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ABSTRACT

Age Discrimination, Apprenticeship Training and Hiring: Evidence from a Scenario Experiment*

In many countries, age discrimination appears to be driven by negative perceptions that recruiters stereotypically hold about older candidates' technological skills, trainability, and flexibility. Based on human capital, signalling, and screening theories, we hypothesise that training programmes might both compensate for and mitigate these ageist stereotypes and thereby improve these candidates' hiring chances. We test this pathway out of age discrimination by designing a scenario experiment in which professional recruiters assess the recruitability and human capital perceptions of fictitious candidates varying in age and (willingsness for) participation in apprenticeship training at older ages. Our results demonstrate that candidates indicating their (willingness for) participation in such training to obtain relevant work experience are more likely to be recruited than candidates without such experience, regardless of their age. Although apprenticeship training can compensate for age discrimination, it cannot mitigate this as the premium it yields is not higher for older workers.

JEL Classification: J14, J24, J71

Keywords: hiring discrimination, older workers, labour market programmes, apprenticeships, signalling, scenario experiment

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1 Introduction

Over the past decades, numerous field experiments in Organisation for Economic Co-operation and Development (OECD) countries have identified age discrimination already in the earliest stages of the hiring process (Ahmed et al., 2012; Baert et al., 2016; Carlsson & Eriksson, 2019; Dalle et al., 2023a; Gringart & Helmes, 2001; Lahey, 2008). Lippens and colleagues' (2023) meta-analysis reveals that age discrimination even ranks among the most problematic types of discrimination, with its severity being comparable to ethnic discrimination. Specifically, older candidates encounter, on average, a 34% lower likelihood of receiving positive responses to their job applications than their younger counterparts. This discriminatory pattern seems particularly pronounced in Europe, where older candidates receive only half as many positive responses as middle-aged candidates (Lippens et al., 2023).

Several studies take a further step by explaining age discrimination through persistent stereotypes that employers hold towards older workers, which seem to be prevalent in different demand-side contexts, according to Dalle and colleagues (2023a). That is, various independent systematic literature reviews reveal that recruiters hold negative perceptions about older workers' mental abilities, social skills, communication skills, physical skills, technological skills, trainability, flexibility, personality, creativity, motivation, attractiveness, hearing condition, and reasonableness of salary expectations. These perceptions result in an overall negative perception of older workers' productivity (Burn et al., 2022; Dordoni & Argentero, 2015; Posthuma & Campion, 2009). However, Van Borm and colleagues (2021) examine these perceptions jointly and directly in an experimental study with genuine US recruiters. Their results indicate that five of these stereotypes are particularly responsible for the lower recruitability of older candidates. The most dominant among these five stereotypes are the perception of older workers' more limited technological skills (explaining 18% of the total age discrimination), trainability (12%) and flexibility (11%), while the perception that the more limited mental abilities (3%) and less reasonable wage expectations (3%) of these workers have less explanatory power.

In this study, we take the final step by searching for and testing an intervention that can tackle these driving ageist stereotypes and the resulting hiring discrimination. Relying on human capital (Becker, 1964; Ben-Porath, 1967), signalling (Arrow, 1973; Spence, 1973) and screening theories (Bills, 2003; Stiglitz, 1975), as outlined in Section 2, we argue that training programmes could offer a remedy by addressing the three dominant stereotypes about older workers' productivity: a perceived lack of technological skills, trainability and flexibility. Therefore, we hypothesise that having already participated in training as well as revealing a willingness to participate in training at an older age may be effective in compensating for and even mitigating these dominant ageist stereotypes and their impact on recruitability.

More concretely, we test this hypothesis by setting up a scenario experiment among genuine recruiters. These recruiters were tasked with assessing fictitious candidates who applied for a fictitious vacancy. The fictitious

candidates varied in terms of their age and willingness to participate, or their recent participation, in apprenticeship training to gain relevant work experience. In addition to scoring the candidates' interview and hiring chances, participating recruiters also evaluated 18 theoretically relevant stereotypes that may be triggered by these treatments.

Hence, besides contributing to the literature on age discrimination and age-related stereotypes, our study also contributes to the literature on training programmes in general and apprenticeship training in particular. First, our research centres on the effects of (willingness to participate in) training in the context of recruiting new personnel, while prior studies primarily examine the impact of training on current employees' labour market outcomes. Specifically, these studies assess how training influences current employees' productivity (Bartel, 1995; Konings & Vanormelingen, 2015; Lee et al., 2021), wages (Belloni & Villosio, 2015; Dearden et al., 2006; Zwick, 2015) and retention (Berg et al., 2017; Picchio & Van Ours, 2013; Zwick, 2015), as well as employers' willingness to provide training to their existing workforce (Fleischmann & Koster, 2018; Karpinska et al., 2015; Taylor & Walker, 1994). Second, we focus on apprenticeship training initiated at later ages (i.e., from age 32 to 60), whereas other studies concentrate on such training during secondary education or shortly after graduation (Kübler et al., 2018; Fossati et al., 2020; Piopiunik et al., 2020; Tobback et al., 2020, 2024). Third, we are the first to investigate the potential mitigating interaction effects of apprenticeship training and candidates' ages, as well as potential underlying signals that may explain the recruitment effects. Last, we provide causal evidence for these effects, in contrast with most prior observational studies that focus on associations.

2 Theoretical assumptions and hypotheses

In this section, we set out the theoretical underpinnings of our hypothesis that prior participation in apprenticeship training can enhance the recruitability of all candidates regardless of their age (i.e., a compensation effect for age discrimination) and explain why we particularly expect a premium effect for older candidates (i.e., a mitigation effect for age discrimination). Next, we discuss why merely signalling a willingness to participate in such training can have a positive effect on the recruitability of candidates in general and older candidates in particular.

As discussed in the introduction above, we rely on human capital, signalling and screening theories to hypothesise this positive effect of apprenticeship training on the recruitability of (older) candidates. On the one hand, human capital theory argues that training contributes to the productivity of workers, making them more valuable to recruiters (Becker, 1964; Ben-Porath, 1967). In particular, training may enhance workers' (technological) skills and knowledge (Gordo & Wolff, 2011; Picchio & Van Ours, 2013), their trainability with respect to subsequent training activities (Rosen, 1976), and their flexibility in terms of their ability to adapt to changes (Gordo & Wolff, 2011; Picchio & Van Ours, 2013). Each of these factors will, in turn, affect worker productivity either directly or

indirectly. On the other hand, in line with signalling and screening theories (Arrow, 1973; Bills, 2003; Spence, 1973; Stiglitz, 1975), participation in training might be useful even in the absence of a productivity-enhancing effect. Workers may undertake training to signal their unobserved and pre-existing characteristics to potential recruiters, while recruiters use expressions of recent participation (or willingness to participate) in training to screen candidates on these characteristics.[1] For example, Thurow (1975) suggests that employers use candidates' education and training information as a signal of their trainability. Taken together, participation in training programmes may thus result in improving perceptions and recruitability because it may signal one's pre-existing human capital and because it further improves that human capital.

Indeed, prior empirical studies examining workers of all ages find that training programmes are associated with higher worker productivity (Barrett & O'Connell, 2001; Bartel, 1995; Conti, 2005; Dearden et al., 2006; Konings & Vanormelingen, 2015) and employability (Card et al., 2018; Crépon et al., 2012; Groot & Maassen van den Brink, 2000; Kluve, 2010).

Overall, these arguments suggest that job candidates, regardless of their age, will have improved recruitment chances when they have recently participated in an apprenticeship training that is relevant for the vacant job compared to those without any relevant experience or apprenticeship training **(H1a)**. Moreover, we expect this training participation will improve recruiters' perceptions of candidates' technological skills **(H1b)**, trainability **(H1c)** and flexibility **(H1d)**. Hence, recent participation in an apprenticeship training might compensate for age discrimination and the signals underlying this discrimination.

Furthermore, aempirical research focusing on older workers in particular shows positive associations between training programmes and these workers' productivity (Lee et al., 2021) and employability (Bassanini, 2006; Gordo & Wolff, 2011; Zwick, 2015). However, some evidence suggests this is mainly the case for on-the-job training rather than formal classroom training, seminars or training circles (Gordo & Wolff, 2011; Picchio & Van Ours, 2013; Zwick, 2015). As suggested above, training programmes can address recruiter perceptions of a candidate's (technological) skills, trainability, and flexibility. This impact appears particularly relevant for older candidates, as they are predominantly discriminated against based on these three dominant stereotypes (Van Borm et al., 2021).

Given these considerations, having participated in apprenticeship training may thus not only compensate for the effect of age-related discrimination, but even mitigate the negative effects of age on a candidate's hiring chances, resulting in a higher premium for older candidates **(H2a)**. In a similar vein, we expect apprenticeship

[1] However, based on signaling and screening theories, a negative effect can also be expected for candidates who recently participated in an apprenticeship training. Specifically, the fact that the previous employer did not offer permanent employment to this candidate after the training might signal that the candidate is less suitable.

training to mitigate the impact of age-related negative perceptions of older candidates' technological skills **(H2b)**, trainability **(H2c),** and flexibility **(H2d)**.

Notwithstanding this positive association between training participation and productivity, it is argued that employers are hesitant to provide training to workers themselves (Bishop, 1998). Moreover, the willingness of employers to train workers decreases as the workers' age increases (Bassanini et al., 2005; Fleischmann & Koster, 2018), making older workers less likely to be offered training (Armstrong-Stassen & Templer, 2005; Cully et al., 2008; Posthuma & Campion, 2009; Taylor & Walker, 1994).

According to human capital theory, this hesitation results from the trade-off employers make between the costs and benefits of training investments (Elias & Davies, 2004; Franz & Zimmermann, 2002). First, the increase in job turnover might make employers more reluctant to hire inexperienced workers of all ages and provide them with skills training (Bishop, 1998). Second, in line with Ben-Porath's (1967) influential model of human capital, employers may assume that the period over which they might expect to reap a return on their training investment is shorter for older than middle-aged workers given that the former is closer to retirement (Bassanini et al., 2005; Canduela et al., 2012; Cully et al., 2008; Posthuma & Campion, 2009).[2] Third, employers may also expect a lower return on their training investment for older workers if they assume that these workers are less trainable and flexible to adapt to changes than their middle-aged counterparts (Canduela et al., 2012; Cully et al., 2008; Posthuma & Campion, 2009).

While this reluctance to provide training implies that employers prefer job candidates who have previously participated in training (Bishop, 1998), it may nonetheless be useful for candidates to express their willingness to participate in the absence of earlier participation and relevant work experience. In particular, through this expression, candidates demonstrate their confidence in being screened on their pre-existing abilities or on their ability to acquire skills and attitudes deemed important while pursuing the training. In addition, expressing a willingness to participate in training may also indicate one's intrinsic motivation for the job, an aspect that has already been shown to be important for the candidate's chances and the recruiters' perceptions of their employability and trainability in the context of the youth apprenticeship labour market (Tobback et al., 2020, 2024). Moreover, new employers might provide apprenticeship training to screen candidates on these characteristics while observing them directly on the job (Autor, 2001).

Based on these arguments, we hypothesise that also expressing a willingness to participate in training will improve candidates' recruitment chances **(H3a)** as well as the recruiters' perception of their technological skills

[2] As shown based on the scenario experiment by Tobback and colleagues (2020) for younger workers, employer do, indeed, account for the expected duration of the employment relationship when deciding to offer an apprenticeship.

(H3b), trainability **(H3c)** and flexibility **(H3d)**, and thus, also compensate for (the signals underlying) age discrimination.

Once again, these effects may be further moderated by the candidate's age. According to Fleischman and Koster's (2018) vignette experiment, employers expect a training investment to be more likely to pay off in this case because it signals the intention to remain active for a longer period. They discovered that employers' willingness to offer training consistently declines with age when workers do not mention being interested in training, while this willingness remains stable up until age 55 and only decreases afterwards when workers do express such interest. Moreover, up until the age of 60, employers were found to be more willing to provide training to workers who do relative to those who do not mention such an interest. This corresponds to the vignette study of Karpinska and colleagues (2015), which argues that employers perceive training programmes as a mere tool to increase the productivity of older workers who perform well and are highly motivated rather than to increase the productivity of older workers who need to update their human capital.

Therefore, we expect that expressing a willingness to participate in training also reduces the negative effects of age on older candidates' recruitment chances **(H4a)** as well as on the recruiters' perception of older workers' technological skills **(H4b)**, trainability **(H4c)** and flexibility **(H4d)**, and thus, also mitigates (the signals underlying) age discrimination.

3 Experiment

We test our hypotheses by setting up a scenario experiment, a method frequently employed to explore the reasoning behind recruitment decisions (Dalle et al., 2024; Kübler et al., 2018; Sterkens et al., 2022; Tobback et al., 2020, 2024; Van Borm et al., 2021). Unlike traditional surveys, scenario experiments facilitate causal interpretation, diminish social desirability, and enhance ecological validity (Alexander & Becker, 1978; Auspurg & Hinz, 2014; Wallander, 2009). These effects are induced by the multidimensional nature of the experiment, compelling recruiters to make trade-offs among a predetermined set of experimentally manipulated dimensions by which real-life recruitment decisions are mimicked, and the primary research objective remains concealed. Specifically, in scenario experiments related to hiring, recruiters assess fictitious candidate profiles (i.e., scenarios) which are represented by specific characteristics (i.e., dimensions such as age) varying across predetermined categories (i.e., levels such as 48 years) for non-existing vacancies (Auspurg & Hinz, 2014; Rossi & Nock, 1982).

3.1 Fictitious candidate profiles

As summarised in Table 1, the candidate profiles in our experiment cover six dimensions. Three of them are (in)directly related to the research hypotheses mentioned in the previous subsection: the candidates' age, their

relevant work experience in the same profession and sector (as mentioned in the vacancy), and their related work experience outside the relevant profession or sector. Indeed, we reveal the apprenticeship training through the candidates' work experience as such trainings are intended to boost relevant work experience. Moreover, the field experiment by Baert and colleagues (2016) suggests that age discrimination depends on older candidates' work experience as the authors only find robust evidence for discrimination against older candidates employed in out-of-field jobs during their post-educational years. In addition, the integration of candidates' work experience enables us to isolate a pure age effect, preventing potential bias that could arise if older candidates were favoured over middle-aged candidates solely as a result of the presumption that they have more extensive work experience (Carlsson & Eriksson, 2019).

First, regarding the candidates' age, we include eight levels with four-year gaps: 32, 36, 40, 44, 48, 52, 56 and 60 years. The upper bound is choosen to ensure our candidates are not too close to the statutory retirement age of 65 years at the time of the experiment, while the lower bound is selected to ensure candidates can compete in terms of work experience (Neumark et al., 2019; Van Borm et al., 2021).

Second, concerning the relevant work experience in the same profession and sector, we incorporate four levels: (i) none, (ii) none but willing to participate in an apprenticeship training for one year, (iii) last employment was one year in a standard (non-apprenticeship) contract, and (iv) last employment was one year in an apprenticeship training.[3] For the latter level, we explicitly refer to the candidates' last employment to indicate that this pertains to the recent past – and, thus, when older – instead of similar training during their school career or immediately after graduation. We increase ecological validity by restricting the duration of this relevant work experience to one year, which is similar to most genuine apprenticeships in Belgium. Moreover, by also implementing a level of candidate willingness to participate in apprenticeship training, we are able to examine recruitment decisions before (**H3a** and **H4a**) and after participating (**H1a** and **H2a**) in such training.

Third, with respect to related work experience outside the profession or sector to which the candidate applied, we consider four levels: (i) none, (ii) five years in a completely different profession in the same sector, (iii) five years in a similar profession in a different sector, or (iv) five years in a similar profession in the same sector. This related work experience is integrated to create more realistic curriculum vitae and selection decisions.

