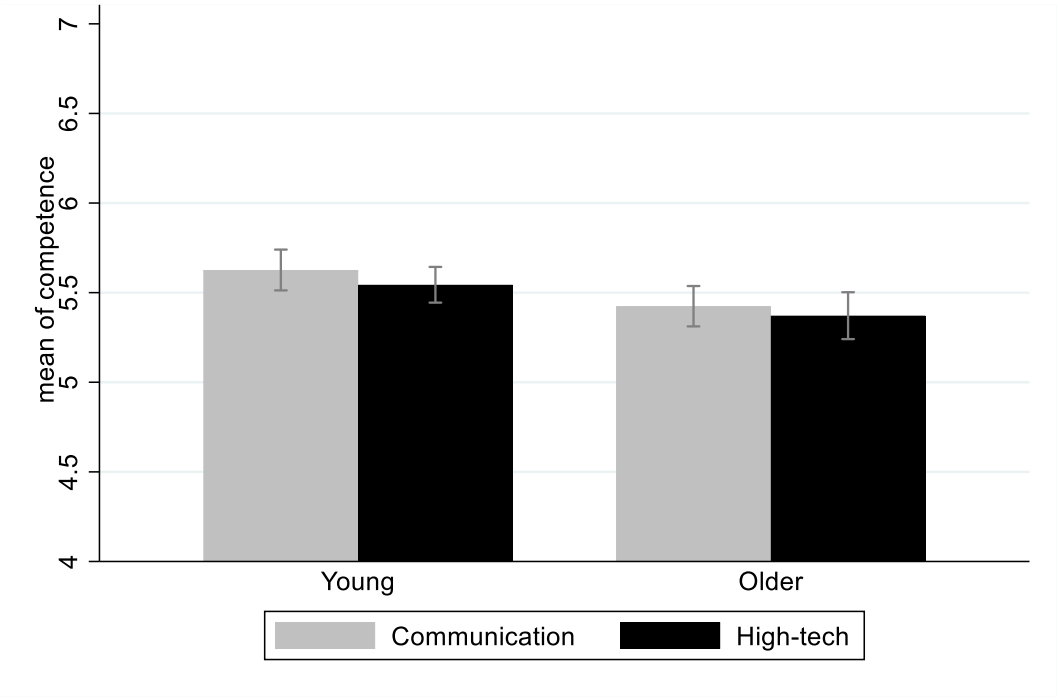
Interactions between Tool Description and Candidate Gender for Perceived Warmth in Study 2



Note. Bonferroni correction applied; *** $p < .01$, ** $p < .05$, * $p < .1$

Figure 6

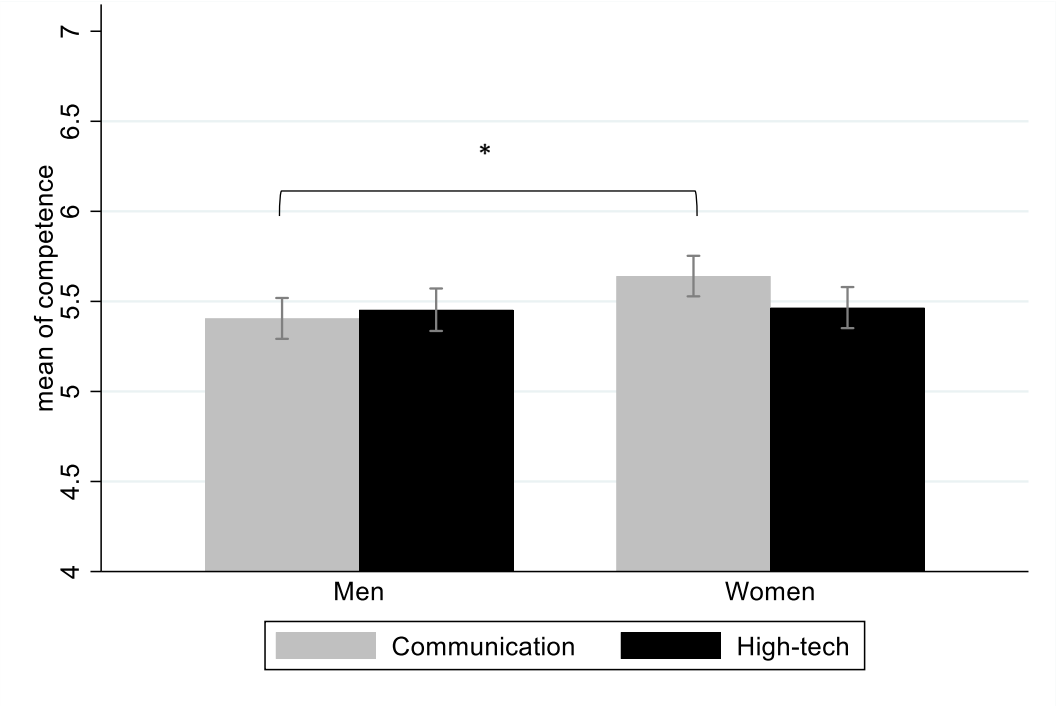
Interactions between Tool Description and Candidate Age for Perceived Competence in Study 2



