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Exploring the association between negative age stereotypes and employability

Testing a moderated mediation model

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Abstract

This study deals with the effect of negative age stereotypes on older workers' employability mediated by individual HR practices tailored to older workers, and the possible moderating effect of absolute age difference between supervisor and employee on the relationship between negative age stereotypes and individual HR practices. Hierarchical regression analyses were conducted to test the hypotheses in this study, using data gathered from a respondent sample of 117 pairs (supervisor-employee) from the Dutch labour market. The results revealed support for an increase in three dimensions of employability (i.e. occupational expertise, anticipation and optimisation, and corporate sense) as an effect of investments in flexible working options (i.e. a distinguished factor of the mediator variable). No evidence was found to support either the mediation effect or the moderation effect proposed in the hypotheses.

Keywords: negative age stereotypes, individual HR practices (training and development HR practices and flexible working options), older workers, employability (occupational expertise, anticipation and optimisation, personal flexibility, corporate sense, and balance), age dissimilarity

Introduction

In light of the swift dejuvenization and ageing of the Dutch workforce, in fact across most developed countries (Schalk et al., 2010; Van der Heijden et al., 2010; Veth et al., 2015), there is need for older workers (40 years and older¹) to remain in employment for a longer period of time. This is reflected in the government in the Netherlands which is in the act of raising the retirement age to 67 by 2021, whereas it was 65 in 2013. In other words, there are too few younger workers in the Dutch labour market to make up for the large group of older employees who have left or will soon leave employment. Ageing, as Dordoni and Argentero (2015) explained it, is a demographic transition caused mainly by a low fertility rate and a reduction of the mortality rate. Similarly, Statistics Netherlands (CBS) (2017) pointed out that the net labour participation is somewhat stable for people aged from 25 to 55 years of age; however, a significant drop in employment is observed for people aged 55 years and older². In order to finance and support the longer lives of Dutch citizens, better and longer careers are sorely needed (Veth et al., 2015).

Regardless of the fact that many organisations and much scientific literature recognise the essential role of older workers in organisations, research has revealed that older applicants are often discriminated against in favour of younger applicants, and that many HR decisions support younger workers (Dordoni & Argentero, 2015; Gringart & Helmes, 2001). Therefore, several scholars have called for more research on the effect of negative age stereotypes (and age discrimination) on older

¹ 'According to the ADEA (U.S. Age Discrimination in Employment Act of 1967) 40 years old seems to be an acceptable cut off to distinguish between younger and older workers' (Dordoni & Argentero, 2015, p. 395).

² For more details, cf. Appendix 1.

workers' employability (e.g. Finkelstein, King, & Voyles, 2015; Furunes & Mykletun, 2010; Gordon & Arvey, 2004; Posthuma & Campion, 2008). For example, Finkelstein et al. (2015) indicated that in order to understand, and in the end, improve interactions between age groups, the organisational implications of age stereotyping have to be considered. Negative age stereotyping is defined in this study as 'a simplified, undifferentiated portrayal of an age group that is often erroneous, unrepresentative of reality, and resistant to modification' (Schulz et al., 2006, p. 43). In line with this definition, age discrimination can be explained as the behavioural component of attitude formation, which is influenced by ingroup favouritism and out-group bias, in this case concerning older workers (Cuddy & Fiske, 2002). In this study, this call for research is extended to the impact of negative age stereotypes and age discrimination on workers' employability, which has received more and more attention over the last years (Thijssen, Van der Heijden, & Rocco, 2008), both in academia and in practice. Employability can be explained as the optimal use of competences in order to continuously fulfil, acquire, or create work (Van der Heijde & Van der Heijden, 2006). To the researcher's knowledge, no research has been performed using the combination of these concepts as of yet (De Lange, Kooij, & Van der Heijden, 2015).

Next to employability as an outcome variable, negative age stereotypes are hypothesised as a predictor variable in this study. Elaborating on the definition provided earlier, Dordoni and Argentero (2015) stated that stereotypes are multidimensional, both positive and negative age stereotypes exist, this study took the perspective of perceived negative age stereotypes existing in an organisation and their impact on older workers' employability. Moreover, while both younger, middle-aged, and older people are impacted by them (Dordoni & Argentero, 2015; Finkelstein, King, & Voyles, 2015), age stereotypes are often discussed related to older people (Furunes & Mykletun, 2010). Examples of negative age stereotypes are that older workers have lower performance, lower ability to learn, resistant to change, tend to have shorter tenure and are costlier (Posthuma & Campion, 2008). Furthermore, several academics have recognised that biased attitudes (e.g. stereotypes) may, but do not unavoidably lead to discrimination (e.g. Finkelstein & Farrell, 2007; Fiske, 2002; Furunes & Mykletun, 2010; Gordon & Arvey, 2004). This study specifically looks into age discrimination in the form of decreased (or non-existent) investments in HR practices for older workers in organisations (Armstrong-Stassen & Ursel, 2009); in other words, the behavioural component of attitude formation, as explained earlier. Examples of these individual HR practices are training and development investments and flexible working options tailored to older workers' needs (Armstrong-Stassen & Ursel, 2009). HR practices in general, as described by Wright and Nishii (2013), are mechanisms for communication that signal employees to engage in certain behaviours.

Finally, this research investigates the effect of age dissimilarity on the hypothesised relationship between negative age stereotypes and individual HR practices. The concept of age dissimilarity is operationalised as the absolute age difference between supervisor and employee. As the Social Identity theory (Tajfel & Turner, 1985) states, the awareness of a person belonging to a certain age group (even one's own group) can lead to the cognitive activation of age stereotypes, being either negative or

positive. In turn, this can but does not necessarily lead to discriminatory behaviour (Fiske, 2002), in case of this research, decreased or non-existent HR practices for older workers.

The focus of this study is to find out to whether or not organisationally prevailing³ negative age stereotypes influence decisions concerning HR practices for the benefit of older workers' employability. And if this is the case, to determine to what degree this influence is present. Additionally, a goal of this research is to find out to what extent the relationship between negative age stereotypes and individual HR practices is moderated by the absolute difference in age between supervisors and employees. Despite the fact that both negative age stereotypes and individual HR practices are operationalised on the organisational level, both these concepts and the workers' employability are measured on the individual level. More specifically, workers' perceptions of negative age stereotyping and individual HR practices for older workers are measured, in addition to the supervisors' perceptions of the workers' employability. The research question central in this study was:

What is the impact of perceived negative age stereotypes on individual HR practices on the employability of older employees, and what effect does age dissimilarity between supervisor and employee have on the relationship between negative age stereotypes and individual HR practices?

This study's contribution to science is threefold. Firstly, it explores whether negative age stereotypes are influential for employability. Secondly, this is the first study, to the researcher's knowledge, which investigates a mediation model regarding negative age stereotypes, individual HR practices and employability. And thirdly, this is only the second study to investigate the moderation effect of absolute age difference between supervisor and employee on the relationship between negative age stereotypes and individual HR practices (the first study being Van der Heijden, Gorgievski, & De Lange, 2016).

This paper is structured as follows: first, the theory outline and conceptual model are discussed and hypotheses are formulated; afterwards, the hypotheses are tested and the results reported; subsequently, conclusions are inferred from these results, along with a discussion of these conclusions and the study's limitations and suggestions for future research; finally, some practical implications are outlined.

³ This can be on different levels, from higher management up, down to the line managers who have the power to make decisions about such HR practices. In this study, organisation-wide negative age stereotypes are the unit of analysis; measured at the level of individual perceptions of the employees.

Theoretical Framework

Towards a moderated mediation model for the relationship between negative age stereotypes and employability

In this chapter, first the theoretical foundations for the different sections of the mediation model are discussed; namely, the relationship between negative age stereotypes and employability, mediated by individual HR practices tailored to older workers. Afterwards, the moderation model is elucidated; meaning the hypothesised influence of age dissimilarity between supervisor and employee on the relationship between negative age stereotypes and individual HR practices.