Furthermore, to enhance ecological validity, we follow standard practice (Carlsson et al., 2018; Lahey, 2008; Nuijten et al., 2017; Olian et al., 1988; Sterkens et al., 2022; Van Borm et al., 2021) by incorporating three additional dimensions that are frequently displayed in candidates' curriculum vitae: the candidates' gender (man or woman),

[3] In the experiment, the two categories regarding willingness to participate and recent participation in apprenticeship training are divided according to wage: at the standard wage or at half the standard wage. Since our analyses reveals no substantial difference between these subcategories, we have combined them throughout the study to maintain focus and conciseness.

commuting distance (0–5km, 5–10km, 10–50km and more than 50km), and extracurricular activities (none, volunteer work, practising sports, or engaging in cultural activities).

< Table 1 about here >

The combinations of levels for the six dimensions result in 6,144 unique scenarios (i.e., 2x8x4x6x4x4). However, as each scenario must be assessed by multiple participants, this would necessitate an impractically large participant sample (Auspurg & Hinz, 2014). Therefore, we implement a D-efficient design to select the scenarios with the highest statistical power. Specifically, by applying the algorithms of Auspurg and Hinz (2014) and Kuhfeld (2010), we identify 140 unique scenarios with a D-efficiency of 91 which is sufficiently high to achieve an efficient experimental design (Auspurg & Hinz, 2014). These 140 scenarios are grouped into 28 decks, each containing five scenarios, which we randomly assign to the participating recruiters to enhance design efficiency and internal validity (Auspurg & Hinz, 2014). Considering the number of evaluation criteria (17 statements per scenario; see Subsection 3.3), recruiters were tasked with evaluating only five scenarios to minimise fatigue-related biases (Auspurg & Hinz, 2014).

3.2 Fictitious vacancies and experimental context

The participating recruiters were asked to imagine that they had to assist in the selection of a candidate to fill a vacancy in their own company for a junior position requiring a certain educational background. To determine this educational background, we requested the minimal educational level and domain required for most jobs in their organisation.[4] By following this approach, we increase the external validity of our experiment, as the participating recruiters envisioned the most appropriate fictitious vacancy based on their own professional experience (Tobback et al., 2020). Regarding the level of education, we offer three possibilities: higher secondary education, post-secondary vocational education and tertiary education. Recruiters indicating higher secondary education had to specify this by selecting one of the following four options: general, technical, vocational or secondary art education. Concerning the educational domain, we adopt the Flemish government's classification of secondary education (Onderwijs Vlaanderen, 2017): language and culture, STEM (i.e., science, technology, engineering and mathematics), art and creation, agriculture and horticulture, economics and organisations, society and welfare, sports, and food and hospitality. In addition, we add education to these domains to cover also all domains in tertiary education. It

[4] We deliberately asked about the most common job in the organisation and not the job for which they were recently involved in a selection decision or for which they most often made selection decisions. In these latter cases, we risk an overrepresentation of positions known to have high staff turnover (e.g., salespeople).

turned out that most participating recruiters imagined a vacancy requiring a higher secondary degree (42.96%) with a technical focus (48.33%) in the STEM domain (40.14%).[5]

Subsequently, the recruiters were asked to recall such a vacancy and assess some related job characteristics, allowing us to describe the envisioned vacancies. For this purpose, we presented nine statements where recruiters could indicate by means of an 11-point Likert scale to what extent they agreed: 0 (totally disagree) to 10 (totally agree) with a scale average of 5. As demonstrated in Appendix Table A.1, the imagined vacancies were perceived as requiring an average educational level (sample average: 5.014), more customer contact (sample average: 6.901), less physical activity (sample average: 3.479), and average technological knowledge (sample average: 5.338). In addition, the envisioned vacancies involved an average number of women (sample average: 5.225) and older workers (sample average: 4.859). Finally, participating recruiters perceived the hypothetical vacancy as a job with normal changes in tasks (sample average: 5.278), slightly elevated task difficulty (sample average: 5.859), and a higher-than-average need for frequent training (sample average: 6.803).

Next, the recruiters were informed that a colleague had already made a first selection of five candidates who were formally eligible based on their level of education, limited relevant work experience, and availability. Concerning the latter, we mentioned that this was an urgent vacancy for which candidates would ideally be available immediately, thereby justifying the selection of five candidates who had become unemployed in the preceding three months. Furthermore, given the junior position, we included only candidates with limited relevant work experience. Moreover, we clarified that the candidates obtained a diploma at a younger age that corresponds to the level but not the domain of the vacancy. Hence, their diploma is unlikely to be perceived as a substitute for their (lack of) apprenticeship training. Finally, we explained that their colleague made summary tables about the characteristics on which the candidates clearly differed, such as details on whether they have (i) work experience within the same profession and sector and (ii) related work experience outside the profession and/or sector. We clarified that the candidates gained all other work experience in a completely different profession in a completely different sector.

3.3 Candidate evaluations

On the subsequent pages of the experimental survey, the characteristics of the five candidates were individually displayed by means of tabular information consistent with the format outlined in Table 1. Based on this information,

[5] Higher secondary degrees with a different focus appeared to a lesser extent: vocational focus (30.00%) and general focus (21.67%). Furthermore, in comparison with these higher secondary degrees, other educational levels were less prevalent: higher vocational degree (16.90%) and tertiary degree (40.14%). Finally, other frequently indicated domains covered the economics and organisations (28.17%) and society and welfare (16.90%) domains, while alternative domains were indicated by less than 5.00% of the participants.

recruiters were asked to assess each candidate in response to 17 statements on an 11-point Likert scale ranging from 0 ('completely disagree') to 10 ('completely agree'). As delineated in Table 2, these statements are categorised into two sets to examine our hypotheses on the recruitability and signalled human capital of fictitious candidates.

< Table 2 about here >

The first set comprises two statements on the candidates' recruitability (**H1a**, **H2a**, **H3a** and **H4a**) – their interview and hiring chances – which measure the distal and proximal outcome, respectively (Dalle et al., 2023b; Sterkens et al., 2021). These statements are congruent with those employed in prior studies (Baert et al., 2024; Sterkens et al., 2022; Van Belle et al., 2019). Nevertheless, our approach involves a more explicit reference to the experimental context wherein recruiters had to offer advice to their fictitious colleagues. For instance, the following statement is included: 'I advise inviting this candidate for a job interview for the described position.'

The second set of statements focuses on the recruiter's perceptions of the candidates' signalled human capital. First, we include three statements regarding the dominant ageist stereotypes that might be compensated for and even mitigated by (willingness to participate in) apprenticeship training: the candidates' technological skills (**H1b**, **H2b**, **H3b**, and **H4b**), trainability (**H1c**, **H2c**, **H3c**, and **H4c**), and flexibility (**H1d**, **H2d**, **H3d**, and **H4d**). Second, we incorporate nine statements regarding additional ageist stereotypes identified in previous studies (Burn et al., 2022; Dordoni & Argentero, 2015; Van Borm et al., 2021). These statements encompass the following aspects: intellectual abilities, social skills, physical capabilities, creativity, experience, motivation, reliability, accuracy, and reasonability of wage expectations. Third, we integrate two statements addressing additional unemployment stigmas since all our candidates were unemployed at the time of application. These statements raise productivity concerns about the satisfaction of previous employers and rejections by potential employers (Bonoli & Hinrichs, 2012; Dalle et al., 2023b; Oberholzer-Gee, 2008; Van Belle et al., 2019). Finally, given the willingness of some candidates to participate in an apprenticeship training, we include one statement on the administrative ease of hiring (Baert, 2016; Brown & Koettl, 2015; Burtless, 1985; Dalle et al., 2023b; Katz, 1998). Drawing inspiration from the literature (Dalle et al., 2023b; Van Belle et al., 2019; Van Borm et al., 2021), but also ensuring a consistent positive formulation, the following statements are included: 'Individuals with such a profile typically have sufficient intellectual capacities to perform well in this job' and 'Individuals with such a profile are typically not often rejected by other employers.'

3.4 Participating recruiters

To enhance external validity, we targeted our online scenario experiment to genuine recruiters who held professional experience in selection decisions. Therefore, we distributed our experiment via email to contact

persons listed in vacancies published on the website of the public employment service of Flanders. This is Belgium's largest job site (Delbeke, 2019) and mainly covers vacancies in Flanders, the Dutch-speaking region of Belgium, which represents more than half of the Belgian population (Statbel, 2023). Between April and May 2022, 142 professional recruiters completed our online experiment and passed an additional attention check, generating a total of 710 observations of evaluated fictitious candidates. Along with the experimental questions, the recruiters were asked a number of additional questions about their personal characteristics and those of their organisation to assess the overall composition of the sample.

The summary statistics displayed in Column 1 of Appendix Table A.2 demonstrate that a predominant proportion of the participating recruiters are women (63.93%) holding a tertiary degree (78.87%) and with an average age of 41 years. This supports the external validity of our results as our sample aligns with the profile of Belgian recruiters from the European Social Survey (2023), comprising mainly women (77.8%) with a tertiary degree (77.8%), although these recruiters are slightly older given their average age of 52 years.[6]

Moreover, our participants exhibit extensive experience in comparable recruitment decisions. More concretely, a vast majority engaged at least weekly (54.93%) and for more than five years (57.75%) in selection decisions. Based on their professional experience, they felt sufficiently competent to select candidates for the hypothetical vacancy (sample average: 7.620), as well as for vacancies that require advanced education (sample average: 7.120), frequent customer contact (sample average: 7.789), substantial physical effort (sample average: 5.021), and technological proficiency (sample average: 6.028) given that the scale average was equal to 5.

In addition, half of the participants worked in organisations employing at least 50 employees (51.41%), of which at least 20% were older than 50 (54.23%). These organisations offer a diverse set of training encompassing methods such as classroom training (63.38%), online training (61.27%), workplace training for employees (80.28%), workplace training for students (33.80%) and workplace training for the unemployed (16.90%). The shares in the latter two cases demonstrate that a majority of these organisations offer some type of apprenticeship training. Moreover, most participants appear to have knowledge of the principles of apprenticeship training (57.74%), while only a minority had experience in hiring candidates who undertook such training (10.56%) or in providing such training (16.20%).

Finally, the participating recruiters had average scores (scale average: 3.000) on Steenkamp and colleagues' (2010) egoistic response tendency scale (sample average: 3.327) and moralistic response tendency scale (sample

[6] Similar to other studies (Dalle et al., 2024; Sterkens et al., 2022), we retrieve Belgian data from the 2020 wave for the following ISCO-08 codes: 1212 (human resource managers), 2423 (personnel and career professionals), 3333 (employment agents and contractors), and 4416 (personnel clerks).

average: 3.213).[7] This implies that there is limited potential bias due to social desirability, although we still perform robustness checks to confirm this.

The other columns of Appendix Table A.2 present the participant characteristics by experimental conditions. More concretely, Columns 2 to 4 indicate that candidates aged below and above 46 years were evaluated by participants with similar characteristics. Similarly, Columns 5 to 9 demonstrate that this is also the case for candidates with and without mentioning (their willingness regarding) apprenticeship training. The statistically insignificant Chi-squared and Kruskal–Wallis tests depicted in Columns 4 and 9 confirm the successful randomisation of both experimental conditions across the participating recruiters. However, there are two exceptions: (i) candidates expressing their willingness to partake in apprenticeship training were evaluated by participants who indicated they were less competent to make selection decisions concerning vacancies requiring technological proficiency, and (ii) candidates who had already participated in an apprenticeship training were assessed by participants who scored lower on the egoistic response tendency scale than participants in the other experimental conditions.

4 Results

In this section, we discuss the results of the experimental data with respect to our hypotheses posed in Section 2. First, we provide a visual presentation of our collected data (Subsection 4.1). Next, we expound upon the statistical framework employed to analyse these data (Subsection 4.2). Following that, we report the recruitability of (older) candidates who have expressed their (willingness regarding) participation in apprenticeship training (Subsection 4.3). Finally, we elaborate on the human capital signals transmitted by these candidates (Subsection 4.4).

4.1 Visual inspection

In this subsection, we undertake a descriptive analysis concerning the recruitability of candidates who recently participated (**H1a**) or expressed willingness to participate (**H3a**) in an apprenticeship training (i.e., compensation effect for age discrimination), as well as the premium for recent participation (**H2a**) or willingness to participate (**H4a**) in such training for older candidates (i.e., mitigating effect on age discrimination). Therefore, we rely on figures illustrating the average interview chances (Figure 1) and hiring chances (Figure 2) by candidates' ages and experimental conditions mentioned under relevant work experience.

[7] Steenkamp and colleagues (2010) select two groups of ten statements to measure egoistic response tendencies (α = 0.505) and moralistic response tendencies (α = 0.717) on a 5-point Likert scale. The Cronbach's alphas in our experiment are consistent with the reported ranges by Steenkamp and colleagues (2010).

These figures suggest that recent participation and willingness to partake in an apprenticeship training positively affect candidates' recruitability, as these curves lie between the curves for no experience and for experience obtained through a regular contract. Specifically, the latter candidates have the highest recruitment chances, followed by those who obtained this experience through apprenticeship training and those willing to participate in such training, while candidates without relevant work experience have the lowest chances of recruitment.

Furthermore, the fact that all curves descend indicates that candidates' recruitment chances decrease as they age, irrespective of whether and how they have acquired relevant work experience. However, the decline by age is less steep for candidates who have recently participated (or expressed a willingness to participate) in apprenticeship training to obtain relevant work experience compared to candidates without such experience. Moreover, the distance between the curves representing recent participation or willingness to participate) in apprenticeship training, and no experience is greater for older candidates than for younger ones, suggesting that pariticipation (or willingness to engage) in such training yields a premium for older candidates. Hence, Figures 1 and 2 appear to confirm our four hypotheses.

< Figure 1 about here >

< Figure 2 about here >

4.2 Statistical framework

Since a visual inspection is insufficient to discern significant effects with respect to our hypotheses, we employ a multivariate linear regression model as presented in Equation 1. In this model, we regress the recruitment (Subsection 4.3) or perception (Subsection 4.4) outcomes (*Y*) on the candidates' ages (*AGE*), relevant work experience conditions (*RWE*), and all other candidate (*CAN*), job (*JOB*), and recruiter (*REC*) characteristics, as discussed in Section 3. Additionally, we incorporate the interaction between the candidates' ages and relevant work experience (*AGE*RWE*) to analyse the potential mitigating effects of (willingness regarding) participation in apprenticeship training on age discrimination in terms of recruitment chances (Subsection 4.3.3) and perceptions (Subsection 4.4.3). Finally, the standard errors in this model are adjusted to account for the clustering of observations at the recruiter level.

$$Y = \alpha_Y + \beta_Y AGE + \gamma_Y RWE\ (+\ \delta_Y AGE * RWE) + \zeta_Y CAN + \eta_Y JOB + \theta_Y REC + \varepsilon_Y \quad (1)$$

In the baseline model, we include candidates' ages as a continuous variable as this is consistent with our experimental operationalisation, contains the most detailed information, and leads to the highest adjusted R^2 compared to other models reported below with different age operationalisations. However, for a more meaningful interpretation, we rescale this continuous variable was rescaled as the effect would otherwise benchmark to candidates who are 0 years old. Specifically, the experimental ages 32, 36, 40, 44, 48, 52, 56 and 60 are adjusted to 0, 4, 8, 12, 16, 20, 24 and 28.