Note. Bonferroni correction applied; *** $p < .01$, ** $p < .05$, * $p < .1$

Figure 7

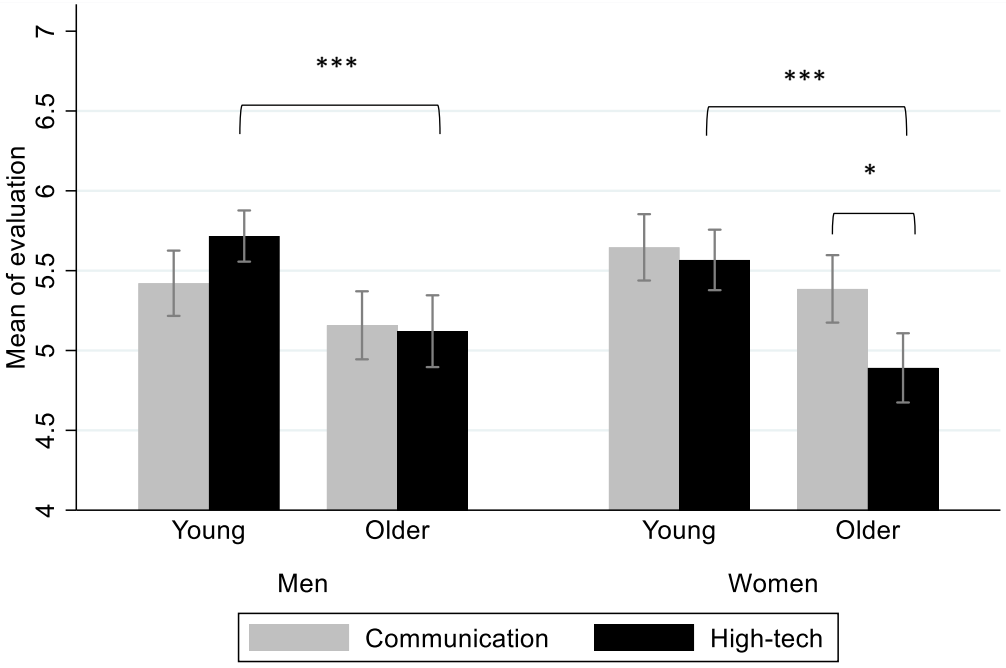
Interactions between Tool Description and Potential Teammate Gender for Perceived Competence in Study 2



Note. Bonferroni correction applied*;* *** $p < .01$, ** $p < .05$, * $p < .1$

Appendix

Interactions between Tool Description and Potential Teammate Gender and Age for Evaluation Received in Study 2



Note. Comparisons were computed exploratorily despite the interaction between the type of technological tool, teammate age, and gender being non-significant; Bonferroni correction applied; *** $p < .01$, ** $p < .05$, * $p < .1$