Association between negative age stereotypes and individual HR practices

In order to explain the influence of negative age stereotypes on individual HR practices for older workers, the first step was to look at the wider theoretical foundation in which (age) stereotypes are embedded, namely the Social Identity Theory (Tajfel & Turner, 1985). According to the Social Identity Theory (SIT), people have the inclination to classify themselves and others into a variety of social categories, for example religious affiliation, gender, and *age cohort* (Ashforth & Mael, 1989). Such social categories are formed by deducing prototypical characteristics from its members (for older people, e.g. greying hair). This kind of social classification serves two functions (Ashforth & Mael, 1989). Firstly, it provides individuals with systematic means of defining others by cognitively segmenting and ordering their social environment. Meaning that a person you meet is assigned the prototypical characteristics of the social categories to which he or she is classified to reduce cognitive load. This process has been termed stereotyping (Ashforth & Mael, 1989; Cuddy & Fiske, 2002; Tajfel & Turner, 1985). However, as research on stereotypes has indicated, such stereotypical assignments are not overly reliable and sensitive to errors (e.g. Bal et al., 2015; Fiske, 2002; Schulz et al., 2006). The second function of social classification is to locate or define yourself within your social environment (Ashforth & Mael, 1989). As stated in the SIT, a person's self-concept consists of a *personal* identity which includes idiosyncratic characteristics (the traits which make a person unique) and a *social* identity which includes salient group classifications. In other words, social *identification* is a person's perceived belonging to a human aggregate.

Specifically for this study, according to Schulz et al. (2006), age stereotypes were defined as 'a simplified, undifferentiated portrayal of an age group that is often erroneous, unrepresentative of reality, and resistant to modification' (p.43). Importantly, people tend to attribute more negative characteristics to members of other social groups (out-group bias) (Dordoni & Argentero, 2015). The construct akin to out-group bias relevant in (age) stereotyping, is ingroup favouritism: the preferential treatment and evaluation of members of your own social group (Brewer, 2007). Importantly, this process is not always deliberate; in fact, even the most unprejudiced people can be influenced by subtle bias (Fiske, 2002), meaning that the stereotype activation is automatic, unintentional, and unconscious. Stereotyping being the cognitive component of attitude formation, the behavioural component (i.e. discrimination) (Cuddy

& Fiske, 2002) is influenced by both ingroup favouritism and out-group bias. Meaning that organisational decisions regarding HR practices, as was the focus of this study, are subject to the effects of both these processes.

When looking at the association between negative age stereotypes and individual HR practices, prior research has provided evidence that negative age stereotypes regarding older workers are prevalent in personnel decisions (e.g. Chiu et al., 2001; Hirschfeld & Thomas, 2011; Posthuma & Campion, 2008), such as HR practices for maintenance and further development. Moreover, although several positive stereotypes have been associated with older workers in an organisational context, older workers are subject to more negative organisational decisions compared to younger workers (Bal et al., 2011). Hence, in line with Social Identity theory (Tajfel & Turner, 1985), the following was hypothesised:

Hypothesis 1: Negative age stereotypes are *negatively* associated with individual HR practices (training and development HR practices (H1a) and flexible working options (H1b)).

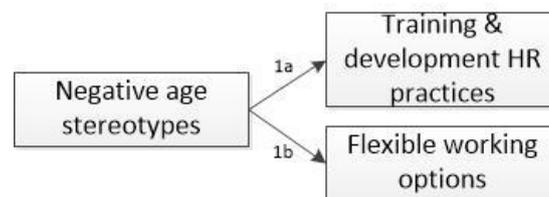


Figure 1. Partial conceptual model depicting relationships between negative age stereotypes, training and development practices, and flexible working options.

Veth et al. (2015) stated that HR practices for older workers ought to have a different focus than those for younger workers. The reason for this is that, in line with the life-span theory of Selection Optimisation and Compensation (SOC; Baltes, Staudinger, & Linderberger, 1999), ageing involves shifts in work-related needs and motives (Kooij et al., 2011; Veth et al., 2015). Armstrong-Stassen and Ursel (2009) have researched two distinguished sets of HR practices, training and development practices and flexible work options, which have been specifically tailored to older workers. Armstrong-Stassen and Ursel (2009) have indicated the effects of these practices for older workers' intention to remain with an organisation. In this research, they were expected to also have a beneficial impact on older workers' employability, since both training and development practices and flexible working options are necessary for increasing older workers' expertise and adaptability. These dimensions of employability (see later in this section) are deemed by both the researcher and Van der Heijde and Van Der Heijden (2006) as the two most important dimensions of employability. These two sets of HR practices of Armstrong-Stassen and Ursel (2009) show great resemblance with the Development, Maintenance and

Accommodative HR bundles⁴ for older workers coined in De Lange et al. (2015)⁵. According to Armstrong-Stassen and Ursel (2009), the effects of development HR practices *tailored to older workers* (similar to Development HR bundle) increase with age, since these practices contend with skill obsolescence (in other words, decreased employability; Kooij et al., 2013). Moreover, the Maintenance and Accommodative HR bundles, which display similarities with flexible working options (Armstrong-Stassen & Ursel, 2009), are also expected to increase in impact with age (De Lange et al., 2015).

Towards increasing employability

Employability, the outcome variable in this study's conceptual model, as explained by Van der Heijde and Van der Heijden (2006) means 'the continuous fulfilling, acquiring or creating of work through the optimal use of competences' (p. 453). This explanation has been corroborated by several researchers as it is a thoroughly comprehensive definition (e.g. Fugate et al., 2004; Peters & Lam, 2015). Employability as a construct consists of five dimensions, according to the competence-based approach of Van der Heijde and Van der Heijden (2006), in which competence models are used to align individual capabilities with organisational core competences. Firstly, in line with this competence-based approach, *occupational expertise* has been indicated as the most essential element of employability, since job relevant knowledge is the criterion employers look at first in times of recession (Van der Heijde & Van der Heijden, 2006). In addition, people with high levels of occupational expertise derive greater benefits from interfirm career opportunities. The other four dimensions cover the more general competences which are required for employability. For instance, the second and third dimensions of employability cover the subject of adaptability. Van der Heijde and Van der Heijden (2006) have distinguished two types of adaptability: *anticipation and optimisation*, which is seen as a more proactive, self-initiating form of adaptability, and *personal flexibility*, the more passive, reactive version. The first concerns 'preparing for future work changes in a personal and creative manner in order to strive for the best possible job and career outcomes' (Van der Heijde & Van der Heijden, 2006, p. 454). The second, personal flexibility, is related to more passive adaptation to changing work and environment, instigated by someone other than oneself. The term adaptability is often used instead of personal flexibility and is seen as another crucial element of employability next to occupational expertise (Van der Heijde & Van der Heijden, 2006). The fourth dimension, *corporate sense*, comprises the willingness to participate as members of an integrated team, identification with corporate goals and acceptance of collective responsibility for decision-making. This dimension derives from the increased decentralisation of decision power in organisations (Van der Heijde & Van der Heijden, 2006). The fifth and final dimension of employability is *balance*, which entails finding a compromise between an employer's and an employee's interests. Both parties have to find a balance between their investments and profits for

⁴ See Appendix 2, for a list of example HR practices associated with these HR bundles (De Lange, Kooij, & Van der Heijden, 2015).

⁵ No similarities could be discovered between Armstrong-Stassen and Ursel's practices and the Utilisation HR bundle of De Lange, Kooij, and Van der Heijden (2015).

the exchange relationship to work. This conceptualisation of employability is supported by Peters and Lam (2015).