Additionally, we run multiple variations of this model to assess the robustness of the results. Specifically, concerning analyses of recruitability (Subsection 4.3), we employ a model in which hiring probability serves as an alternative outcome to interview probability. Furthermore, for all analyses, we test two models wherein the candidates' age is operationalised as a binary variable indicating whether the candidate was older than 45 on one hand, and older than 50 on the other hand. Moreover, we explore two models in which we exclude 5% of the participants with the highest scores on the egoistic and moralistic response tendency scales. Finally, we apply Benjamini and Hochberg's (1995) correction for multiple hypotheses testing to the baseline model.

4.3 Recruitability

The starting point of our statistical analyses involves discerning age discrimination and the positive impact of apprenticeship training, paving the way for an exploration of whether the latter can compensate for and mitigate the former. Therefore, in the first subsection, we employ our statistical framework to check whether we observe hiring discrimination against older candidates. In the second subsection, we examine the recruitability of candidates who express that they have recently participated (**H1a**) or are willing to partake (**H3a**) in apprenticeship training (i.e., compensation effect for age discrimination). Finally, in the third subsection, we investigate if expressing that they recently participated (**H2a**) or are willing to participate (**H4a**) in such training can reduce the negative effects of age on older candidates' recruitment chances (i.e., mitigating effect on age discrimination). The findings of our baseline model are summarised in Table 3 and are further elaborated upon below.[8]

< Table 3 about here >

4.3.1 Older candidates

The regression model without interaction effects, as presented in Column 1 of Table 3, reveals that candidates' interview probabilities are adversely affected by their age. Specifically, older candidates are less likely to be invited for a job interview ($\beta = -0.091$, $p < 0.000$).

[8] The full estimation results for the other candidate, job, and recruiter characteristics are presented in Appendix Table A.3.

This effect seems to be robust, given the results of our alternative model specifications. More concretely, similar effects are found in the model with hiring probabilities as the outcome variable and in both models with binary variables on candidate age, as demonstrated in Columns 1 to 3 of Appendix Table A.4. Moreover, this effect also appears in the two models excluding 5% of the participants based on their scores on the egoistic and moralistic response tendency scales of which the results are available upon request. Finally, the result remains also significant ($p < 0.000$) after Benjamini and Hochberg's (1995) correction for multiple hypotheses testing.

This finding supports the quality and accuracy of our dataset as our results are consistent with those from prior research discussed in the introduction (Section 1): older candidates face discrimination in the hiring process.

4.3.2 Apprenticeship training

Furthermore, Column 1 of Table 3 also reveals that candidates' interview probabilities are positively influenced by their (willingness regarding) participation in apprenticeship training. More concretely, candidates willing to participate in such programmes to acquire relevant work experience exhibit a 7.7 percentage point higher interview chance ($\beta = 0.773$, $p = 0.004$) than those without relevant work experience. Compared to the latter, candidates who have already undergone such apprenticeship training experience a 10.1 percentage point higher chance of being granted an interview ($\beta = 1.014$, $p = 0.001$). Hence, these results demonstrate that (willingness regarding) apprenticeship training can compensate for age discrimination. More concretely, willingness to participate in such training compensates for being 8.5 years older (i.e., 0.773/−0.091), while recent participation offsets the disadvantage of being 11 years older (i.e., 1.014/−0.091). Nevertheless, additional Wald tests demonstrate that the differences in effects of expressing a willingness to participate and recent participation are not significant ($F = 0.887$, $p = 0.348$).

Once again, these effects appear to be robust given the results of the alternative models employing hiring probabilities as the outcome and binary variables on candidates' ages (Columns 1–3 of Appendix Table A.4). We obtain similar effects for the models excluding participants based on their high scores on the egoistic and moralistic response tendency scales (results available upon request). Moreover, these positive effects remain at least marginally significant after a correction for multiple hypotheses testing (Benjamini & Hochberg, 1995). Specifically, the effect for candidates revealing a willingness to participate in apprenticeship training becomes marginally significant ($p = 0.086$), while the effect for candidates expressing experience through recent participation in such training ($p = 0.024$) remains highly significant.

Hence, we find robust evidence to support our hypotheses regarding the increased recruitability of candidates who express their recent participation (**H1a**) or willingness to participate (**H3a**) in an apprenticeship training to obtain relevant work experience compared to candidates without such work experience and willingness, regardless of their age (i.e., compensation effect for age discrimination). In particular, the positive recruitment effect for

candidates who reveal a willingness to participate in such training and the fact that this does not significantly differ from that for recent participation is noteworthy given that previous studies suggest that employers are less willing to provide such training themselves and prefer to recruit candidates who underwent training with their previous employer (Section 2).

4.3.3 Apprenticeship training for older candidates

In the final step of this subsection, we examine whether the negative age effect can also be mitigated by the positive effect of apprenticeship training. The results of the interaction effect of both candidate characteristics, as presented in Column 2 of Table 3, indicate that a mitigating effect of (willingness regarding) apprenticeship training on the interview probability of older candidates is non-existent. Specifically, we find no significant effects for the interaction between a candidate being older and willingness to undertake apprenticeship training (β = 0.035, p = 0.256), nor for the interaction between being older and recent participation in apprenticeship training (β = 0.047, p = 0.133).

These findings are in line with the observations in our alternative model specifications. There occurs only a marginally significant interaction effect between the candidate's age and recent participation in apprenticeship training (β = 0.044, p = 0.096) in the model with hiring probability as the outcome, as presented in Column 4 of Appendix Table A.4.

These findings indicate no (robust) evidence in favour of our hypotheses concerning the mitigating effects of expressing recent participation (**H2a**) or a willingness to partake (**H4a**) in apprenticeship training on the negative age-related effects on older candidates' recruitment chances. Apparently, the positive effect of (willingness regarding) participation in apprenticeship training can only compensate for age discrimination, but it cannot mitigate its effect. Stated otherwise, older candidates benefit from expressions about apprenticeship training, but only to the same extent as middle-aged candidates.

4.4 Signalled human capital

To explain these observations regarding candidates' recruitability, we inspect these candidates' signalled human capital. In the first subsection, we verify if older candidates are perceived as being less technologically skilled, less trainable, and less flexible. In second subsection, we examine the perceptions that recruiters hold about candidates' technological skills (**H1b** and **H3b**), trainability (**H1c** and **H3c**), and flexibility (**H1d** and **H3d**) when they mention recent participation or a willingness to participate in an apprenticeship training (i.e., compensation effect for ageist stereotypes). Finally, in the third subsection, we investigate if expressing recent participation or a willingness to participate in such training reduces the negative age effects on the perceived technological skills (**H2b** and **H4b**),

trainability (**H2c** and **H4c**), and flexibility (**H2d** and **H4d**) of older candidates (i.e., mitigating effect on ageist stereotypes. The findings of our baseline model are summarised in Table 4 and are further elaborated upon below.[9]

< Table 4 about here >

4.4.1 Older candidates

Once again, we first check the human capital signals emitted by older candidates. Columns 1 to 3 of Table 4 demonstrate that being older has a significant negative impact on the recruiters' perceptions of the candidates' technological skills (β= −0.044, p< 0.000), trainability (β= −0.059, p<0.000), and flexibility (β= −0.033, p<0.000).

These effects seem robust, given the results of our alternative model specifications. More concretely, we obtain similar effects in both models with binary variables on candidates' ages, as demonstrated in Appendix Table A.6, as well as in the two models excluding 5% of the participants based on their scores on the egoistic and moralistic response tendency scales of which the results are available upon request. Moreover, the effects remain significant (p < 0.000) after a correction for multiple hypotheses testing (Benjamini & Hochberg, 1995).

Hence, we conclude that older candidates signal lower levels of technological skills, trainability, and flexibility than middle-aged candidates. Once again, this supports the quality and accuracy of our dataset, as our results are consistent with findings from prior research, as discussed in the introduction (Section 1).

In addition to the three perceptions included in our hypotheses, we test 15 other perceptions, as discussed in section 3.3. The results presented in Appendix Table A.7 reveal that, compared to middle-aged candidates, older candidates are perceived more negatively in terms of physical skills (β= −0.045, p< 0.000), creativity (β= −0.029, p < 0.000), motivation (β = −0.022, p = 0.002), reasonable salary expectations (β = −0.032, p = 0.001), the satisfaction of previous employers (β= −0.013, p= 0.059), limited rejection by previous employers (β= 0.067, p< 0.000), and administrative hiring ease (β= −0.027, p= 0.003). While these effects also occur in our four alternative model specifications, some disappear after Benjamini and Hochberg's (1995) correction for multiple hypothesis testing. Specifically, the effect on the perceptions of older candidates' motivation, satisfaction by previous employers and the administrative ease of hiring fade.

4.4.2 Apprenticeship training

Next, we scrutinise the signals given by apprenticeship training. According to Columns 1 to 3 of Table 4, it appears that (willingness regarding) participation in apprenticeship training has no effect on the perceptions of the candidates' flexibility, but it seems to demonstrate positive effects on the perceptions of their trainability and technological skills. More concretely, compared to candidates without relevant work experience, both candidates

[9] The full estimation results for the other candidate, job, and recruiter characteristics are presented in Appendix Table A.5.

who expressed their willingness to partake in apprenticeship training (β = 0.347, p = 0.089) and candidates who obtained experience through apprenticeship training (β = 0.422, p = 0.037) scored better in terms of perceived trainability, while only the latter candidates perform better in terms of their perceived technological skills (β = 0.395, p = 0.064).

At first glance, the results appear to be robust in the models with alternative specifications. Specifically, we obtain similar effects in both models with binary variables on candidates' ages, as demonstrated in Appendix Table A.6. Only the marginal significant positive effect on the perception of the trainability of candidates expressing their willingness to participate in an apprenticeship training disappears entirely in the model for candidates older than 50 years and the model excluding 5% of the participants based on their score on the moralistic response tendency scale. However, all (marginally) significant effects disappear after Benjamini and Hochberg's (1995) correction for multiple hypotheses testing.

Hence, we find no robust evidence to support our hypotheses concerning the positive effects of expressing willingness to partake or having recently participated in an apprenticeship training on the perceived technological skills (**H1b** and **H3b**), trainability (**H1c** and **H3c**), and flexibility (**H1d** and **H3d**) of the candidate. This suggests that (willingness regarding) participation in such training has no compensatory effect on the dominant ageist stereotypes.

Once again, we test 15 other perceptions, as discussed in section 3.3. The results depicted in Appendix Table A.7, demonstrate that participation in apprenticeship training has a positive effect on perceptions regarding the candidate's experience (β = 0.580, p = 0.031), motivation (β = 0.440, p = 0.030), and reasonability of salary expectations (β = 0.809, p = 0.001). Also, candidates' willingness to partake in apprenticeship training is perceived as a positive signal of their motivation (β = 0.328, p = 0.088). Although we obtain similar effects in our four alternative model specifications, these effects disappear after correction for multiple hypothesis testing (Benjamini & Hochberg, 1995).[10] Only the effect on the reasonability of salary expectations of candidates who participated in apprenticeship training remains marginally significant (p = 0.057) after this correction.

4.4.3 Apprenticeship training for older candidates

Finally, we examine the human capital signals by older candidates who express their (willingsness regarding) participation in apprenticeship training to investigate if such expressions can reduce the negative age effect on their perceived technological skills, trainability, and flexibility. As depicted in Columns 4 to 6 of Table 4, (the willingness regarding) participation in apprenticeship training does not mitigate the significant influence of the candidate's age on recruiters' perceptions regarding their technological skills and trainability, but it does affect the

[10] These results are available upon request.

age gradient in their perception of the candidates' flexibility. More concretely, the lower flexibility perceived for older candidates diminishes when they express a willingness to undergo apprenticeship training ($\beta = -0.053$, $p = 0.048$) or when they have recently participated in an apprenticeship training ($\beta = -0.065$, $p = 0.013$).

At first sight, these effects seem to be robust, given the results of our alternative model specifications. Specifically, we identify similar interaction effects in both models with binary variables on candidates' ages, as demonstrated in Appendix Table A.6, as well as in the models excluding 5% of the candidates based on their scores on the egoistic and moralistic response tendency scale, the results of which are available upon request. However, when applying a correction for multiple hypotheses testing (Benjamini-Hochberg, 1995), the significant interaction effects regarding the flexibility of older candidates expressing their (willingsness regarding) participation in an apprenticeship training disappear completely.

Hence, we find no robust evidence to support our hypotheses regarding the mitigating effect of expressing (willingness regarding) participation in an apprenticeship training on the dominant negative perceptions about older candidates' technological skills (**H2b** and **H4b**), trainability (**H2c** and **H4c**), and flexibility (**H2d** and **H4d**).

We also test the 15 other perceptions, as discussed in section 3.3 of which te results are presented in Appendix Table A.8. However, we detect no significant differences are detected between older and middle-aged candidates in the effects of expressing their (willingness regarding) participation in an apprenticeship training.

5 Conclusion

Age discrimination remains a prevalent issue in recruitment processes. Prior research reveals that this is primarily fuelled by recruiters' negative perceptions regarding older workers' technological skills, trainability and flexibility. Drawing upon human capital, signalling, and screening theories, we hypothesised that training programmes could serve as a remedy to counter these ageist stereotypes and subsequently reduce age discrimination. We tested this by designing a scenario-based experiment wherein genuine recruiters were tasked with evaluating the recruitability and human capital signals of fictitious candidates, varying in age and their willingness to participate or recent participation in apprenticeship training to gain relevant work experience later in life.

We find that regardless of their age, candidates expressing their (willingness regarding) participation in an apprenticeship training to acquire relevant work experience fare better in terms of recruitability than those without such experience and willingness, despite there being no divergence in perceptions regarding technological skills, trainability, or flexibility. Moreover, it is inconsequential whether candidates merely mention a willingness or have previously participated in such training; both expressions can compensate for approximately ten years of age. Nevertheless, the difference in recruitment opportunities and human capital signals between middle-aged and older candidates does not appear to be affected by the candidate's revealance of a (willingness regarding)

participation in apprenticeship training. Hence, older candidates benefit from expressions about willingness to partake or recent participation in apprenticeship training, but only to the same extent as middle-aged candidates. Consequently, we conclude that (willingsness regarding) participation in apprenticeship training can compensate for age discrimination, but it cannot mitigate this.

This has important policy implications as apprenticeship training emerges as an effective tool in policies aimed at increasing older candidates' recruitability. Although middle-aged and older candidates benefit equally from apprenticeship training in terms of their recruitment opportunities, it may be more advisable to invest in such training for older candidates due to the discrimination they face during the hiring process compared to middle-aged candidates. Therefore, it is imperative for governmental bodies to promote and facilitate training initiatives for the older workforce.

We conclude our article by acknowledging three of our study's limitations and providing directions for future research. First, we could not identify specific human capital signals responsible for the observed recruitment effects. There may be additional signals that we did not consider, which could explain recruitability. Hence, we urge other researchers to explore potential underlying signals further. Second, the external validity of our findings is limited to recruitment outcomes and signals of unemployed candidates who recently participated in or expressed willingness to engage in apprenticeship training at older ages to gain one year of relevant work experience in the Flemish context. We investigated this type of training programme as it was the most promising according to the existing literature. Nevertheless, other types of training programmes might affect recruitment prospects and human capital signals differently. Future research could examine related training programmes in other contexts to achieve a comprehensive understanding of the effectiveness of training in combatting age discrimination. Third, scenario experiments carry an inherent risk of social desirability bias, given recruiters' awareness of their participation in the experiment. To reduce this risk, we forced recruiters to make trade-offs between multiple candidate characteristics keeping the true research focus hidden and we incorporated a social desirability scale, which we employed for robustness checks. Nevertheless, we recommend that researchers employ complementary research methods (e.g., field experiments) to overcome such biases.

Declarations

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Conflict of interest: The authors have no relevant financial or non-financial interests to disclose.

Data availability: The anonymised dataset that was generated and analysed for the current study is available from the corresponding author upon reasonable request.

General data protection: Data processing was organised in line with Ghent University's code of conduct and, therefore, adheres to General Data Protection Regulation (GDPR) standards.

Informed consent: Participants were asked to confirm that they were of age and participating of their own free will. They also gave consent for their personal data to be collected, processed, and anonymously reported. Finally, they were informed about the possibility of stopping the study at any time, retrieving their data, and contacting the researchers.

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Figures

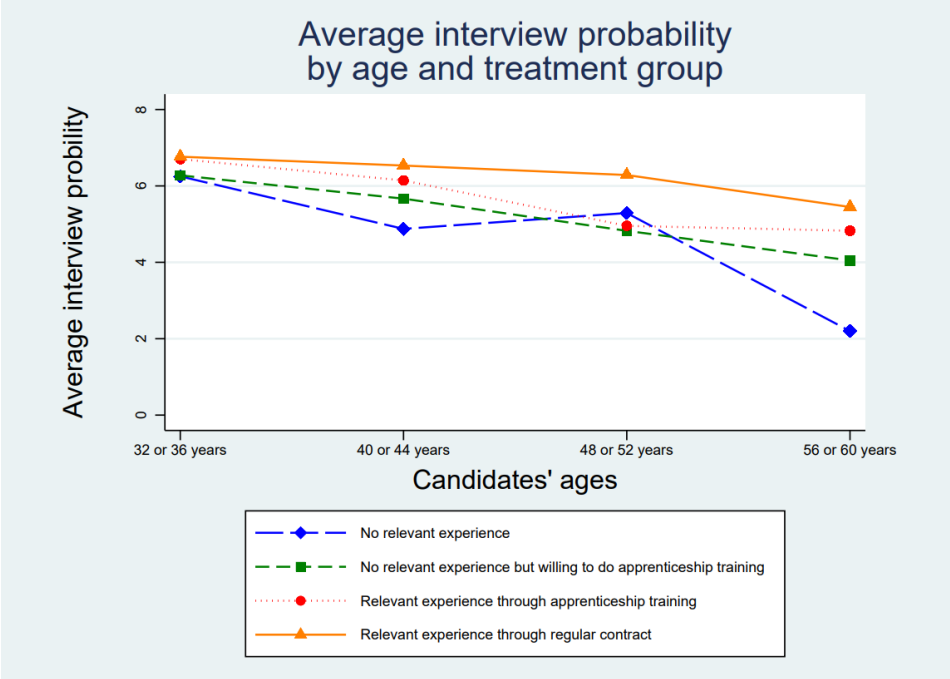

Figure 1 Average interview probability by age and treatment group

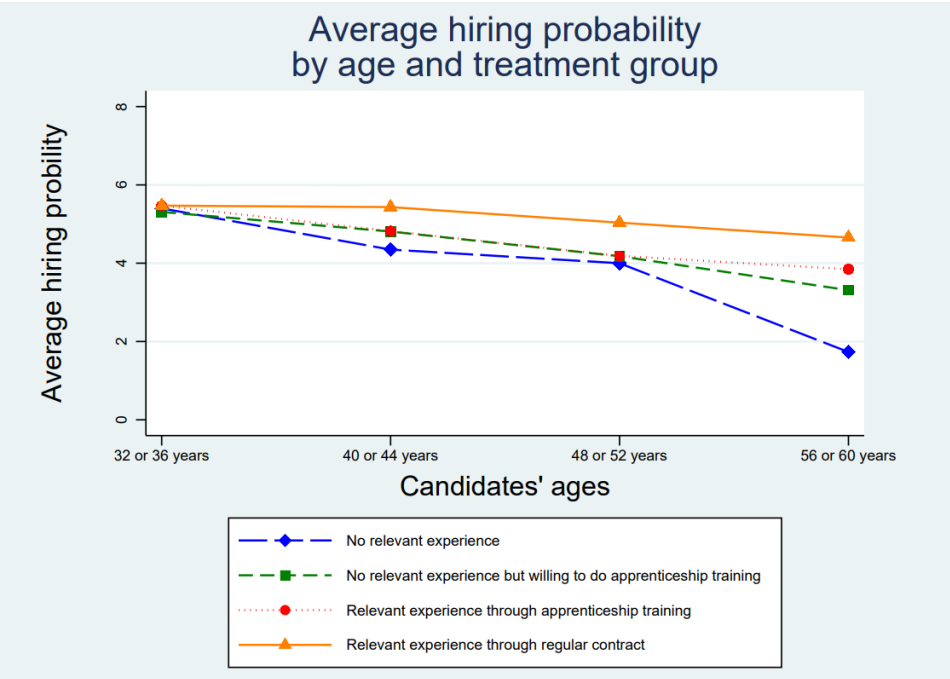

Figure 2 Average hiring probability by age and treatment group

Tables

Table 1 Scenario dimensions and corresponding levels used in the experiment

Dimensions	Levels
Gender	{Male, Female}
Age	{32, 36, 40, 44, 48, 52, 56, 60}
Commuting distance	{0-5km, 5-10km, 10-50km and more than 50km}
Relevant work experience in the same profession or sector	{None, None but willing to participate in an apprenticeship training for one year, Last employment was one year on ordinary contract, Last employment was one year in an apprenticeship training}
Related work experience outside this profession or sector	{None, five years in a completely different profession in the same sector, five years in a similar profession in a different sector, five years in a similar profession in the same sector}
Extracurricular activities	{None, Cultural activities, Sports activities, Volunteering}

Notes: The factorial product of the scenario levels (i.e. 2x8x4x6x4x4) resulted in 6,144 possible combinations. Twenty-eight sets of five scenarios were drawn from this scenario universe using a D-efficient design (D-efficiency: 91; Auspurg & Hinz, 2014) and distributed at random to the recruiters as described in Subsection 3.1.

Table 2 Outcome and perception statements

Outcomes and perceptions	Statements
A. Outcomes	
Interview chance	I advise to invite this candidate for a job interview for the described position.
Hiring chance	I advise to hire this candidate for the described position.
B. Perceptions related to statistical-based discrimination	
Perceived technological knowledge and skills	Individuals with such a profile typically have sufficient technological knowledge and skills to perform well in this job.
Perceived trainability	Individuals with such a profile are typically sufficiently trainable to perform well in this job.
Perceived flexibility	Individuals with such a profile are typically sufficiently flexible to perform well in this job.
Perceived intellectual abilities	Individuals with such a profile typically have sufficient intellectual capacities to perform well in this job.
Perceived social abilities	Individuals with such a profile typically have sufficient social capacities to perform well in this job.
Perceived physical abilities	Individuals with such a profile typically have sufficient physical capacities to perform well in this job.
Perceived creativity	Individuals with such a profile are typically sufficiently creative to perform well in this job.
Perceived experience	Individuals with such a profile typically have sufficient experience to perform well in this job.
Perceived motivation	Individuals with such a profile are typically sufficiently motivated to perform well in this job.
Perceived reliability	Individuals with such a profile are typically sufficiently reliable to perform well in this job.
Perceived accuracy	Individuals with such a profile are typically sufficiently accurate to perform well in this job.
Perceived reasonability towards wage expectations	Individuals with such a profile typically have reasonable wage expectations.
Perceived satisfaction by previous employers	Previous employers that individuals with such a profile worked for were typically satisfied with their productivity.
Perceived frequency of rejection	Individuals with such a profile are typically not often rejected by other employers.
Perceived (administrative) ease of hiring	Hiring individuals with such a profile is typically (administratively) easy.

Notes: This table presents the statements regarding selection outcomes and perception items as they were shown to the participants in the online experiment. The participants evaluated each statement on an 11-point Likert scale ranging from 0 (i.e. 'completely disagree') to 10 ('completely agree').

Table 3 Linear regression results with interview probability as outcome (summarised results)

	Without interaction variables	With interaction variables
A. CANDIDATE CHARACTERISTICS		
Age (c.)	−0.091*** (0.010)	−0.127*** (0.023)
Relevant work experience (ref. = None) (RWE1)		
None but willingness to participate in AT (RWE2)	0.773** (0.261)	0.295 (0.496)
1 year through participation in AT (RWE3)	1.014** (0.298)	0.367 (0.524)
1 year through regular contract (RWE4)	1.594*** (0.343)	0.829 (0.514)
Age x Relevant work experience (ref. = None)		
Age x None but willingness to participate in AT		0.035 (0.030)
Age x 1 year through participation in AT		0.047 (0.031)
Age x 1 year through regular contract		0.057† (0.030)
Other candidate characteristics	Included	Included
B. JOB CHARACTERISTICS		
Job characteristics	Included	Included
C. RECRUITER CHARACTERISTICS		
Participant characteristics	Included	Included
D. ADDITIONAL PARAMETERS AND DIAGNOSTICS		
Constant	7.059*** (1.371)	7.544*** (1.413)
Adjusted R^2	0.279	0.279
Wald tests (F-statistic)		
RWE1 = RWE2	8.804**	
RWE1 = RWE3	11.566***	
RWE1 = RWE4	21.655***	
RWE2 = RWE3	0.887	
RWE2 = RWE4	6.648*	
RWE3 = RWE4	3.727†	

Notes. Abbreviations used: c. (continuous variable), ref. (reference category), RWE (Relevant Work Experience), and AT (Apprenticeship Training). The other candidate, job, and recruiter characteristics discussed in Section 3 are included in this analysis, but their statistics are presented in Appendix Table A.3. The presented statistics are coefficient estimates with their standard errors between parentheses. Standard errors are corrected for clustering of the observations at the participant level. Significances are indicated as *** when $p < .001$, ** when $p < .01$, * when $p < .05$, and † when $p < .10$.

Table 4 Linear regression results with perception variables regarding the hypotheses as the outcomes (summarised results)

	Without interaction variables			With interaction variables		
	Technological skills	Trainability	Flexibility	Technological skills	Trainability	Flexibility
A. CANDIDATE CHARACTERISTICS						
Age (con.)	−0.044*** (0.009)	−0.059*** (0.008)	−0.033*** (0.008)	−0.063** (0.019)	−0.063** (0.021)	0.008 (0.021)
Relevant work experience (ref. = None) (RWE1)						
None but willingness to participate in AT (RWE2)	0.314 (0.219)	0.347† (0.202)	0.099 (0.187)	−0.097 (0.391)	0.418 (0.393)	0.850* (0.409)
1 year through participation in AT (RWE3)	0.395† (0.212)	0.422* (0.201)	0.021 (0.191)	0.245 (0.411)	0.252 (0.427)	0.918* (0.414)
1 year through regular contract (RWE4)	0.798*** (0.213)	0.689** (0.229)	0.039 (0.208)	0.371 (0.360)	0.569 (0.352)	0.346 (0.362)
Age x Relevant work experience (ref. = None)						
Age x None but willingness to participate in AT				0.030 (0.024)	−0.005 (0.026)	−0.053* (0.027)
Age x 1 year through participation in AT				0.010 (0.025)	0.013 (0.027)	−0.065* (0.026)
Age x 1 year through regular contract				0.032 (0.024)	0.009 (0.026)	−0.021 (0.024)
Other candidate characteristics	Included	Included	Included	Included	Included	Included
B. JOB CHARACTERISTICS						
Job characteristics	Included	Included	Included	Included	Included	Included
C. RECRUITER CHARACTERISTICS						
Participant characteristics	Included	Included	Included	Included	Included	Included
D. ADDITIONAL PARAMETERS AND DIAGNOSTICS						
Constant	5.832*** (0.970)	6.630*** (0.953)	4.747*** (0.895)	6.078*** (0.971)	6.678*** (0.963)	4.123*** (0.889)
Ajusted R^2	0.221	0.248	0.150	0.223	0.250	0.164
Wald tests (F-statistic)						
RWE1 = RWE2	2.069	2.938†	0.280			
RWE1 = RWE3	3.477†	4.423*	0.012			
RWE1 = RWE4	14.096***	0.043**	0.034			
RWE2 = RWE3	0.227	0.188	0.214			
RWE2 = RWE4	4.708*	2.903†	0.116			
RWE3 = RWE4	2.989†	1.950	0.011			

Notes. Abbreviations used: c. (continuous variable). ref. (reference category). and AT (Apprenticeship Training). The other candidate, job, and recruiter characteristics discussed in Section 3 are included in this analysis, but their statistics are presented in Appendix Table A.5. The presented statistics are coefficient estimates with their standard errors between parentheses. Standard errors are corrected for clustering of the observations at the participant level. Significances are indicated as *** when p < .001. ** when p < .01. * when p < .05. and † when p < .10.

Appendix

Table A.1 Description of job characteristics by experimental conditions

	Full sample	Subsamples based on candidates' ages			Subsamples based on candidates' relevant work experience				
	[N = 710]	Candidates aged between 32 and 44 [N = 362]	Candidates aged between 48 and 60 [N = 348]	Independence test (p-value)	Candidates without relevant experience [N = 122]	Candidates willing to partake in apprenticeship training [N = 240]	Candidates with experience through apprenticeship training [N = 227]	Candidates with experience through regular contract [N = 121]	Independence test (p-value)
Job requiring advanced education (s.)	5.014	4.956	5.075	0.221 (0.638)	4.975	5.075	5.106	4.760	1.346 (0.718)
Job requiring frequent customer contact (s.)	6.901	6.837	6.968	0.540 (0.462)	6.664	7.083	6.824	6.926	2.105 (0.551)
Job requiring substantial physical effort (s.)	3.479	3.481	3.477	0.037 (0.847)	3.541	3.500	3.361	3.595	0.768 (0.857)
Job requiring proficient technological skills (s.)	5.338	5.301	5.376	0.097 (0.756)	5.279	5.208	5.344	5.645	2.865 (0.413)
Job involving many female workers (s.)	5.225	5.287	5.161	0.320 (0.572)	5.025	5.313	5.203	5.298	0.715 (0.870)
Job involving many older workers (s.)	4.859	4.870	4.848	0.012 (0.913)	4.803	4.846	4.789	5.074	1.183 (0.757)
Job with many changes in tasks (s.)	5.278	5.359	5.187	0.684 (0.408)	5.664	5.096	5.238	5.306	3.699 (0.296)
Job with in increasing task difficulty (s.)	5.859	5.917	5.799	0.013 (0.909)	5.992	5.717	6.066	5.620	4.244 (0.236)
Jobs requiring continuing education (s.)	6.803	6.933	6.667	1.527 (0.217)	6.852	6.708	6.960	6.645	2.687 (0.442)

Notes: Abbreviation used: s. (scale ranging from 0 to 10). The independence between the participant characteristic and the experimental condition is tested by a Pearson Chi-square test for indicator variables and by a Kruskal–Wallis test for continuous variables. The resulting X^2 and accompanying p-value are presented in the final column.