Mediation of individual HR practices in relationship between negative age stereotypes and employability

Several researchers have indicated the relevance of the first part of the mediation model (see Figures 2 and 3 below; e.g. Dordoni & Argentero, 2015; Furunes & Mykletun, 2010; Hirschfeld & Thomas, 2011), the relationship between negative age stereotypes and individual HR practices. Moreover, many have provided empirical evidence for the latter part of this model (e.g. Armstrong-Stassen & Ursel, 2009; De Lange et al., 2015; Van der Heijden et al., 2016), the relationship between individual HR practices and employability. Yet, to the researcher's knowledge, these two separate relationships have not been united in a mediation model. However, following the competency development and career success research of De Vos, De Hauw, and Van der Heijden (2011) arguments can be supplied for the relevance of this mediation model. In their study, they provided support for the association of employee participation in competency development (cf. training and development HR practices of Armstrong-Stassen & Ursel, 2009) with increased levels of self-perceived employability. Although in this study supervisor ratings for employability have been used, the researcher was convinced that the results found in De Vos et al.'s (2011) research would hold for this study. Additionally, as stated earlier, the use of flexible working options is essential for an employee's adaptability (the second and third dimensions of employability of Van der Heijde & Van der Heijden, 2006). However, when little to no development HR practices (in the form of training and development and flexible working options) are granted because of a supervisor's negative age stereotypes, as a result the individual's employability/career development also suffers. Consequently, the following was hypothesised:

Hypothesis 2: Training and development HR practices are *positively* associated with employability (occupational expertise (H2a), anticipation and optimisation (H2b), personal flexibility (H2c), corporate sense (H2d), and balance (H2e)).

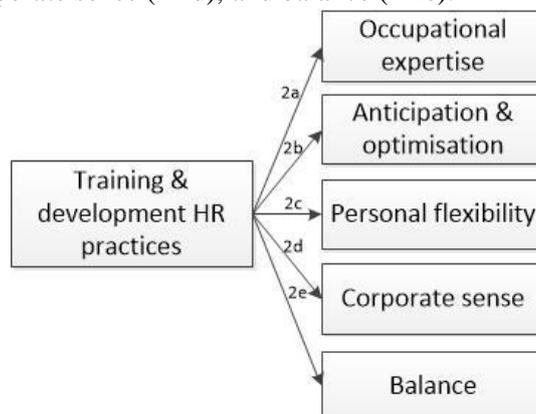


Figure 2. Partial conceptual model depicting relationships between training and development practices and the five dimensions of employability.

Hypothesis 3: Flexible working options are *positively* associated with employability (occupational expertise (H3a), anticipation and optimisation (H3b), personal flexibility (H3c), corporate sense (H3d), and balance (H3e)).

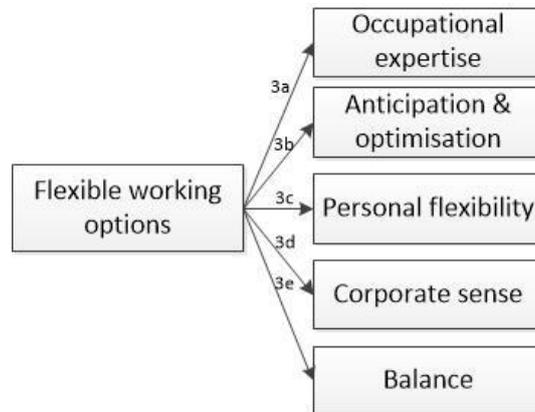


Figure 3. Partial conceptual model depicting relationships between flexible working options and the five dimensions of employability.

Hypothesis 4: The relationships between negative age stereotypes and employability are (partially) mediated by training and development HR practices (occupational expertise (H4a), anticipation and optimisation (H4b), personal flexibility (H4c), corporate sense (H4d), and balance (H4e)).

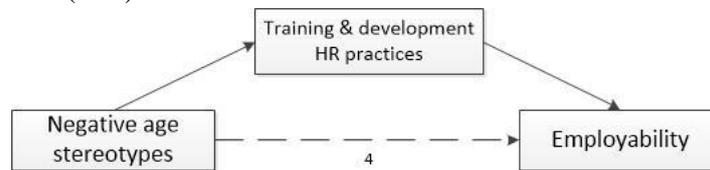


Figure 4. Partial conceptual model depicting relationships between negative age stereotypes and employability, mediated by training and development HR practices.

Hypothesis 5: The relationships between negative age stereotypes and employability are (partially) mediated by flexible working options (occupational expertise (H5a), anticipation and optimisation (H5b), personal flexibility (H5c), corporate sense (H5d), and balance (H5e)).

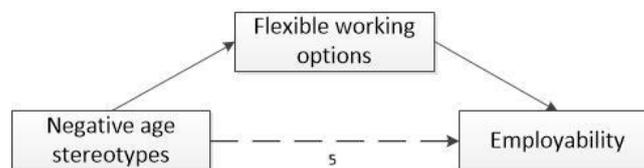


Figure 5. Partial conceptual model depicting relationships between negative age stereotypes and employability, mediated by flexible working options.

Moderation effect of age dissimilarity on the relationship between negative age stereotypes and individual HR practices

In this study, the relationship between negative age stereotypes and employability was researched. Moreover, we tested whether this relationship was mediated by individual HR practices (Armstrong-

Stassen & Ursel, 2009). This section goes into an additional analysis and studies the potential impact of age difference between supervisor and employee as a moderator on the relationship between negative age stereotypes and individual HR practices. Van der Heijden (2016) used the term ‘directional age difference’ in her study and linked it to the possible lower evaluations about the employee, and feelings of status-incongruence (as is the case when a supervisor is younger than his or her subordinate). However, in this study age dissimilarity was operationalised as the absolute age difference between supervisor and employee, in line with Social Identity theory (Tajfel & Turner, 1985). As stated earlier, when two persons are in different social categories (e.g. age cohorts), people often rely on stereotypes. For instance, a younger supervisor may impose the stereotype onto her older subordinate that older workers have lower ability to learn (Posthuma & Campion, 2008), so she might decide not to invest in training and development for this employee; she might see this as a waste of resources. Ingroup favouritism and out-group bias (see above) play a role in such a case since the two parties are age-wise in different social groups. Yet, supervisor and employee can belong to a similar age group, but still negative age stereotypes are activated in making decisions regarding the worker’s employability. In this case, the second function of social classification, social identification, is important. A person can belong to a certain age group (e.g. older workers), but also distancing himself (mentally) from this group when belonging to it triggers negative cognitive associations for this person (Ashforth & Mael, 1989). In other words, a person who views older workers from a perspective of negative age stereotypes can deny being a member of this group, thus seeing older workers as being a member of a different group than himself. Following this line of reasoning, the following was hypothesised:

Hypothesis 6: The more age dissimilarity between an employee and his/her direct supervisor, the greater the *negative* effect of negative age stereotypes on investment in individual HR practices for this employee (H6a for training and development HR practices and H6b for flexible working options).

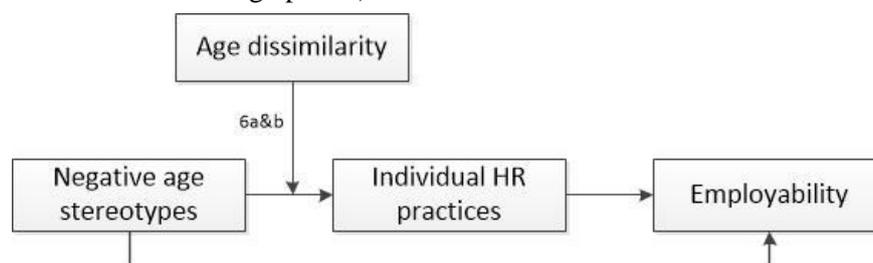


Figure 6. Conceptual model depicting the moderation effect of age dissimilarity on the relationship between negative age stereotypes and individual HR practices.

In sum, the model tested in this study concerned the relationship between negative age stereotypes and employability, mediated by individual HR practices. The model also covered a hypothesised moderation effect of age dissimilarity between supervisor and employee on the relation between negative age stereotypes and individual HR practices. In the figure below, all hypotheses discussed in this section have been gathered for the purpose of clarity.