Table A.2 Description of participant characteristics by experimental conditions

	Full sample	Subsamples based on candidates' ages			Subsamples based on candidates' relevant work experience				
	[N = 710]	Candidates aged between 32 and 44 [N = 362]	Candidates aged between 48 and 60 [N = 348]	Independence test (p-value)	Candidates without relevant experience [N = 122]	Candidates willing to partake in apprenticeship training [N = 240]	Candidates with experience through apprenticeship training [N = 227]	Candidates with experience through regular contract [N = 121]	Independence test (p-value)
A. Demographic characterics									
Female	63.93%	67.40%	67.82%	0.014 (0.906)	69.58%	67.84%	67.84%	66.94%	1.210 (0.751)
Age (c.)	41.014	40.959	41.072	0.051 (0.821)	39.016	41.783	40.718	42.058	5.672 (0.129)
Tertiary education	78.87%	79.56%	78.16%	0.208 (0.648)	76.23%	77.92%	77.97%	85.12%	3.591 (0.309)
B. Experience characterics									
At least weekly involved in selection decisions	54.93%	56.35%	53.45%	0.605 (0.437)	57.38%	51.67%	58.59%	52.07%	2.957 (0.398)
More than 5 years of experience in selection decisions	57.75%	56.63%	58.91%	0.377 (0.539)	58.20%	57.50%	57.27%	58.68%	0.80 .994)
C. Competence characterics									
Competence for selection decisions concerning the hypothetical vacancy (s.)	7.620	7.682	7.555	1.529 (0.216)	7.541	7.558	7.626	7.810	2.572 (0.463)
Competence for selection decisions concerning vacancies requiring advanced education (s.)	7.120	7.207	7.029	1.514 (0.219)	7.197	7.008	7.163	7.182	1.584 (0.663)
Competence for selection decisions concerning vacancies requiring frequent customer contact (s.)	7.789	7.754	7.825	0.143 (0.706)	7.861	7.742	7.775	77.835	1.226 (0.747)
Competence for selection decisions concerning vacancies requiring substantial physical effort (s.)	5.021	5.116	4.922	0.595 (0.440)	5.344	4.821	5.031	5.074	2.577 (0.462)
Competence for selection decisions concerning vacancies requiring proficient technological skills (s.)	6.028	6.157	5.894	1.395 (0.238)	6.270	5.563	6.159	6.463	8.615 .035)
D. Organisation characterics									
At least 50 employees in their organisation	51.41%	49.45%	47.70%	0.217 (0.642)	44.26%	50.83%	54.19%	54.55%	3.703 (0.295)
At least 20% of employees older than 50 in their organisation	54.23%	55.80%	52.59%	0.739 (0.390)	50.00%	54.17%	55.07%	57.02%	1.325 .723)

E. Apprenticeship training characterics									
Participant's knowledge of and experience with AT									
None	24.65%	23.48%	25.86%	0.542 (0.462)	26.23%	22.92%	25.55%	24.79%	0.653 (0.884)
Knowledge of AT	57.74%	57.73%	57.76%	0.000 (0.995)	61.48%	57.92%	55.07%	58.68%	1.410 (0.703)
Experience with providing AT	16.20%	15.75%	16.67%	0.111 (0.739)	10.66%	16.67%	17.62%	18.18%	3.489 (0.322)
Experience with hiring candidates who participated in AT	10.56%	11.05%	10.06%	0.185 (0.667)	8.20%	10.83%	11.01%	11.57%	0.920 (0.821)
Organisations' training provision									
Training in classrooms	63.38%	61.88%	64.94%	0.718 (0.397)	65.57%	65.00%	63.88%	57.02%	2.654 (0.448)
Training online	61.27%	58.01%	64.66%	3.301 (0.069)	60.66%	62.08%	63.00%	57.02%	1.290 (0.731)
Workplace training for employees	80.28%	81.22%	79.31%	0.407 (0.524)	83.61%	78.33%	80.62%	80.17%	1.445 (0.695)
Workplace training for the unemployed	16.90%	15.75%	18.10%	0.702 (0.402)	14.75%	19.17%	17.62%	13.22%	2.527 (0.470)
Workplace training for students	33.80%	31.77%	35.92%	1.367 (0.242)	36.89%	36.25%	29.52%	33.88%	3.26 .388)
F. Socially desirable characterics									
Egoistic response tendency (s.)	3.327	3.324	3.331	0.173 (0.678)	3.303	3.385	3.266	3.350	11.355 (0.010)
Moralistic response tendency (s.)	3.213	3.211	3.217	0.025 (0.875)	3.233	3.243	3.189	3.183	1.462 (0.691)

Notes. Abbreviations used: c. (continuous variable). s. (scale ranging from 0 to 10) and AT (Apprenticeship Training). The independence between the participant characteristic and the experimental condition is tested by a Pearson Chi-square test for indicator variables and by a Kruskal–Wallis test for continuous variables. The resulting X^2 and accompanying p-value are presented in the final column.

Table A.3 Linear regression results with interview probability as outcome (full results)

	Without interaction variables	With interaction variables
A. CANDIDATE CHARACTERISTICS		
Age (c.)	−0.091*** (0.010)	−0.127*** (0.023)
Relevant work experience (ref. = None) (RWE1)		
None but willingness to participate in AT (RWE2)	0.773** (0.261)	0.295 (0.496)
1 year through participation in AT (RWE3)	1.014** (0.298)	0.367 (0.524)
1 year through regular contract (RWE4)	1.594*** (0.343)	0.829 (0.514)
Age x Relevant work experience (ref. = None)		
Age x None but willingness to participate in AT		0.035 (0.030)
Age x 1 year through participation in AT		0.047 (0.031)
Age x 1 year through regular contract		0.057† (0.030)
Related work experience (ref. = None)		
5 years in different job in same sector	1.073** (0.312)	1.069** (0.314)
5 years in similar job in different sector	0.892** (0.318)	0.844** (0.315)
5 years in similar job in same sector	1.638*** (0.318)	1.578*** (0.321)
Gender (ref. = Man)		
Woman	0.076 (0.207)	0.080 (0.206)
Commuting distance (ref. = 0-5km)		
5-10km	0.074 (0.270)	0.099 (0.275)
10-50km	−0.186 (0.279)	−0.171 (0.286)
>50km	−1.634*** (0.331)	−1.607*** (0.337)
Extracurricular activities (ref. = None)		
Cultural activities	0.468 (0.287)	0.490† (0.290)
Sports activities	−0.228 (0.283)	−0.215 (0.283)
Volunteering	0.024 (0.287)	0.025 (0.291)
B. JOB CHARACTERISTICS		
Advanced education (s.)	−0.051 (0.078)	−0.048 (0.078)
Frequent customer contact (s.)	−0.074 (0.065)	−0.075 (0.065)
Substantial physical effort (s.)	−0.112 (0.069)	−0.116† (0.069)
Proficient technological skills (s.)	−0.071 (0.084)	−0.065 (0.084)
Many female workers (s.)	0.062 (0.064)	0.059 (0.064)
Many older workers (s.)	0.099 (0.076)	0.102 (0.077)
Many changes in tasks (s.)	0.204* (0.084)	0.200* (0.084)
Increasing task difficulty (s.)	−0.182† (0.099)	−0.169† (0.098)
Continuing education (s.)	−0.005 (0.108)	−0.014 (0.109)
C. RECRUITER CHARACTERISTICS		
Age (c.)	−0.037* (0.015)	−0.036* (0.015)
Gender (ref. = Man)		
Woman	−0.592 (0.382)	−0.592 (0.384)
Degree (ref. = Maximum secondary education)		
Tertiary education	−0.516 (0.373)	−0.540 (0.373)
Involvement in selection decisions (ref. = Less than weekly)		
At least weekly	−0.087 (0.345)	−0.103 (0.345)

Experience in selection decisions (ref. = Maximum 5 years)		
More than 5 years	0.192 (0.366)	0.195 (0.366)
No knowledge of or experience with AT (ref. = No)		
Yes	−0.060 (0.937)	−0.071 (0.935)
Knowledge of AT's principles (ref. = No)		
Yes	−0.324 (0.814)	−0.338 (0.813)
Experience with providing AT (ref. = No)		
Yes	0.975 (0.750)	0.984 (0.745)
Experience with hiring candidates who participated in AT (ref. = No)		
Yes	−0.129 (0.637)	−0.183 (0.638)
Employees older than 50 in their organisation (ref. = Less than 20%)		
At least 20%	0.434 (0.409)	0.462 (0.406)
Employees in their organisation (ref. = Less than 50)		
At least 50	1.080** (0.392)	1.095** (0.392)
Classroom training offered by their organisation (ref. = No)		
Yes	0.851† (0.461)	0.884† (0.465)
Online training offered by their organisation (ref. = No)		
Yes	−0.542 (0.459)	−0.555 (0.458)
Workplace training for employees offered by their organisation (ref. = No)		
Yes	0.151 (0.439)	0.142 (0.439)
Workplace training for the unemployed offered by their organisation (ref. = No)		
Yes	0.800* (0.400)	0.805* (0.401)
Workplace training for students offered by their organisation (ref. = No)		
Yes	−0.121 (0.403)	−0.115 (0.404)
E. ADDITIONAL PARAMETERS AND DIAGNOSTICS		
Constant	7.059*** (1.371)	7.544*** (1.413)
Adjusted R^2	0.279	0.279
Wald tests (F-statistic)		
RWE1 = RWE2	8.804**	
RWE1 = RWE3	11.566***	
RWE1 = RWE4	21.655***	
RWE2 = RWE3	0.887	
RWE2 = RWE4	6.648*	
RWE3 = RWE4	3.727†	

Notes. Abbreviations used: c. (continuous variable), ref. (reference category), s. (scale ranging from 0 to 10), and AT (Apprenticeship Training). The presented statistics are coefficient estimates with their standard errors between parentheses. Standard errors are corrected for clustering of the observations at the participant level. Significances are indicated as *** when p < .001, ** when p < .01, * when p < .05, and † when p < .10.

Table A.4 Robustness checks for linear regression results with interview probability as the outcome

	Without interaction variables			With interaction variables		
	Outcome: hiring probability	Candidate's age: dummy aged 45 or older	Candidate's age: dummy aged 50 or older	Outcome: hiring probability	Candidate's age: dummy aged 45 or older	Candidate's age: dummy aged 50 or older
A. CANDIDATE CHARACTERISTICS						
Age (c.)	−0.075*** (0.009)	−1.397*** (0.190)	−1.628*** (0.208)	−0.112*** (0.019)	−1.824*** (0.508)	−1.859** (0.537)
Relevant work experience (ref. = None)						
None but willingness to participate in AT	0.743** (0.231)	0.766** (0.272)	0.729** (0.273)	0.258 (0.438)	0.573 (0.390)	0.702† (0.374)
1 year through participation in AT	0.713** (0.260)	1.048** (0.307)	1.002** (0.306)	0.101 (0.451)	0.747 (0.455)	0.851* (0.383)
1 year through regular contract	1.250*** (0.274)	1.608*** (0.350)	1.571*** (0.347)	0.338 (0.437)	1.308** (0.436)	1.415** (0.415)
Age x Relevant work experience (ref. = None)						
Age x None but willingness to participate in AT				0.035 (0.025)	0.377 (0.595)	0.065 (0.621)
Age x 1 year through participation in AT				0.044† (0.026)	0.602 (0.676)	0.418 (0.663)
Age x 1 year through regular contract				0.067** (0.025)	0.608 (0.606)	0.444 (0.694)
Related work experience (ref. = None)						
5 years in different job in same sector	1.089*** (0.260)	1.027** (0.317)	1.119*** (0.309)	1.077*** (0.261)	1.010** (0.318)	1.119*** (0.310)
5 years in similar job in different sector	0.866** (0.257)	0.855** (0.316)	0.949** (0.308)	0.807** (0.255)	0.824* (0.317)	0.930** (0.308)
5 years in similar job in same sector	1.381*** (0.275)	1.583*** (0.312)	1.626*** (0.313)	1.305*** (0.275)	1.548*** (0.315)	1.606*** (0.315)
Gender (ref. = Man)						
Woman	0.040 (0.179)	0.077 (0.211)	0.096 (0.211)	0.045 (0.177)	0.088 (0.210)	0.104 (0.212)
Commuting distance (ref. = 0-5km)						
5-10km	0.351 (0.232)	0.207 (0.274)	0.039 (0.270)	0.379 (0.235)	0.214 (0.278)	0.047 (0.276)
10-50km	−0.054 (0.244)	−0.147 (0.283)	−0.238 (0.286)	−0.047 (0.251)	−0.143 (0.287)	−0.229 (0.291)
>50km	−1.315*** (0.281)	−1.594*** (0.335)	−1.670*** (0.334)	−1.297*** (0.286)	−1.577*** (0.337)	−1.673*** (0.336)
Extracurricular activities (ref. = None)						
Cultural activities	0.171 (0.247)	0.471 (0.286)	0.633* (0.293)	0.200 (0.247)	0.491† (0.286)	0.654* (0.294)
Sports activities	−0.200 (0.259)	−0.206 (0.289)	−0.080 (0.293)	−0.184 (0.259)	−0.189 (0.289)	−0.068 (0.294)
Volunteering	−0.058 (0.241)	0.019 (0.289)	0.180 (0.295)	−0.051 (0.245)	0.039 (0.292)	0.197 (0.297)
B. JOB CHARACTERISTICS						
Advanced education (s.)	−0.068 (0.065)	−0.064 (0.078)	−0.048 (0.078)	−0.064 (0.065)	−0.060 (0.078)	−0.047 (0.078)

Frequent customer contact (s.)	−0.124* (0.051)	−0.090 (0.066)	−0.075 (0.066)	−0.126* (0.051)	−0.092 (0.066)	−0.077 (0.066)
Substantial physical effort (s.)	−0.074 (0.060)	−0.105 (0.069)	−0.111 (0.069)	−0.078 (0.060)	−0.107 (0.070)	−0.115 (0.070)
Proficient technological skills (s.)	0.010 (0.068)	−0.070 (0.085)	−0.079 (0.085)	0.017 (0.068)	−0.066 (0.085)	−0.077 (0.085)
Many female workers (s.)	0.091† (0.047)	0.069 (0.064)	0.061 (0.065)	0.087† (0.047)	0.068 (0.065)	0.061 (0.066)
Many older workers (s.)	−0.046 (0.063)	0.084 (0.077)	0.088 (0.076)	−0.045 (0.063)	0.087 (0.078)	0.091 (0.078)
Many changes in tasks (s.)	0.201** (0.076)	0.201* (0.084)	0.203* (0.084)	0.196* (0.076)	0.198* (0.083)	0.201* (0.084)
Increasing task difficulty (s.)	−0.159† (0.089)	−0.186† (0.101)	−0.191† (0.100)	−0.144 (0.089)	−0.180† (0.101)	−0.188† (0.100)
Continuing education (s.)	0.016 (0.098)	0.010 (0.108)	0.009 (0.107)	0.008 (0.098)	0.005 (0.109)	0.008 (0.108)
C. RECRUITER CHARACTERISTICS						
Age (c.)	−0.014 (0.013)	−0.033* (0.015)	−0.035* (0.015)	−0.014 (0.013)	−0.036* (0.015)	−0.035* (0.015)
Gender (ref. = Man)						
Woman	−0.594* (0.284)	−0.649† (0.383)	−0.559 (0.386)	−0.587* (0.286)	−0.592 (0.384)	−0.553 (0.388)
Degree (ref. = Maximum secondary education)						
Tertiary education	−0.361 (0.335)	−0.457 (0.370)	−0.581 (0.375)	−0.384 (0.332)	−0.540 (0.373)	−0.588 (0.379)
Involvement in selection decisions (ref. = Less than weekly)						
At least weekly	0.203 (0.314)	−0.029 (0.351)	−0.067 (0.349)	0.191 (0.314)	−0.103 (0.345)	−0.083 (0.349)
Experience in selection decisions (ref. = Maximum 5 years)						
More than 5 years	−0.060 (0.304)	0.193 (0.366)	0.141 (0.367)	−0.060 (0.304)	0.195 (0.366)	0.141 (0.367)
No knowledge of or experience with AT (ref. = No)						
Yes	−0.751 (0.733)	−0.067 (0.950)	−0.037 (0.939)	−0.769 (0.737)	−0.071 (0.935)	−0.053 (0.942)
Knowledge of AT's principles (ref. = No)						
Yes	−0.708 (0.635)	−0.328 (0.822)	−0.279 (0.818)	−0.722 (0.641)	−0.338 (0.813)	−0.295 (0.820)
Experience with providing AT (ref. = No)						
Yes	0.162 (0.569)	0.929 (0.761)	1.057 (0.757)	0.170 (0.571)	0.984 (0.745)	1.055 (0.756)
Experience with hiring candidates who participated in AT (ref. = No)						
Yes	0.088 (0.584)	−0.295 (0.632)	−0.206 (0.614)	0.027 (0.592)	−0.183 (0.638)	−0.220 (0.618)
Employees older than 50 in their organisation (ref. = Less than 20%)						
At least 20%	0.152 (0.326)	0.499 (0.410)	0.436 (0.413)	0.175 (0.322)	0.462 (0.406)	0.437 (0.413)
Employees in their organisation (ref. = Less than 50)						
At least 50	1.141*** (0.318)	1.110** (0.398)	1.124** (0.399)	1.161*** (0.316)	1.095** (0.392)	1.132** (0.402)
Classroom training offered by their organisation (ref. = No)						

Yes	0.480 (0.404)	0.834† (0.462)	0.890† (0.463)	0.521 (0.405)	0.884† (0.465)	0.921† (0.466)
Online training offered by their organisation (ref. = No)						
Yes	−0.541 (0.362)	−0.594 (0.462)	−0.591 (0.458)	−0.559 (0.357)	−0.555 (0.458)	−0.613 (0.463)
Workplace training for employees offered by their organisation (ref. = No)						
Yes	−0.153 (0.361)	0.157 (0.432)	0.084 (0.449)	−0.170 (0.361)	0.142 (0.439)	0.092 (0.453)
Workplace training for the unemployed offered by their organisation (ref. = No)						
Yes	0.913* (0.358)	0.788† (0.402)	0.838* (0.398)	0.915* (0.361)	0.805* (0.401)	0.853* (0.400)
Workplace training for students offered by their organisation (ref. = No)						
Yes	−0.052 (0.334)	−0.116 (0.410)	−0.070 (0.398)	−0.043 (0.333)	−0.115 (0.404)	−0.065 (0.399)
D. ADDITIONAL PARAMETERS AND DIAGNOSTICS						
Constant	6.215*** (1.163)	6.442*** (1.369)	6.321*** (1.361)	6.724*** (1.217)	6.639*** (1.386)	6.397*** (1.378)
Adjusted R^2	0.256	0.257	0.268	0.258	0.254	0.265
Wald tests (F-statistic)						
RWE1 = RWE2	10.350**	7.953**	7.109**			
RWE1 = RWE3	7.490**	11.673***	10.741***			
RWE1 = RWE4	20.857***	21.089***	20.481***			
RWE2 = RWE3	0.018	1.203	1.136			
RWE2 = RWE4	3.508†	6.962**	7.149**			
RWE3 = RWE4	3.971*	3.498†	3.565†			

Notes. Abbreviations used: c. (continuous variable). ref. (reference category). s. (scale ranging from 0 to 10). and AT (Apprenticeship Training). The presented statistics are coefficient estimates with their standard errors between parentheses. Standard errors are corrected for clustering of the observations at the participant level. Significances are indicated as *** when p < .001. ** when p < .01. * when p < .05. and † when p < .10.

Table A.5 Linear regression results with perception variables regarding the hypotheses as the outcomes (full results)

	Without interaction variables			With interaction variables		
	Technological skills	Trainability	Flexibility	Technological skills	Trainability	Flexibility
A. CANDIDATE CHARACTERISTICS						
Age (con.)	−0.044*** (0.009)	−0.059*** (0.008)	−0.033*** (0.008)	−0.063** (0.019)	−0.063** (0.021)	0.008 (0.021)
Relevant work experience (ref. = None)						
None but willingness to participate in AT	0.314 (0.219)	0.347† (0.202)	0.099 (0.187)	−0.097 (0.391)	0.418 (0.393)	0.850* (0.409)
1 year through participation in AT	0.395† (0.212)	0.422* (0.201)	0.021 (0.191)	0.245 (0.411)	0.252 (0.427)	0.918* (0.414)
1 year through regular contract	0.798*** (0.213)	0.689** (0.229)	0.039 (0.208)	0.371 (0.360)	0.569 (0.352)	0.346 (0.362)
Age x Relevant work experience (ref. = None)						
Age x None but willingness to participate in AT				0.030 (0.024)	−0.005 (0.026)	−0.053* (0.027)
Age x 1 year through participation in AT				0.010 (0.025)	0.013 (0.027)	−0.065* (0.026)
Age x 1 year through regular contract				0.032 (0.024)	0.009 (0.026)	−0.021 (0.024)
Related work experience (ref. = None)						
5 years in different job in same sector	0.860*** (0.219)	0.605** (0.199)	0.243 (0.187)	0.871*** (0.219)	0.593** (0.199)	0.249 (0.192)
5 years in similar job in different sector	0.958*** (0.222)	0.652** (0.186)	0.427* (0.194)	0.931*** (0.223)	0.646** (0.187)	0.459* (0.194)
5 years in similar job in same sector	1.340*** (0.247)	0.829*** (0.200)	0.253 (0.213)	1.331*** (0.247)	0.802*** (0.200)	0.224 (0.213)
Gender (ref. = Man)						
Woman	−0.134 (0.146)	0.029 (0.124)	−0.097 (0.131)	−0.138 (0.146)	0.033 (0.124)	−0.103 (0.132)
Commuting distance (ref. = 0-5km)						
5-10km	−0.006 (0.194)	−0.196 (0.179)	−0.211 (0.194)	0.012 (0.199)	−0.198 (0.182)	−0.248 (0.198)
10-50km	0.129 (0.243)	0.109 (0.184)	0.124 (0.194)	0.124 (0.246)	0.115 (0.188)	0.073 (0.195)
>50km	−0.013 (0.244)	−0.132 (0.190)	−0.267 (0.218)	−0.005 (0.245)	−0.129 (0.189)	−0.341 (0.217)
Extracurricular activities (ref. = None)						
Cultural activities	−0.067 (0.213)	−0.180 (0.200)	−0.319 (0.194)	−0.075 (0.210)	−0.161 (0.199)	−0.319† (0.191)
Sports activities	−0.091 (0.243)	0.010 (0.193)	−0.064 (0.190)	−0.088 (0.246)	0.016 (0.191)	−0.067 (0.185)
Volunteering	−0.124 (0.208)	0.046 (0.196)	0.102 (0.173)	−0.124 (0.209)	0.049 (0.198)	0.121 (0.175)
B. JOB CHARACTERISTICS						
Advanced education (s.)	−0.085 (0.055)	−0.046 (0.057)	−0.015 (0.051)	−0.085 (0.056)	−0.044 (0.058)	−0.018 (0.051)
Frequent customer contact (s.)	−0.046 (0.044)	0.008 (0.040)	0.034 (0.035)	−0.045 (0.043)	0.007 (0.040)	0.037 (0.034)

Substantial physical effort (s.)	−0.034 (0.046)	−0.065 (0.048)	−0.099* (0.046)	−0.034 (0.046)	−0.066 (0.048)	−0.096* (0.046)
Proficient technological skills (s.)	0.057 (0.049)	0.003 (0.050)	0.060 (0.046)	0.060 (0.049)	0.004 (0.049)	0.055 (0.045)
Many female workers (s.)	0.052 (0.037)	0.042 (0.037)	0.024 (0.034)	0.051 (0.037)	0.041 (0.037)	0.024 (0.034)
Many older workers (s.)	−0.079 (0.064)	−0.028 (0.068)	0.044 (0.066)	−0.079 (0.065)	−0.027 (0.070)	0.037 (0.066)
Many changes in tasks (s.)	0.000 (0.065)	−0.017 (0.061)	0.091 (0.056)	−0.004 (0.065)	−0.017 (0.062)	0.097† (0.054)
Increasing task difficulty (s.)	−0.128 (0.082)	−0.158† (0.081)	−0.126† (0.075)	−0.121 (0.082)	−0.157† (0.080)	−0.143* (0.072)
Continuing education (s.)	0.106 (0.074)	0.095 (0.082)	0.036 (0.085)	0.103 (0.074)	0.092 (0.082)	0.050 (0.084)
C. RECRUITER CHARACTERISTICS						
Age (con.)	0.002 (0.010)	0.000 (0.010)	0.007 (0.010)	0.002 (0.010)	0.000 (0.010)	0.008 (0.010)
Gender (ref. = Man)						
Woman	−0.343 (0.256)	−0.382 (0.246)	−0.209 (0.239)	−0.340 (0.257)	−0.382 (0.246)	−0.193 (0.236)
Degree (ref. = Maximum secondary education)						
Tertiary education	−0.107 (0.275)	−0.045 (0.317)	0.035 (0.317)	−0.108 (0.279)	−0.055 (0.320)	0.080 (0.318)
Involvement in selection decisions (ref. = Less than weekly)						
At least weekly	0.459† (0.259)	0.398 (0.244)	0.355 (0.224)	0.458† (0.258)	0.394 (0.245)	0.402† (0.225)
Experience in selection decisions (ref. = Maximum 5 years)						
More than 5 years	−0.191 (0.268)	−0.032 (0.293)	−0.297 (0.285)	−0.170 (0.267)	−0.045 (0.289)	−0.321 (0.281)
No knowledge of or experience with AT (ref. = No)						
Yes	−0.621 (0.590)	−0.573 (0.556)	−0.011 (0.497)	−0.626 (0.590)	−0.576 (0.560)	−0.009 (0.490)
Knowledge of AT's principles (ref. = No)						
Yes	−0.316 (0.511)	−0.306 (0.483)	0.211 (0.433)	−0.317 (0.512)	−0.312 (0.489)	0.219 (0.427)
Experience with providing AT (ref. = No)						
Yes	−0.736 (0.485)	−0.241 (0.474)	−0.032 (0.382)	−0.732 (0.484)	−0.238 (0.479)	−0.047 (0.376)
Experience with hiring candidates who participated in AT (ref. = No)						
Yes	0.231 (0.474)	0.980† (0.502)	0.965* (0.439)	0.197 (0.479)	0.976† (0.512)	1.011* (0.446)
Employees older than 50 in their organisation (ref. = Less than 20%)						
At least 20%	0.044 (0.259)	0.167 (0.245)	0.074 (0.234)	0.049 (0.257)	0.176 (0.246)	0.030 (0.237)
Employees in their organisation (ref. = Less than 50)						
At least 50	0.631* (0.250)	0.381 (0.238)	0.514* (0.254)	0.634* (0.250)	0.389 (0.240)	0.520* (0.256)
Classroom training offered by their organisation (ref. = No)						
Yes	−0.297 (0.308)	−0.111 (0.322)	0.009 (0.334)	−0.298 (0.310)	−0.093 (0.326)	−0.013 (0.328)

Online training offered by their organisation (ref. = No)						
Yes	0.563 (0.381)	−0.303 (0.331)	−0.144 (0.320)	0.572 (0.378)	−0.318 (0.333)	−0.165 (0.312)
Workplace training for employees offered by their organisation (ref. = No)						
Yes	−0.129 (0.284)	−0.048 (0.306)	0.177 (0.271)	−0.143 (0.285)	−0.043 (0.305)	0.197 (0.274)
Workplace training for the unemployed offered by their organisation (ref. = No)						
Yes	0.287 (0.304)	0.747* (0.327)	0.720** (0.266)	0.285 (0.304)	0.750* (0.328)	0.706** (0.261)
Workplace training for students offered by their organisation (ref. = No)						
Yes	−0.604* (0.268)	−0.554* (0.244)	−0.278 (0.217)	−0.606* (0.267)	−0.548* (0.247)	−0.263 (0.216)
D. ADDITIONAL PARAMETERS AND DIAGNOSTICS						
Constant	5.832*** (0.970)	6.630*** (0.953)	4.747*** (0.895)	6.078*** (0.971)	6.678*** (0.963)	4.123*** (0.889)
Ajusted R^2	0.221	0.248	0.150	0.223	0.250	0.164
Wald tests (F-statistic)						
RWE1 = RWE2	2.069	2.938†	0.280			
RWE1 = RWE3	3.477†	4.423*	0.012			
RWE1 = RWE4	14.096***	0.043**	0.034			
RWE2 = RWE3	0.227	0.188	0.214			
RWE2 = RWE4	4.708*	2.903†	0.116			
RWE3 = RWE4	2.989†	1.950	0.011			
Constant	5.832*** (0.970)	6.630*** (0.953)	4.747*** (0.895)	6.078*** (0.971)	6.678*** (0.963)	4.123*** (0.889)

Notes. Abbreviations used: c. (continuous variable). ref. (reference category). s. (scale ranging from 0 to 10). and AT (Apprenticeship Training). The presented statistics are coefficient estimates with their standard errors between parentheses. Standard errors are corrected for clustering of the observations at the participant level. Significances are indicated as *** when p < .001. ** when p < .01. * when p < .05. and † when p < .10.

Table A.6 Robustness checks for linear regression results with perception variables regarding the hypotheses as the outcomes

	Candidate's age: dummy aged 45 or older					
	Without interaction variables			With interaction variables		
	Technological skills	Trainability	Flexibility	Technological skills	Trainability	Flexibility
A. CANDIDATE CHARACTERISTICS						
Age (c.)	−0.568** (0.161)	−0.899*** (0.148)	−0.454** (0.141)	−0.800* (0.381)	−0.998* (0.397)	0.308 (0.387)
Relevant work experience (ref. = None)						
None but willingness to participate in AT	0.315 (0.222)	0.345† (0.207)	0.099 (0.185)	0.116 (0.282)	0.413 (0.299)	0.617* (0.291)
1 year through participation in AT	0.418† (0.215)	0.450* (0.202)	0.037 (0.189)	0.392 (0.323)	0.288 (0.329)	0.557† (0.322)
1 year through regular contract	0.811*** (0.213)	0.707** (0.231)	0.049 (0.206)	0.582* (0.275)	0.604* (0.277)	0.293 (0.287)
Age x Relevant work experience (ref. = None)						
Age x None but willingness to participate in AT				0.403 (0.441)	−0.139 (0.457)	−1.020* (0.444)
Age x 1 year through participation in AT				0.048 (0.514)	0.332 (0.532)	−1.032* (0.508)
Age x 1 year through regular contract				0.474 (0.468)	0.215 (0.512)	−0.464 (0.445)
Related work experience (ref. = None)						
5 years in different job in same sector	0.844*** (0.224)	0.575** (0.203)	0.240 (0.215)	0.838*** (0.227)	0.561** (0.204)	0.244 (0.217)
5 years in similar job in different sector	0.946*** (0.224)	0.624** (0.187)	0.416* (0.197)	0.930*** (0.230)	0.616** (0.193)	0.473* (0.199)
5 years in similar job in same sector	1.320*** (0.247)	0.797*** (0.199)	0.227 (0.188)	1.322*** (0.251)	0.757*** (0.199)	0.226 (0.194)
Gender (ref. = Man)						
Woman	−0.133 (0.149)	0.034 (0.127)	−0.094 (0.133)	−0.131 (0.149)	0.042 (0.127)	−0.105 (0.133)
Commuting distance (ref. = 0-5km)						
5-10km	0.055 (0.201)	−0.109 (0.185)	−0.166 (0.200)	0.077 (0.201)	−0.124 (0.186)	−0.196 (0.200)
10-50km	0.134 (0.247)	0.136 (0.191)	0.131 (0.200)	0.123 (0.250)	0.144 (0.192)	0.115 (0.197)
>50km	0.006 (0.248)	−0.103 (0.195)	−0.253 (0.221)	0.019 (0.247)	−0.105 (0.194)	−0.296 (0.218)
Extracurricular activities (ref. = None)						
Cultural activities	−0.060 (0.218)	−0.182 (0.206)	−0.316 (0.197)	−0.074 (0.216)	−0.152 (0.204)	−0.335† (0.194)
Sports activities	−0.078 (0.249)	0.021 (0.198)	−0.057 (0.193)	−0.075 (0.249)	0.041 (0.195)	−0.049 (0.187)
Volunteering	−0.119 (0.211)	0.044 (0.198)	0.103 (0.173)	−0.107 (0.213)	0.059 (0.199)	0.104 (0.174)
B. JOB CHARACTERISTICS						
Advanced education (s.)	−0.092† (0.055)	−0.054 (0.057)	−0.019 (0.050)	−0.093† (0.055)	−0.050 (0.057)	−0.022 (0.051)