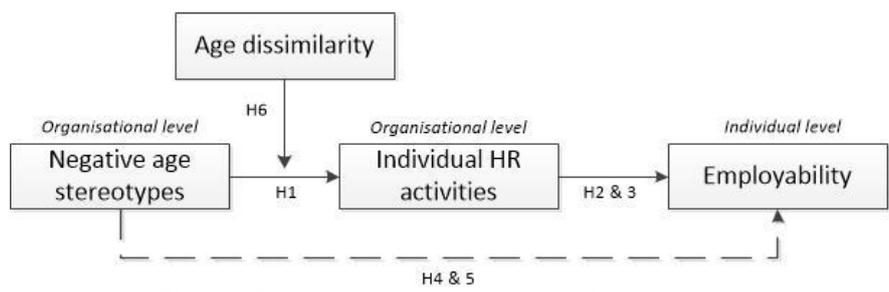


Figure 7. Complete conceptual model including hypotheses

Methodology

Sample and procedure

The sample of this study consisted of two groups of respondents, employees and supervisors, from various sectors, organisations, and age groups. Importantly, to prevent common method bias (Podsakoff et al., 2003) employee ratings were collected for the predictor (negative age stereotypes scale, Bal et al., 2015) and mediator variable (individual HR practices, Armstrong-Stassen & Ursel, 2009), in addition to the supervisor ratings for the outcome variable (employability, Van der Heijde & Van der Heijden, 2006). Van der Heijde and Van der Heijden (2006) have acknowledged that rater bias⁶ might be present among the supervisor ratings. However, since objective data regarding the workers' employability were difficult if not impossible to obtain and considering the key role of supervisors' perception in the employees' career progress, the researcher opted for using the supervisor ratings instead of the employee ratings. Additionally, as Mabe and West (1982) stated, respondents' ratings are more reliable when they are aware that the other party (i.e. the employee) is also rating their own employability.

So as to answer the research question central to this study, a quantitative research approach was applied, using a survey in order to recognise trends and associations in the data. Additionally, thoroughly validated measurement scales were available for all variables in this study.

The data were gathered in the first half of 2017, in multiple organisations in the Dutch market. Two questionnaires were used: one for the employee and one for their direct supervisor. The supervisor's questionnaire consisted mainly of items formulated to express the degree of employability of their subordinate. Additionally, for practical (time restrictions) and reliability reasons (Van der Heijde & Van der Heijden, 2006) questionnaires were limited to a maximum of three employees per supervisor spread over three age groups. Both a convenience sampling and quota sampling strategy (Vennix, 2011) were used to compile the sample of survey respondents. The quota sampling concerned the gathering of respondents within certain age groups (20-34, 35-49 and 50+). Though no exact quota were set up, the aim was to create a balanced, evenly spread sample of respondents across these age groups. This was especially important given the focus of this study (i.e. age stereotypes) since this required empirical data from both younger and older respondents. The organisations in the sample also varied regarding size, location, market, sector, et cetera. The selection of respondents was limited to employees with at least middle educational levels of functioning and thinking, and to employees who had a tenure of at least one year within the organisation, to ensure that the supervisors have been able to get a good impression of the subordinates' employability.

Of the 178 supervisor-employee pairs who were approached for participation in this study, 159 supervisors and 141 employees completed the survey. Resulting in a research sample of 117 pairs, indicating a response rate of 65.7%. The descriptive statistics of the sample indicated the majority of the

⁶ Hoyt (2000) about rater bias: 'Raters may interpret scale items differently or have unique reactions to particular targets so that the obtained ratings reflect characteristics of the raters to some extent'. (p. 64).

respondents in the employee group is female, namely 56.4%. On the other hand, the majority of the supervisors was male (i.e. 65.0%). The age distribution of employees in the three age groups outlined above were as follows: 23.9% was between 20-34 years old, 39.3% between 35-49, and 36.8% was 50 years and older. The age distribution for supervisors was: 9.4% between 20-34 years old, 40.2% between 35-49 years old, and 50.4% 50 years and older. Both the employees and direct supervisors were in general highly educated, respectively 56.4% and 84.6% had at least a higher vocational education. Moreover, the supervisors and employees in the sample had a tenure in their current organisation of about ten years, with a standard deviation of 9.7, respectively 10.15. The sample was a representation of different sectors of the Dutch labour market; however, the sector mainly represented in the data was the financial sector (i.e. 47.0%). Additionally, the transport and telecommunications sector, respectively with 1.7% and 2.6% of respondents, were underrepresented in the sample (see Table 1).

Table 1. Number and percentage of respondents for each sector

Sector	Number of respondents	Percentage of respondents
<i>Product</i>	15	12.8%
<i>Transport</i>	2	1.7%
<i>Financial services (bank or insurance)</i>	55	44.4%
<i>Telecommunication, media</i>	2	2.6%
<i>Services (societal or care)</i>	21	17.1%
<i>Other</i>	22	21.4%
<i>Total</i>	117	100%

Measures

Measures from several validated scales were used to compile the survey questionnaire⁷ (e.g. employability scale from Van der Heijde & Van der Heijden, 2006; scale of individual HR practices from Armstrong-Stassen & Ursel, 2009). However, some of these scales had not been translated to Dutch yet, thus the researcher and her research team used Hambleton's (1993) translation-back-translation method to create a validated Dutch equivalent of the questionnaire.

Employability was measured using a 22-item scale from Van der Heijde and Van der Heijden (2006). As this variable was measured using supervisor ratings, the items were formulated from the third-person's point of view, but overall were identical to the employee rating scale. The five dimensions of employability were measured using measurement scales with four or five items scored on a six-point rating scale. Examples of scale anchors used are: 'not at all' to 'a considerable degree', 'never' to 'very often', and 'very little' to 'a great deal'. Example items per dimension of employability were: 'During the past year, he/she was, in general, competent to take prompt decisions with respect to his/her approach to work' (dimension *occupational expertise*, 5 items, Cronbach's $\alpha = 0.88$); 'During the past year, he/she was actively engaged in investigating adjacent job areas to see where success could be achieved' (dimension *anticipation and optimisation*, 4 items, Cronbach's $\alpha = 0.89$); 'How quickly does he/she

⁷ For a full outline of the survey, please contact B.I.J.M. van der Heijden, email: b.vanderheijden@fm.ru.nl.

generally anticipate and take advantage of changes in his/her working environment?’ (dimension *personal flexibility*, 5 items, Cronbach’s $\alpha = 0.87$); ‘In his/her work, he/she takes the initiative in sharing responsibilities with colleagues’ (dimension *corporate sense*, 4 items, Cronbach’s $\alpha = 0.85$); and ‘The time he/she spends on his/her work and career development on the one hand and his/her personal development and relaxation on the other are evenly balanced’ (dimension *balance*, 4 items, Cronbach’s $\alpha = 0.67$).

Individual HR practices were measured using an eight-item scale from Armstrong-Stassen and Ursel (2009). The scale included both training and development practices (four items, Cronbach’s $\alpha = 0.88$) and flexible working options (four items, Cronbach’s $\alpha = 0.76$). Example items, respectively, of both variables were ‘Targeting older managerial and professional employees for training to update current job skills’ and ‘Providing a reduced work week (part-time employment)’. The three-point response categories were ‘Not at all engaged in doing this’, ‘Somewhat engaged in doing this’, and ‘Highly engaged in doing this’.

Negative age stereotypes were measured using an eight-item scale (Cronbach’s $\alpha = 0.884$) from Bal et al. (2015). An example item was ‘Older workers have a hard time learning new skills’. The response categories of the five-point scale ranged from ‘totally disagree’ to ‘totally agree’.

Age dissimilarity was measured by asking both the supervisors and the employees in the respondent pairs their year of birth and computing the absolute age difference into the new variable age dissimilarity.