Frequent customer contact (s.)	−0.055 (0.043)	−0.004 (0.040)	0.028 (0.035)	−0.055 (0.043)	−0.005 (0.040)	0.029 (0.034)
Substantial physical effort (s.)	−0.031 (0.047)	−0.060 (0.048)	−0.097* (0.046)	−0.030 (0.048)	−0.061 (0.048)	−0.093* (0.046)
Proficient technological skills (s.)	0.057 (0.049)	0.003 (0.050)	0.059 (0.047)	0.061 (0.049)	0.003 (0.050)	0.052 (0.046)
Many female workers (s.)	0.056 (0.037)	0.047 (0.036)	0.027 (0.034)	0.056 (0.037)	0.046 (0.037)	0.026 (0.034)
Many older workers (s.)	−0.087 (0.064)	−0.038 (0.068)	0.038 (0.067)	−0.088 (0.065)	−0.036 (0.070)	0.032 (0.067)
Many changes in tasks (s.)	−0.002 (0.064)	−0.018 (0.061)	0.089 (0.055)	−0.003 (0.064)	−0.019 (0.061)	0.094† (0.054)
Increasing task difficulty (s.)	−0.130 (0.082)	−0.161* (0.081)	−0.128† (0.075)	−0.129 (0.081)	−0.159† (0.081)	−0.141† (0.073)
Continuing education (s.)	0.116 (0.074)	0.105 (0.082)	0.043 (0.085)	0.115 (0.074)	0.103 (0.081)	0.056 (0.084)
C. RECRUITER CHARACTERISTICS						
Age (c.)	0.004 (0.010)	0.002 (0.010)	0.008 (0.010)	0.004 (0.010)	0.002 (0.010)	0.009 (0.010)
Gender (ref. = Man)						
Woman	−0.375 (0.255)	−0.421† (0.244)	−0.233 (0.239)	−0.376 (0.256)	−0.424† (0.246)	−0.210 (0.238)
Degree (ref. = Maximum secondary education)						
Tertiary education	−0.074 (0.275)	−0.002 (0.317)	0.063 (0.316)	−0.069 (0.277)	−0.010 (0.318)	0.086 (0.314)
Involvement in selection decisions (ref. = Less than weekly)						
At least weekly	0.492† (0.261)	0.435† (0.246)	0.379† (0.224)	0.496† (0.259)	0.427† (0.247)	0.417† (0.224)
Experience in selection decisions (ref. = Maximum 5 years)						
More than 5 years	−0.196 (0.267)	−0.031 (0.290)	−0.299 (0.283)	−0.183 (0.266)	−0.043 (0.285)	−0.329 (0.281)
No knowledge of or experience with AT (ref. = No)						
Yes	−0.634 (0.597)	−0.585 (0.563)	−0.020 (0.501)	−0.661 (0.595)	−0.575 (0.564)	−0.008 (0.496)
Knowledge of AT's principles (ref. = No)						
Yes	−0.325 (0.516)	−0.311 (0.489)	0.204 (0.435)	−0.342 (0.516)	−0.311 (0.494)	0.223 (0.431)
Experience with providing AT (ref. = No)						
Yes	−0.767 (0.489)	−0.274 (0.477)	−0.055 (0.381)	−0.779 (0.490)	−0.260 (0.482)	−0.073 (0.379)
Experience with hiring candidates who participated in AT (ref. = No)						
Yes	0.149 (0.475)	0.867† (0.504)	0.900* (0.439)	0.125 (0.477)	0.863† (0.514)	0.952* (0.444)
Employees older than 50 in their organisation (ref. = Less than 20%)						
At least 20%	0.074 (0.261)	0.209 (0.247)	0.097 (0.235)	0.069 (0.257)	0.230 (0.246)	0.037 (0.238)
Employees in their organisation (ref. = Less than 50)						
At least 50	0.655* (0.251)	0.403† (0.240)	0.530* (0.255)	0.656* (0.252)	0.410† (0.240)	0.529* (0.255)
Classroom training offered by their organisation (ref. = No)						

Yes	−0.304 (0.309)	−0.122 (0.324)	0.001 (0.333)	−0.299 (0.310)	−0.106 (0.327)	−0.018 (0.331)
Online training offered by their organisation (ref. = No)						
Yes	0.524 (0.385)	−0.338 (0.335)	−0.170 (0.319)	0.530 (0.384)	−0.361 (0.338)	−0.179 (0.315)
Workplace training for employees offered by their organisation (ref. = No)						
Yes	−0.117 (0.284)	−0.049 (0.303)	0.185 (0.271)	−0.136 (0.285)	−0.037 (0.302)	0.206 (0.273)
Workplace training for the unemployed offered by their organisation (ref. = No)						
Yes	0.280 (0.300)	0.741* (0.327)	0.717** (0.265)	0.276 (0.301)	0.750* (0.327)	0.707** (0.260)
Workplace training for students offered by their organisation (ref. = No)						
Yes	−0.605* (0.269)	−0.550* (0.246)	−0.278 (0.216)	−0.602* (0.269)	−0.546* (0.248)	−0.265 (0.216)
D. ADDITIONAL PARAMETERS AND DIAGNOSTICS						
Constant	5.464*** (0.971)	6.235*** (0.954)	4.488*** (0.882)	5.581*** (0.956)	6.259*** (0.955)	4.080*** (0.873)
Ajusted R^2	0.202	0.226	0.139	0.204	0.229	0.149
Wald tests (F-statistic)						
RWE1 = RWE2	2.005	2.789†	0.284			
RWE1 = RWE3	3.777†	4.993*	0.039			
RWE1 = RWE4	14.533***	9.364**	0.056			
RWE2 = RWE3	0.362	0.362	0.131			
RWE2 = RWE4	4.860*	3.307†	0.082			
RWE3 = RWE4	2.844†	1.784	0.004			

Notes. Abbreviations used: c. (continuous variable). ref. (reference category). s. (scale ranging from 0 to 10). and AT (Apprenticeship Training). The presented statistics are coefficient estimates with their standard errors between parentheses. Standard errors are corrected for clustering of the observations at the participant level. Significances are indicated as *** when p < .001. ** when p < .01. * when p < .05. and † when p < .10.

Table A.6 Robustness checks for linear regression results with perception variables regarding the hypotheses as the outcomes (continued)

	Candidate's age: dummy aged 50 or older					
	Without interaction variables			With interaction variables		
	Technological skills	Trainability	Flexibility	Technological skills	Trainability	Flexibility
A. CANDIDATE CHARACTERISTICS						
Age (c.)	−0.790*** (0.170)	−1.053*** (0.165)	−0.494** (0.158)	−0.681† (0.388)	−0.804† (0.421)	0.496 (0.401)
Relevant work experience (ref. = None)						
None but willingness to participate in AT	0.292 (0.223)	0.319 (0.207)	0.091 (0.186)	0.350 (0.291)	0.505† (0.272)	0.517* (0.253)
1 year through participation in AT	0.389† (0.216)	0.412* (0.203)	0.023 (0.191)	0.464 (0.292)	0.483† (0.282)	0.606* (0.264)
1 year through regular contract	0.785*** (0.215)	0.670** (0.231)	0.038 (0.206)	0.774** (0.274)	0.748** (0.260)	0.300 (0.252)
Age x Relevant work experience (ref. = None)						
Age x None but willingness to participate in AT				−0.150 (0.479)	−0.485 (0.496)	−1.098* (0.470)
Age x 1 year through participation in AT				−0.205 (0.511)	−0.163 (0.536)	−1.568** (0.515)
Age x 1 year through regular contract				0.051 (0.520)	−0.185 (0.556)	−0.646 (0.467)
Related work experience (ref. = None)						
5 years in different job in same sector	0.876*** (0.220)	0.628** (0.201)	0.267 (0.217)	0.873*** (0.220)	0.625** (0.201)	0.257 (0.216)
5 years in similar job in different sector	0.981*** (0.216)	0.694*** (0.183)	0.446* (0.194)	0.986*** (0.220)	0.708*** (0.187)	0.509** (0.192)
5 years in similar job in same sector	1.329*** (0.245)	0.816*** (0.195)	0.238 (0.187)	1.328*** (0.246)	0.814*** (0.197)	0.264 (0.186)
Gender (ref. = Man)						
Woman	−0.125 (0.149)	0.041 (0.128)	−0.091 (0.133)	−0.125 (0.149)	0.050 (0.128)	−0.097 (0.131)
Commuting distance (ref. = 0-5km)						
5-10km	−0.020 (0.195)	−0.219 (0.181)	−0.216 (0.195)	−0.027 (0.200)	−0.235 (0.185)	−0.275 (0.199)
10-50km	0.105 (0.244)	0.071 (0.186)	0.097 (0.197)	0.099 (0.245)	0.066 (0.187)	0.055 (0.195)
>50km	−0.026 (0.246)	−0.160 (0.192)	−0.276 (0.221)	−0.036 (0.246)	−0.179 (0.189)	−0.329 (0.218)
Extracurricular activities (ref. = None)						
Cultural activities	0.013 (0.216)	−0.065 (0.205)	−0.264 (0.197)	0.013 (0.216)	−0.063 (0.204)	−0.300 (0.196)
Sports activities	−0.021 (0.243)	0.108 (0.192)	−0.016 (0.191)	−0.021 (0.245)	0.097 (0.192)	−0.049 (0.192)
Volunteering	−0.049 (0.210)	0.148 (0.192)	0.153 (0.171)	−0.047 (0.213)	0.147 (0.193)	0.131 (0.171)
B. JOB CHARACTERISTICS						
Advanced education (s.)	−0.084 (0.056)	−0.045 (0.058)	−0.015 (0.051)	−0.084 (0.056)	−0.045 (0.058)	−0.018 (0.050)

Frequent customer contact (s.)	−0.046 (0.044)	0.008 (0.040)	0.033 (0.035)	−0.046 (0.044)	0.007 (0.040)	0.036 (0.034)
Substantial physical effort (s.)	−0.033 (0.046)	−0.066 (0.046)	−0.099* (0.045)	−0.032 (0.046)	−0.066 (0.046)	−0.089* (0.044)
Proficient technological skills (s.)	0.053 (0.049)	−0.002 (0.050)	0.057 (0.047)	0.052 (0.049)	−0.004 (0.049)	0.047 (0.045)
Many female workers (s.)	0.052 (0.036)	0.042 (0.036)	0.025 (0.034)	0.051 (0.036)	0.042 (0.037)	0.023 (0.034)
Many older workers (s.)	−0.085 (0.064)	−0.035 (0.068)	0.039 (0.066)	−0.088 (0.065)	−0.036 (0.070)	0.025 (0.066)
Many changes in tasks (s.)	−0.001 (0.066)	−0.019 (0.062)	0.089 (0.056)	−0.001 (0.066)	−0.017 (0.062)	0.095† (0.053)
Increasing task difficulty (s.)	−0.131 (0.084)	−0.163† (0.083)	−0.130† (0.076)	−0.133 (0.083)	−0.167* (0.082)	−0.144* (0.073)
Continuing education (s.)	0.112 (0.075)	0.103 (0.083)	0.043 (0.085)	0.115 (0.075)	0.104 (0.082)	0.056 (0.084)
C. RECRUITER CHARACTERISTICS						
Age (c.)	0.003 (0.010)	0.001 (0.010)	0.008 (0.010)	0.003 (0.010)	0.001 (0.010)	0.010 (0.010)
Gender (ref. = Man)						
Woman	−0.329 (0.259)	−0.357 (0.247)	−0.204 (0.240)	−0.326 (0.259)	−0.357 (0.246)	−0.205 (0.236)
Degree (ref. = Maximum secondary education)						
Tertiary education	−0.138 (0.276)	−0.098 (0.316)	0.022 (0.317)	−0.130 (0.278)	−0.100 (0.318)	0.065 (0.312)
Involvement in selection decisions (ref. = Less than weekly)						
At least weekly	0.468† (0.258)	0.413† (0.245)	0.371 (0.225)	0.480† (0.257)	0.415† (0.244)	0.439† (0.222)
Experience in selection decisions (ref. = Maximum 5 years)						
More than 5 years	−0.214 (0.269)	−0.066 (0.294)	−0.316 (0.285)	−0.219 (0.269)	−0.074 (0.291)	−0.340 (0.279)
No knowledge of or experience with AT (ref. = No)						
Yes	−0.611 (0.594)	−0.549 (0.566)	−0.010 (0.499)	−0.611 (0.597)	−0.542 (0.570)	0.020 (0.485)
Knowledge of AT's principles (ref. = No)						
Yes	−0.293 (0.514)	−0.266 (0.494)	0.221 (0.435)	−0.293 (0.516)	−0.263 (0.498)	0.243 (0.424)
Experience with providing AT (ref. = No)						
Yes	−0.700 (0.490)	−0.178 (0.485)	−0.014 (0.382)	−0.707 (0.491)	−0.182 (0.489)	−0.043 (0.373)
Experience with hiring candidates who participated in AT (ref. = No)						
Yes	0.193 (0.471)	0.947† (0.507)	0.933* (0.438)	0.191 (0.476)	0.962† (0.511)	0.955* (0.436)
Employees older than 50 in their organisation (ref. = Less than 20%)						
At least 20%	0.048 (0.259)	0.171 (0.246)	0.078 (0.235)	0.044 (0.259)	0.168 (0.247)	0.059 (0.233)
Employees in their organisation (ref. = Less than 50)						
At least 50	0.653* (0.252)	0.409† (0.242)	0.537* (0.255)	0.660* (0.256)	0.414† (0.243)	0.555* (0.254)
Classroom training offered by their organisation (ref. = No)						

Yes	−0.278 (0.310)	−0.087 (0.323)	0.019 (0.336)	−0.284 (0.314)	−0.084 (0.328)	−0.050 (0.335)
Online training offered by their organisation (ref. = No)						
Yes	0.538 (0.382)	−0.334 (0.331)	−0.171 (0.322)	0.532 (0.386)	−0.351 (0.334)	−0.176 (0.312)
Workplace training for employees offered by their organisation (ref. = No)						
Yes	−0.161 (0.287)	−0.087 (0.305)	0.166 (0.273)	−0.163 (0.291)	−0.078 (0.306)	0.157 (0.272)
Workplace training for the unemployed offered by their organisation (ref. = No)						
Yes	0.307 (0.300)	0.765* (0.322)	0.729** (0.263)	0.304 (0.298)	0.768* (0.322)	0.702** (0.255)
Workplace training for students offered by their organisation (ref. = No)						
Yes	−0.577* (0.269)	−0.520* (0.245)	−0.263 (0.218)	−0.574* (0.271)	−0.514* (0.246)	−0.256 (0.214)
D. ADDITIONAL PARAMETERS AND DIAGNOSTICS						
Constant	5.471*** (0.988)	6.135*** (0.973)	4.427*** (0.898)	5.423*** (1.003)	6.054*** (0.973)	4.054*** (0.863)
Ajusted R^2	0.215	0.237	0.140	0.215	0.239	0.158
Wald tests (F-statistic)						
RWE1 = RWE2	1.708	2.386	0.241			
RWE1 = RWE3	3.242†	4.121*	0.015			
RWE1 = RWE4	13.291***	8.410**	0.033			
RWE2 = RWE3	0.324	0.290	0.157			
RWE2 = RWE4	4.927*	3.166†	0.094			
RWE3 = RWE4	2.876†	1.856	0.007			

Notes. Abbreviations used: c. (continuous variable). ref. (reference category). s. (scale ranging from 0 to 10). and AT (Apprenticeship Training). The presented statistics are coefficient estimates with their standard errors between parentheses. Standard errors are corrected for clustering of the observations at the participant level. Significances are indicated as *** when p < .001. ** when p < .01. * when p < .05. and † when p < .10.