Control variables. As the sample contained a wide variety of organisational sizes and sectors, there was no need to include these as control variables. Moreover, since a high correlation between age and tenure has been confirmed (e.g. Hassan & Davies, 2003; Shirom et al., 2008) and age was already represented in the model as age dissimilarity, tenure was not included as a control variable. Thus, also in line with previous research, gender and educational level of the employees were included as control variables in the tests of the moderated mediation model (e.g. Bal et al., 2015; Van der Heijde & Van der Heijden, 2006; Van der Heijden, 2016).

Preliminary analyses

Measurement model

After determining the number of pairs (i.e. supervisor-employee), preliminary analyses were performed prior to the hypothesis testing using hierarchical regression analysis. Firstly, frequency tables were used in order to provide input for the data cleaning process and to detect any missing values in the data; no missing values were discovered. Furthermore, despite the thorough validation of the scales used in the survey for this study, the researcher decided to run confirmatory factor analyses for the main variables in the conceptual model to reconfirm their factor structures; with the exception of age dissimilarity as this is a pure numerical value. For this purpose, principal axis factoring was used and a fixed number of

factors was set to be extracted for each scale. Oblique rotation was used, since factors of the same measurement scale are allowed to correlate (Field, 2013); this also improved the interpretation of the output.

Before the factor analyses could be run, several measures first had to be checked. Firstly, all factor analyses met the assumption of the Kaiser-Meyer-Olkin (KMO) measure, which needed to be ≥ 0.5 but preferably higher for a more distinct and reliable factor structure (Field, 2013): negative age stereotypes' KMO value was 0.878; the KMO value of individual HR practices was 0.795; and for employability it was 0.895. In addition, all factor analyses appeared to have met the assumption of Bartlett's test of sphericity, which is significant at $p < .05$ level and means that there is satisfactory inter-variable correlation (Field, 2013): negative age stereotypes, individual HR practices and employability all were significant at $p < 0.001$ level. Finally, in order to determine linear relationships between variables and check for multi-collinearity (when inter-variable correlations are too high), the determinant of the R-matrix needed to have a value higher than 0.00001 (Field, 2013). For both negative age stereotypes and individual HR practices this assumption was met; however, for employability the value was smaller than 0.00001, indicating possible multicollinearity. Despite the fact that factor analysis requires a large sample size (Field, 2013), factor analyses were performed with this study's relatively small sample. The extracted one-factor structure for negative age stereotypes explained 50.85% of variance, and all items loaded on this factor. For individual HR practices, the two-factor structure which was extracted explained 55.99% of variance, with all items loading of their corresponding factors. Lastly, the five-factor structure for employability explained 61.80% of variance; however, not all items loaded on their corresponding factors and one factor had an Eigenvalue smaller than one (i.e. 0.703). But since this is a thoroughly validated scale, no amendments were made to maintain construct validity.

An additional analysis was performed regarding the control variable gender, as this variable displayed rather large effects on the dependent variables in many of the regression analyses. The problem with interpreting the results for this control variable most probably lies in the fact that it is a nominal variable and not an interval variable (i.e. continuous). Conversely, no interpretative problems were encountered for the other control variable, educational level, which is an interval variable. The data set was split according to the gender of the employee, in order to calculate the minimum, maximum, and mean score for all main variables and their corresponding standard deviations. With this information⁸, a more accurate interpretation of the outcomes of the regression analyses was possible. Despite the fact that the group of male respondents was slightly smaller than the female group (i.e. respectively, $N = 51$ and $N = 66$), men indicated higher average investments in training and development HR practices than women, and while the opposite was found for investments in flexible working options. Moreover, women received on average higher scores from their direct supervisors on all employability

⁸ See Appendix 3, for the results of this analysis.

dimensions, except for balance. For the dimension balance, the scores were approximately the same for men and women. Hence, for some of the results of the regression analyses, the results were skewed to either the men's or the women's advantage.

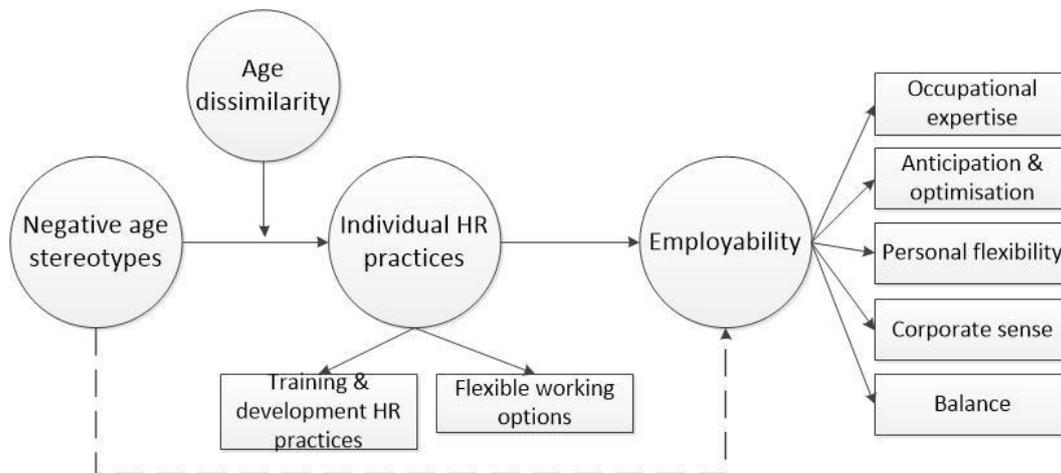


Figure 8. Measurement model

Assumption testing for regression analyses

In Table 2 the means, standard deviations, reliabilities (on the diagonal) and correlations are shown for the variables in this study. Negative age stereotypes showed no significant correlations with any of the variables in the model, including the control variables. Moreover, a medium positive correlation (i.e. medium if $0.3 < |r| < 0.5$) (Field, 2013) was found between training and development HR practices and flexible working options. The variable flexible working options showed small, positive correlations (i.e. small if $0.1 < |r| < 0.5$) (Field, 2013) with three dimensions of employability: occupational expertise, anticipation and optimisation, and corporate sense. Furthermore, the dimensions of employability were found to have medium to strong positive correlations (i.e. strong if $|r| > 0.5$) (Field, 2013) with each other. Additionally, age dissimilarity showed no significant correlations with any of the variables in the model. Finally, the control variables were also found to correlate with some of the main variables: gender, more specifically, showed a small correlation with training and development HR practices (negative effect), and a small positive correlation with occupational expertise; educational level showed small, positive correlations with anticipation and optimisation and personal flexibility.

Prior to performing the hierarchical regression analyses, a number of assumptions were checked. The first assumption for regression analysis is linearity and this assumption was checked by looking at plots of studentized residuals against unstandardized predicted values (Field, 2013). Additionally, the second assumption of homoscedasticity was also checked using these plots. As a result of this test, both linearity and non-linearity were found. Moreover, some of the plots showed homoscedasticity while others showed heteroscedasticity.

The third assumption involves an absence of outliers, leverage points, and influential points. More than half of the regression analyses showed evidence of outliers. However, no leverage points or influential points were found in the data, thus these outliers were not removed (Field, 2013).

The fourth assumption covers normality, which can be checked using Normal P-P plots, skewness, and kurtosis. Nearly all regression analyses showed plots, skewness, and kurtosis which differed from a normal distribution. Thus, assumption four was not met.

The fifth and sixth assumptions deal with the measurement level of the variables. The dependent variables need to be continuous and the independent variable(s) need to be continuous or nominal (Field, 2013). Regardless of the fact that almost all variables were measured using a Likert scale, thus making them ordinal variables, they were handled as interval variables by computing composite scores (i.e. mean scores) (cf. Allen & Seaman, 2007). Hence, these variables are fit to be used in regression analyses.

The seventh assumption of regression analysis is independence of observations (Field, 2013). All regression analyses showed a Durbin-Watson value of around 2 (Field, 2013); the lowest value was observed in the regression analysis for Hypothesis 2b (i.e. D-W = 1.851). However, this value was close enough to the ideal value, thus this assumption was met.

The final assumption regarding multicollinearity, is met if the Tolerance values in the regression analysis are greater than 0.1 and if VIF values are smaller than 10 (Field, 2013). The Tolerance and VIF values were approximately one in all regression analysis, thus the eighth assumption was met.

Statistical analyses

Main effects

For the purpose of exploring the main effects described in Hypotheses 1, 2 and 3, hierarchical regression analyses were used. The first step of the regression analyses, in each and every case, contained the control variables. Next, the independent variable for the hypothesis to be tested was included in the second step. For instance, for Hypothesis 2a, the variable training and development HR practices was entered as the independent variable in the second step, with the employability dimension occupational expertise as the dependent variable, and gender and educational level of the employees as the control variables in the first step.

Mediation effect

For testing the mediation model proposed in Hypothesis 4 and 5, Baron and Kenny's (1986) steps for hierarchical regression analysis were applied. They stated that to test for mediation, one should estimate the three following regression equations (see Figure 9): first, the independent variable should significantly affect the mediator (i.e. Path a); second, the mediator must be shown to affect the dependent variable (i.e. Path b); and third, the independent variable must display a significant effect on the dependent variable (i.e. Path c). In order to conclude that there is a mediation effect, Path c should be or approximate a beta of zero. Although a significant reduction in Path c (i.e.

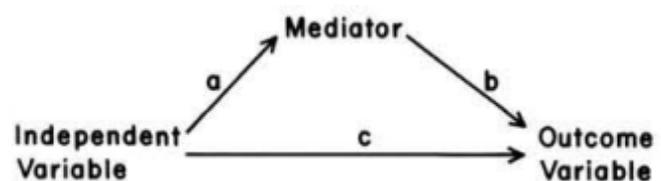


Figure 9. Steps for testing a mediation model (Baron & Kenny, 1986)

partial mediation) is more likely in the social sciences, as often more than one variable mediates the relationship between the independent and dependent variables (Baron & Kenny, 1986). However, before running the regression analysis, three conditions for regression analysis had to be met: 1) the independent variable predicts the mediator, 2) the mediator predicts the dependent variable and 3) the independent variable predicts the dependent variable. Finally, if these conditions hold and the discussed relationships have been indicated, a Sobel test (Baron & Kenny, 1986) can approximate the indirect effect of the independent variable on the dependent variable through the mediator (Path c').

Moderation effect

Furthermore, hierarchical regression analysis was used to test the moderation effect as proposed in Hypothesis 6. Baron and Kenny (1986) explained a moderation effect as an interaction effect between an independent variable and a variable that specifies certain conditions under which the independent variable operates. For testing a moderation model, Baron and Kenny (1986) advocated the following steps (see Figure 10): the impact of the negative age stereotypes as a predictor (Path a), the impact of age dissimilarity as a moderator (Path b), and the interaction effect or product of these two (Path c). The moderation hypothesis is supported if the interaction (Path c) is significant. Additionally, Baron and Kenny (1986) stipulated that both the dependent and independent variables do not correlate with the moderator variable, to be able to clearly interpret the interaction effect. Finally, the variables involved in the interaction effect had to be centered before running the moderation analysis (Field, 2013). The following procedure was used for this moderation analysis: in step one the control variables were entered; in step two the independent (i.e. predictor) variable; then, in step three the centered moderator variable; and finally, in step four, the centered interaction effect of the predictor and moderator were entered.

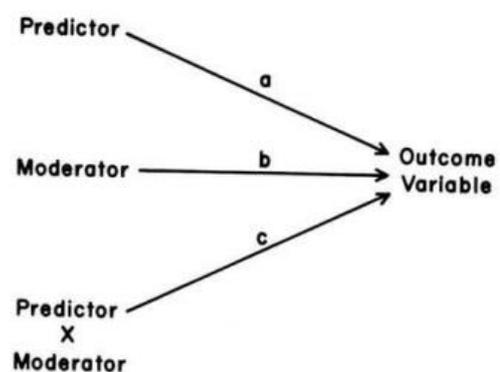


Figure 10. Steps for testing a moderation model (Baron & Kenny, 1986)

Table 2. Means, standard deviations, reliabilities and correlations between the model variables ($N = 117$)

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Gender	1.56	0.50	-										
2. Educational level	3.55	0.91	-.078	-									
3. NAS	2.62	0.68	.063	-.054	.884								
4. TRAINDEV	1.56	0.51	-.213*	.040	.058	.875							
5. FLEX	1.71	0.51	.131	.121	.166	.310**	.757						
6. AGEDISS	9.80	8.20	-.019	-.006	.149	-.029	-.002	-					
7. OCCEXP	4.54	0.72	.263**	.155	.039	.000	.264**	-.003	.880				
8. ANTIC	3.87	0.91	.177	.257**	.012	.023	.267**	.033	.547***	.887			
9. PERSFLEX	4.36	0.66	.141	.195*	.130	-.028	.129	.014	.496***	.619***	.865		
10. CORPSENSE	4.23	0.88	.149	.131	.002	.009	.192*	-.069	.525***	.621***	.722***	.848	
11. BAL	4.17	0.57	.025	-.005	-.160	-.028	.095	.000	.405***	.493***	.420***	.540***	.672

*Correlation significant at $p < .05$ (2-tailed), **Correlation significant at $p < .01$ (2-tailed), ***Correlation significant at $p < .001$ (2-tailed)

Note: NAS = Negative age stereotyping, TRAINDEV = Training & development practices, FLEX = Flexible working options, AGEDISS = Age dissimilarity, OCCEXP = Occupational expertise, ANTIC = Anticipation and optimisation, PERSFLEX = Personal flexibility, CORPSENSE = Corporate sense, and BAL = Balance.

Results

Hypothesis testing

Mediation model

Negative age stereotypes as predictor of individual HR practices

Table 3 below shows the outcome of the regression analyses regarding the relationship between the independent variable negative age stereotypes and the two mediators.

First mediator, training and development HR practices. The results pointed to a significant influence for one of the control variables, gender of the employee, on training and development HR practices. Gender seems to negatively affect training and development HR practices ($\beta = -0.212$; $p < 0.05$)⁹. However, it does not appear that negative age stereotypes influence training and development HR practices, as no significant effect was found in the analysis. Thus, no evidence was found for a significant relationship between negative age stereotypes and training and development HR practices to support Hypothesis 1a. Also, the first condition for regression analysis (Baron & Kenny, 1986) was not met for his relationship, as the negative age stereotypes predicts did not predict this first mediator variable.

Second mediator, flexible working options. Negative age stereotypes do seem to positively influence flexible working options ($\beta = 0.166$; $p < 0.1$), this means that the more negative age stereotypes are perceived to prevail in an organisation, the more investments are made in flexible working options for older workers. Thus, the results point in an opposite direction than hypothesised. Moreover, negative age stereotypes accounted for an increase in the total variance for flexible working options ($\Delta R^2 = 0.027$; $p < 0.10$), after controlling for the variables gender and educational level. In conclusion, negative age stereotypes related *positively* to flexible working options; thus, Hypothesis 1b was not confirmed since the results contradicted the hypothesised relationship. The first condition for regression analysis (Baron & Kenny, 1986), however, was met since negative age stereotypes did predict the second mediator variable.

Table 3. Results of hierarchical regression analyses for the relationship between negative age stereotypes and the two distinguished factors of individual HR practices (N = 117)

Variables	TRAINDEV β	FLEX β
<i>Step 1:</i>		
Gender	-0.212**	0.132
Educational level	0.024	0.140
<i>Step 2:</i>		
NAS	0.073	0.166*

⁹ See Methodology chapter, subsection Measurement model for a further explanation of this control variable.

<i>Model Summary:</i>		
Step 1: ΔR^2	0.046*	0.034
Step 2: ΔR^2	0.005	0.027*
Full model R^2	0.046	0.062*
Overall F	2.753*	2.476*

* $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$

Note: NAS = Negative age stereotypes, TRAINDEV = Training & development HR practices, and FLEX = Flexible working options

Employability as an outcome of individual HR practices

The results of the regression analyses for the relationship between the two distinguished factors of individual HR practices and the dimensions of employability, are shown in respectively Table 4 and Table 5.