Table A.7 Linear regression results with additional perceptions as the outcomes excluding interaction variables

	Intellectual abilities	Social abilities	Physical abilities	Creativity	Experience	Motivation
A. CANDIDATE CHARACTERISTICS						
Age (c.)	0.000 (0.008)	−0.002 (0.007)	−0.045*** (0.009)	−0.029*** (0.007)	0.001 (0.009)	−0.022** (0.007)
Relevant work experience (ref. = None)						
None but willingness to participate in AT	0.185 (0.196)	−0.102 (0.160)	0.149 (0.205)	0.022 (0.143)	−0.247 (0.243)	0.328† (0.191)
1 year through participation in AT	0.249 (0.209)	−0.084 (0.173)	0.214 (0.225)	0.034 (0.168)	0.580* (0.266)	0.440* (0.200)
1 year through regular contract	0.408† (0.238)	0.096 (0.198)	0.326 (0.241)	0.063 (0.185)	1.114*** (0.276)	0.417† (0.225)
Related work experience (ref. = None)						
5 years in different job in same sector	0.631** (0.195)	0.265 (0.172)	0.304 (0.198)	0.148 (0.181)	1.598*** (0.255)	0.432* (0.215)
5 years in similar job in different sector	0.653*** (0.181)	0.369* (0.147)	0.503* (0.192)	0.343* (0.163)	1.988*** (0.274)	0.615** (0.214)
5 years in similar job in same sector	1.045*** (0.198)	0.467** (0.163)	0.535** (0.188)	0.403* (0.173)	2.730*** (0.268)	0.641** (0.198)
Gender (ref. = Man)						
Woman	0.124 (0.121)	0.092 (0.110)	−0.384* (0.152)	0.259* (0.115)	−0.135 (0.184)	0.222 (0.143)
Commuting distance (ref. = 0-5km)						
5-10km	−0.102 (0.164)	−0.087 (0.183)	−0.167 (0.213)	−0.150 (0.178)	0.043 (0.241)	−0.171 (0.208)
10-50km	0.048 (0.168)	0.142 (0.187)	0.099 (0.197)	−0.011 (0.161)	0.463† (0.252)	−0.002 (0.191)
>50km	−0.124 (0.187)	0.053 (0.188)	−0.374 (0.235)	−0.123 (0.189)	0.083 (0.276)	0.079 (0.216)
Extracurricular activities (ref. = None)						
Cultural activities	−0.044 (0.170)	0.103 (0.176)	−0.128 (0.199)	0.072 (0.159)	−0.070 (0.225)	−0.223 (0.195)
Sports activities	−0.249 (0.188)	0.155 (0.173)	0.478* (0.204)	−0.002 (0.158)	−0.392 (0.279)	−0.261 (0.172)
Volunteering	−0.054 (0.159)	0.556** (0.157)	0.260 (0.170)	0.239 (0.155)	−0.400† (0.232)	−0.165 (0.177)
B. JOB CHARACTERISTICS						
Included	Included	Included	Included	Included	Included	Included
C. RECRUITER CHARACTERISTICS						
Included	Included	Included	Included	Included	Included	Included
D. ADDITIONAL PARAMETER						
Constant	4.852*** (1.042)	5.305*** (1.039)	5.711*** (0.976)	5.063*** (0.883)	3.512** (1.144)	4.841*** (0.937)

Table A.7 Linear regression results with additional perceptions as the outcomes excluding interaction variables (continued)

	Reliability	Accuracy	Reasonability towards wage expectations	Satisfaction previous employers	Rejection other employers	Administrative ease of hiring
A. CANDIDATE CHARACTERISTICS						
Age (c.)	0.005 (0.006)	0.005 (0.006)	−0.032** (0.010)	−0.013† (0.007)	0.067*** (0.008)	−0.027** (0.009)
Relevant work experience (ref. = None)						
None but willingness to participate in AT	0.084 (0.174)	0.170 (0.169)	0.297 (0.196)	−0.014 (0.175)	−0.010 (0.217)	−0.040 (0.223)
1 year through participation in AT	0.077 (0.195)	0.148 (0.176)	0.809** (0.230)	0.193 (0.168)	0.075 (0.222)	0.172 (0.262)
1 year through regular contract	0.248 (0.217)	0.307 (0.205)	0.558* (0.249)	0.164 (0.202)	−0.453† (0.239)	0.359 (0.265)
Related work experience (ref. = None)						
5 years in different job in same sector	0.529** (0.181)	0.308† (0.180)	0.032 (0.207)	0.702*** (0.185)	−0.816*** (0.224)	−0.056 (0.228)
5 years in similar job in different sector	0.697*** (0.195)	0.566** (0.187)	0.144 (0.211)	0.782*** (0.173)	−0.936*** (0.213)	0.342 (0.217)
5 years in similar job in same sector	0.853*** (0.194)	0.860*** (0.174)	0.084 (0.208)	0.820*** (0.174)	−1.182*** (0.211)	0.166 (0.227)
Gender (ref. = Man)						
Woman	0.063 (0.117)	0.178 (0.111)	0.264† (0.142)	−0.013 (0.112)	0.160 (0.140)	0.109 (0.154)
Commuting distance (ref. = 0-5km)						
5-10km	−0.257 (0.181)	−0.096 (0.181)	−0.167 (0.214)	−0.086 (0.194)	−0.039 (0.195)	−0.139 (0.210)
10-50km	0.020 (0.162)	0.056 (0.153)	−0.033 (0.238)	0.110 (0.154)	0.214 (0.222)	−0.384† (0.231)
>50km	−0.170 (0.186)	−0.144 (0.179)	−0.083 (0.256)	0.096 (0.176)	0.293 (0.222)	−0.287 (0.249)
Extracurricular activities (ref. = None)						
Cultural activities	−0.060 (0.181)	0.030 (0.169)	0.244 (0.193)	−0.251 (0.159)	0.265 (0.239)	0.179 (0.239)
Sports activities	0.014 (0.197)	0.074 (0.179)	0.023 (0.196)	−0.274† (0.162)	0.002 (0.250)	0.251 (0.220)
Volunteering	0.096 (0.181)	0.084 (0.165)	0.184 (0.189)	−0.150 (0.152)	−0.085 (0.216)	0.407† (0.210)
B. JOB CHARACTERISTICS						
Included	Included	Included	Included	Included	Included	Included
C. RECRUITER CHARACTERISTICS						
Included	Included	Included	Included	Included	Included	Included
D. ADDITIONAL PARAMETER						
Constant	4.913*** (1.015)	5.425*** (0.974)	5.203*** (1.099)	5.449*** (0.955)	5.569*** (0.914)	4.490** (1.325)

Notes. Abbreviations used: c. (continuous variable). ref. (reference category). and AT (Apprenticeship Training). The presented statistics are coefficient estimates with their standard errors between parentheses. Standard errors are corrected for clustering of the observations at the participant level. Although job and participant characteristics are included as described in Section 3. only the results for the candidates' characteristics are presented for conciseness. The full table is available upon request. Significances are indicated as *** when p < .001. ** when p < .01. * when p < .05. and † when p < .10.

Table A.8 Linear regression results with additional perceptions as the outcomes including interaction variables

	Intellectual abilities	Social abilities	Physical abilities	Creativity	Experience	Motivation
A. CANDIDATE CHARACTERISTICS						
Age (c.)	0.022 (0.021)	0.025 (0.018)	−0.031 (0.021)	−0.031† (0.019)	−0.003 (0.023)	−0.021 (0.019)
Relevant work experience (ref. = None)						
None but willingness to participate in AT	0.521 (0.368)	0.275 (0.338)	0.413 (0.389)	0.049 (0.346)	−0.262 (0.408)	0.498 (0.364)
1 year through participation in AT	0.700† (0.415)	0.421 (0.399)	0.520 (0.430)	−0.003 (0.372)	0.573 (0.524)	0.499 (0.417)
1 year through regular contract	0.683 (0.413)	0.608† (0.343)	0.385 (0.378)	−0.104 (0.325)	0.842* (0.424)	0.100 (0.353)
Age x Relevant work experience (ref. = None)						
Age x None but willingness to participate in AT	−0.024 (0.024)	−0.027 (0.022)	−0.019 (0.025)	−0.002 (0.022)	0.001 (0.028)	−0.012 (0.023)
Age x 1 year through participation in AT	−0.033 (0.027)	−0.037 (0.024)	−0.022 (0.027)	0.003 (0.022)	0.001 (0.033)	−0.004 (0.026)
Age x 1 year through regular contract	−0.020 (0.026)	−0.038† (0.022)	−0.004 (0.026)	0.013 (0.021)	0.021 (0.028)	0.025 (0.024)
Related work experience (ref. = None)						
5 years in different job in same sector	0.623** (0.196)	0.267 (0.173)	0.290 (0.198)	0.139 (0.181)	1.587*** (0.259)	0.408† (0.216)
5 years in similar job in different sector	0.672*** (0.182)	0.405** (0.149)	0.510** (0.189)	0.334* (0.165)	1.973*** (0.278)	0.599** (0.215)
5 years in similar job in same sector	1.063*** (0.200)	0.508** (0.165)	0.531** (0.192)	0.383* (0.175)	2.704*** (0.269)	0.598** (0.198)
Gender (ref. = Man)						
Woman	0.121 (0.121)	0.088 (0.110)	−0.386* (0.152)	0.260* (0.114)	−0.135 (0.182)	0.224 (0.142)
Commuting distance (ref. = 0-5km)						
5-10km	−0.119 (0.169)	−0.109 (0.188)	−0.178 (0.214)	−0.150 (0.182)	0.045 (0.247)	−0.176 (0.211)
10-50km	0.027 (0.170)	0.126 (0.189)	0.079 (0.199)	−0.016 (0.161)	0.453† (0.256)	−0.019 (0.197)
>50km	−0.158 (0.185)	0.028 (0.188)	−0.402† (0.233)	−0.129 (0.185)	0.072 (0.275)	0.058 (0.216)
Extracurricular activities (ref. = None)						
Cultural activities	−0.050 (0.176)	0.086 (0.180)	−0.123 (0.200)	0.083 (0.156)	−0.060 (0.220)	−0.202 (0.194)
Sports activities	−0.255 (0.190)	0.146 (0.175)	0.478* (0.204)	0.003 (0.157)	−0.387 (0.278)	−0.251 (0.173)
Volunteering	−0.049 (0.162)	0.557** (0.160)	0.268 (0.172)	0.244 (0.156)	−0.393† (0.232)	−0.152 (0.179)
B. JOB CHARACTERISTICS						
Included	Included	Included	Included	Included	Included	Included
C. RECRUITER CHARACTERISTICS						
Included	Included	Included	Included	Included	Included	Included

D. ADDITIONAL PARAMETER						
Constant	4.545*** (1.048)	4.928*** (1.043)	5.503*** (0.964)	5.082*** (0.903)	3.553** (1.186)	4.794*** (0.957)

Table A.8 Linear regression results with additional perceptions as the outcomes including interaction variables (continued)

	Reliability	Accuracy	Reasonability towards wage expectations	Satisfaction previous employers	Rejection other employers	Administrative ease of hiring
A. CANDIDATE CHARACTERISTICS						
Age (c.)	0.013 (0.018)	0.008 (0.018)	−0.043* (0.022)	0.007 (0.019)	0.054* (0.022)	−0.023 (0.026)
Relevant work experience (ref. = None)						
None but willingness to participate in AT	0.232 (0.349)	0.230 (0.357)	0.279 (0.388)	0.419 (0.392)	−0.288 (0.409)	0.234 (0.442)
1 year through participation in AT	0.308 (0.426)	0.219 (0.411)	0.714 (0.460)	0.642 (0.395)	−0.121 (0.449)	0.143 (0.547)
1 year through regular contract	0.202 (0.363)	0.280 (0.336)	−0.082 (0.401)	0.150 (0.348)	−0.588 (0.402)	0.222 (0.428)
Age x Relevant work experience (ref. = None)						
Age x None but willingness to participate in AT	−0.010 (0.022)	−0.004 (0.021)	0.002 (0.024)	−0.030 (0.023)	0.020 (0.026)	−0.019 (0.030)
Age x 1 year through participation in AT	−0.017 (0.026)	−0.005 (0.024)	0.007 (0.029)	−0.032 (0.023)	0.014 (0.028)	0.003 (0.035)
Age x 1 year through regular contract	0.004 (0.023)	0.002 (0.020)	0.049† (0.029)	0.003 (0.020)	0.010 (0.026)	0.011 (0.029)
Related work experience (ref. = None)						
5 years in different job in same sector	0.519** (0.183)	0.303† (0.183)	0.004 (0.211)	0.674** (0.190)	−0.803** (0.227)	−0.084 (0.230)
5 years in similar job in different sector	0.697** (0.198)	0.565** (0.187)	0.108 (0.207)	0.785*** (0.170)	−0.947*** (0.217)	0.337 (0.213)
5 years in similar job in same sector	0.846*** (0.202)	0.856*** (0.178)	0.021 (0.209)	0.801*** (0.179)	−1.179*** (0.216)	0.125 (0.238)
Gender (ref. = Man)						
Woman	0.061 (0.116)	0.178 (0.110)	0.267† (0.141)	−0.012 (0.112)	0.160 (0.140)	0.113 (0.153)
Commuting distance (ref. = 0-5km)						
5-10km	−0.263 (0.185)	−0.100 (0.186)	−0.166 (0.217)	−0.108 (0.198)	−0.027 (0.197)	−0.150 (0.216)
10-50km	0.002 (0.164)	0.050 (0.156)	−0.054 (0.242)	0.075 (0.157)	0.223 (0.225)	−0.389 (0.237)
>50km	−0.193 (0.185)	−0.153 (0.178)	−0.110 (0.256)	0.044 (0.177)	0.312 (0.220)	−0.303 (0.251)
Extracurricular activities (ref. = None)						
Cultural activities	−0.058 (0.182)	0.033 (0.170)	0.269 (0.194)	−0.239 (0.163)	0.258 (0.241)	0.207 (0.244)
Sports activities	0.015 (0.197)	0.074 (0.180)	0.033 (0.197)	−0.272 (0.164)	0.001 (0.250)	0.258 (0.219)
Volunteering	0.104 (0.182)	0.086 (0.166)	0.194 (0.191)	−0.134 (0.151)	−0.091 (0.218)	0.417† (0.212)
B. JOB CHARACTERISTICS						
Included	Included	Included	Included	Included	Included	Included
C. RECRUITER CHARACTERISTICS						
Included	Included	Included	Included	Included	Included	Included

D. ADDITIONAL PARAMETER						
Constant	4.785*** (1.032)	5.383*** (0.979)	5.308*** (1.090)	5.141*** (0.951)	5.752*** (0.955)	4.415** (1.326)

Notes. Abbreviations used: c. (continuous variable). ref. (reference category). and AT (Apprenticeship Training). The presented statistics are coefficient estimates with their standard errors between parentheses. Standard errors are corrected for clustering of the observations at the participant level. Although job and participant characteristics are included as described in Section 3. only the results for the candidates' characteristics are presented for conciseness. The full table is available upon request. Significances are indicated as *** when p < .001. ** when p < .01. * when p < .05. and † when p < .10.