First mediator, training and development HR practices. Both control variables appear to significantly affect all dimensions of employability, except balance, and corporate sense for educational level. For example, educational level has a rather strong positive influence on the dimension anticipation and optimisation ($\beta = 0.273$; $p < 0.01$), indicating that when employees are more highly educated, they tend to display more of the variable anticipation and optimisation. Furthermore, for all dimensions of employability, again except for balance, changes in total variance were mostly attributed to the influence of the control variables (occupational expertise, $\Delta R^2 = 0.100$; $p < 0.001$; anticipation and optimisation, $\Delta R^2 = 0.105$; $p < 0.001$; personal flexibility, $\Delta R^2 = 0.063$; $p < 0.05$; corporate sense, $\Delta R^2 = 0.043$; $p < 0.10$). Regarding the relationship between mediator and outcome variables, no evidence was found for a significant effect of training and development HR practices on the dimensions of employability. Thus, this lack of evidence from the data led to the conclusion that Hypotheses 2a, 2b, 2c, 2d, and 2e could not be confirmed. As a result, the second condition of Baron and Kenny (1986) for mediation analysis was not met for the relationship between the mediator training and development HR practices and the outcome variable employability.

Table 4. Results of hierarchical regression analyses for the relationship between training and development HR practices and the dimensions of employability (N = 117)

Variables	OCCEXP β	ANTIC β	PERSFLEX β	CORPSENSE β	BAL β
<i>Step 1:</i>					
Gender	0.276***	0.198**	0.157*	0.160*	0.025
Educational level	0.176*	0.273***	0.207**	0.144	-0.003
<i>Step 2:</i>					
TRAINDEV	0.054	0.057	-0.003	0.040	-0.023
<i>Model Summary:</i>					
Step 1: ΔR^2	0.100***	0.105***	0.063**	0.043*	0.001
Step 2: ΔR^2	0.003	0.003	0.000	0.001	0.001
Full model R^2	0.100***	0.105***	0.063**	0.043*	0.001
Overall F	6.325***	6.686***	3.803**	2.538*	0.037

* $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$

Note: TRAINDEV = Training and development HR practices, OCCEXP = Occupational expertise, ANTIC =

Anticipation and optimisation, PERSFLEX = Personal flexibility, CORPSENSE = Corporate sense, and BAL = Balance

Second mediator, flexible working options. Next, the relationship between flexible working options (i.e. the second mediator) and the five dimensions of employability was investigated. Firstly, the control variables seem to have a reasonably strong influence on three of the dimensions of employability; most notably a positive effect of gender was found on occupational expertise ($\beta = 0.246$; $p < 0.05$) and a positive effect of educational level of employees on anticipation and optimisation ($\beta = 0.244$; $p < 0.01$). For the dimension personal flexibility, the control variables accounted for most of the change in variance, while for balance no significant change in variance was found with the data (see previous paragraph).

Flexible working options are shown to positively affect three dimensions of employability quite strongly, especially occupational expertise ($\beta = 0.214$; $p < 0.05$) and anticipation and optimisation ($\beta = 0.216$; $p < 0.05$). For corporate sense, the effect was not as strong, though still significant ($\beta = 0.160$; $p < 0.1$). Moreover, flexible working options appeared to be responsible for an increase in total variance (occupational expertise, $\Delta R^2 = 0.044$; $p < 0.05$; anticipation and optimisation, $\Delta R^2 = 0.045$; $p < 0.05$; corporate sense, $\Delta R^2 = 0.025$; $p < 0.10$) after controlling for the two demographic variables (i.e. gender and educational level). Thus, with these outcomes Hypotheses 3a, 3b, and 3d were confirmed. However, as no significant effect was found for personal flexibility and balance, the Hypotheses 3c and 3e could not be confirmed. Therefore, the second condition of Baron and Kenny (1986) was confirmed for the relationship between flexible working option and three of the dimensions of employability.

Table 5. Results of hierarchical regression analyses for the relationship between flexible working options and the dimensions of employability (N = 117)

Variables	OCCEXP β	ANTIC β	PERSFLEX β	CORPSENSE β	BAL β
<i>Step 1:</i>					
Gender	0.246**	0.167*	0.157*	0.137	0.025
Educational level	0.148*	0.244***	0.207**	0.123	-0.003
<i>Step 2:</i>					
FLEX	0.214**	0.216**	0.086	0.160*	0.096
<i>Model Summary:</i>					
Step 1: ΔR^2	0.100***	0.105***	0.063**	0.043*	0.001
Step 2: ΔR^2	0.044**	0.045**	0.007	0.025*	0.009
Full model R^2	0.144**	0.150**	0.063**	0.067*	0.001
Overall F	6.333**	6.642***	3.803**	2.713**	0.037

* $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$

Note: FLEX = Flexible working options, OCCEXP = Occupational expertise, ANTIC = Anticipation and optimisation, PERSFLEX = Personal flexibility, CORPSENSE = Corporate sense, and BAL = Balance

Individual HR practices as a mediator in the relationship between negative age stereotypes and employability

As the first two conditions for mediation analysis (Baron & Kenny, 1986) were not met for the first mediator (i.e. training and development HR practices), this section only discusses the results of the

analyses regarding the second mediator, flexible working options. In Table 6 below, the Beta values are shown for the regression analyses investigating the relationship between negative age stereotypes and employability, mediated by individual HR practices. The first condition was met for the relationship between the predictor negative age stereotypes and the mediator flexible working options although not in the expected direction ($\beta = 0.166$; $p < 0.1$). Moreover, the second condition was partially met for the relationship between the mediator flexible working options and the dependent variable employability, namely for occupational expertise ($\beta = 0.214$; $p < 0.05$), for anticipation and optimisation ($\beta = 0.216$; $p < 0.05$), and for corporate sense ($\beta = 0.160$; $p < 0.10$). However, for the dimensions personal flexibility and balance, no mediation analysis could be performed as the second condition was not met for these two variables.

Thus far, the results indicated that three mediation analyses could be performed; though, after testing for confirmation of the third condition, the conclusion had to be made that no mediation analyses could be performed to test the indirect effect (i.e. Path c'), because no significant effects were found for the relationships between the predictor (i.e. negative age stereotypes) and the outcome variable (i.e. employability) except for balance ($\beta = -0.163$; $p < 0.1$). In conclusion, no relationships were found have met all three conditions for mediation analysis, thus no mediation analysis could be conducted. In conclusion to these premises, Hypotheses 4 and 5 could not be confirmed.

Table 6. Beta weights for hierarchical regression analyses ($N = 117$)

Variables	TRAINDEV β	FLEX β	OCCEXP β	ANTIC β	PERSFLEX β	CORPSENSE β	BAL β
Path A	0.073	0.166*					
Path B – TRAINDEV			0.054	0.057	-0.003	0.040	-0.023
Path B – FLEX			0.214**	0.216**	0.086	0.160*	0.096
Path C			0.031	0.014	0.132	0.000	- 0.163*
Path C'			-	-	-	-	-

* $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$

Note: TRAINDEV = Training & development HR practices, FLEX = Flexible working options, OCCEXP = Occupational expertise, ANTIC = Anticipation and optimisation, PERSFLEX = Personal flexibility, CORPSENSE = Corporate sense, and BAL = Balance

Moderation model

Moderating effect of age dissimilarity on the relationship between negative age stereotypes and individual HR practices

In this section, Hypothesis 6 is discussed regarding the influence of age dissimilarity as a possible moderator on the relationship between negative age stereotypes and individual HR practices. The results of this regression analysis are visible in Table 7. Gender appeared to have a negative influence on

training and development HR practices ($\beta = -0.212$; $p < 0.05$). Regarding the second step of the moderation analysis, only for the relationship between negative age stereotypes and flexible working options a significant effect was demonstrated ($\beta = 0.169$; $p < 0.10$). Including negative age stereotypes in the model, accounts for a significant change in total variance for the outcome variable flexible working options ($\Delta R^2 = 0.027$; $p < 0.10$), after having controlled for gender and educational level. Yet, no significant effect was discovered for age dissimilarity in predicting training and development HR practices and flexible working options. With these outcomes, adding the moderator age dissimilarity to the model did not increase the total amount of explained variance of the model for neither training and development HR practices nor flexible working options.

Finally, the interaction effect of the predictor (i.e. negative age stereotypes) and moderator (i.e. age dissimilarity) was not significant for both distinguished factors of individual HR practices; nor did adding this interaction effect to the model account for any change in total explained variance in the model. Hence, no support was found for Hypotheses 6a and 6b with these data.

Table 7. Results of hierarchical regression analysis for age dissimilarity as moderator on relationship between negative age stereotypes and individual HR practices (N = 117)

Variables	TRAINDEV β	FLEX β
<i>Step 1:</i>		
Gender	-0.212**	0.132
Educational level	0.024	0.140
<i>Step 2:</i>		
NAS	0.081	0.169*
<i>Step 3:</i>		
AGEDISS	-0.045	-0.024
<i>Step 4:</i>		
NAS-c*AGEDISS-c	0.011	-0.001
<i>Model Summary:</i>		
Step 1: ΔR^2	0.046*	0.034
Step 2: ΔR^2	0.005	0.027*
Step 2: ΔR^2	0.002	0.001
Step 2: ΔR^2	0.000	0.000
Full model R^2	0.046*	0.062*
Overall F	2.753*	2.476*

* $p < .10$; ** $p < .05$; *** $p < .01$; **** $p < .001$

Note: TRAINDEV = Training and development HR practices, FLEX = Flexible working options, NAS = Negative age stereotyping, and AGEDISS = Age dissimilarity. Hyphenated c indicates that the variables were centered before adding them to the regression analysis.

Discussion

Reflecting on the results

Reflecting on negative age stereotypes as predictor of individual HR practices

Hypothesis 1 stated that negative age stereotypes are *negatively* associated with individual HR practices (i.e. training and development HR practices and flexible working options). This empirical study was not able to confirm this hypothesis. That is, negative age stereotypes did not predict investments in training and development HR practices, and the predictor showed a significant impact on flexible working options; however, this impact was observed in the opposite direction than was hypothesised. These results contradict findings in earlier research (e.g. Chiu et al., 2001; Hirschfeld & Thomas, 2011; Posthuma & Campion, 2008) in which evidence was provided that negative age stereotypes do influence decisions regarding investments in HR practices. This positive effect of negative age stereotypes on flexible working options is interesting, as this could mean that some countermeasures are already being taken care of in the organisations that formed part of the research setting.

A possible explanation for this unexpected finding can be found in Allport's (1954) Contact theory, which states that under the right social conditions and influenced by personality factors (cf. Pettigrew, 1998) intergroup contact can to increase positive relations between different social groups. Thus, it was possible that the biased cognitive attitudes towards other age groups (i.e. stereotyping) have reduced if the two parties have worked with each other for a longer period of time. Another process which could have taken place is the recategorization of members of a different social group to one inclusive group (Dovidio et al., 2016). This process has been described in the Common Ingroup Identity Model (CIIM), which states that this recategorization 'can reduce intergroup bias through cognitive and motivational processes involving ingroup favoritism [*sic*]' (Dovidio et al., 2016, p. 8). For example, the case might be that despite the dissimilar age groups of the supervisors and employees a common ingroup identity was perceived, like a shared department, organisation, or other context factor.

Reflecting on employability as an outcome of individual HR practices

Two hypotheses were proposed to investigate the relationship between the two distinguished factors of individual HR practices and the five dimensions of employability (i.e. Hypothesis 2 and 3). Hypothesis 2 proposed a *positive* relationship between training and development HR practices and the five dimensions of employability. No evidence was found with the data to support this hypothesis. The findings for Hypothesis 2 are not in line with past research (e.g. Armstrong-Stassen & Ursel, 2009; De Lange et al., 2015; Van der Heijden et al., 2016), which stated that there is a (positive) relationship between Development HR practices and employability.

A possible explanation for the absence of the relationship between training and development HR practices and the dimensions of employability is that this relationship is moderated by another variable. That is, the significant effects that were found for the relationships between flexible working options and the three dimensions of employability might be spurious (MacCallum & Mar, 1995). In

other words, for example, perceived organisational support (Allen, Shore, & Griffeth, 2003) could function as a confounding variable in this relationship (i.e. an external factor that causes the effects of multiple variables in the model) (Field, 2013). Additionally, employability orientation of the employee (Van Dam, 2004) could serve as such a moderator in the relationship between training and development HR practices and employability. According to Van Dam (2004), an employability orientation “refers to the attitudes of employees toward interventions aimed at increasing the organization’s flexibility through developing and maintaining workers’ employability for the organization” (p. 30). Such interventions often involve changes in the employees’ present work situation; examples of interventions are changes in work content, jobs, or departments, or participating in training and development programmes. Thus, in line with this supposition, if an employee were to have a negative employability orientation, this could affect the impact of such training and development HR practices as described in this study on their employability.

Next, Hypothesis 3 concerned the suggested *positive* relationship between flexible working options and the dimensions of employability. For this hypothesis, some evidence was found to confirm three of the sub-hypotheses, namely for occupational expertise (i.e. H3a), anticipation and optimisation (i.e. H3b), and corporate sense (i.e. H3d). The findings for Hypothesis 3 do partially corroborate earlier research which advocated a positive relationship between Maintenance and Accommodative HR bundles, similar to flexible working options, and employability (e.g. De Lange et al., 2015; Kooij et al., 2011). Additionally, as no significant relationship was observed between flexible working options and two dimensions of employability (i.e. personal flexibility and balance), the researcher assumes that the explanation provided for Hypothesis 2 could also apply to these relationships.

Reflecting on individual HR practices as a mediator in the relationship between negative age stereotypes and employability

The possible mediation effects of individual HR practices in the relationship between negative age stereotypes and the dimensions of employability was proposed in Hypotheses 4 and 5. Firstly, for the mediator training and development HR practices, the conditions for regression analysis (Baron & Kenny, 1986) were not met; thus, the fourth hypothesis could not be tested.

Secondly, for the second mediator flexible working options, the first two conditions were met only for three dimensions of employability; the relationships between flexible working options and three dimensions of employability were found to be significantly related (i.e. for occupational expertise, anticipation and optimisation, and corporate sense). No support was found, however, for the dimensions personal flexibility and balance. The final condition (Baron & Kenny, 1986) was met only for the employability dimension balance. Hence, no significant relationships were found starting from negative age stereotypes through the mediator flexible working options to the outcome variable employability. As a result, no mediation analysis could be performed and the Hypothesis 5 was not tested.

Moreover, since no earlier studies were performed, to the researcher's knowledge, using this combination of variables, no indication can be given whether or not these findings are in line with or corroborate other empirical findings. The researcher proposes that an alternative mediator variable might explain the lack of evidence observed with the data for the relationship for one of the mediator variables (i.e. training and development HR practices). For example, an external locus of control (Finkelstein et al., 2015) on the part of the employee could explain the different effects of negative age stereotyping. This concept entails that employees might be more susceptible to the effects of stereotyping if they perceive a lack of control regarding their own employability. For instance, they could attribute this control to another party (e.g. supervisor or organisation). Importantly, this also has to do with power differences in an organisation or in a supervisor-subordinate relationship (Finkelstein et al., 2015).

Reflecting on the moderating effect of age dissimilarity on the relationship between negative age stereotypes and individual HR practices

The final hypothesis (i.e. Hypothesis 6) described a possible moderation effect of age dissimilarity on the relationship between negative age stereotypes and individual HR practices. Firstly, for the mediator training and development HR practices, no significant relationship was found for the moderator with the predictor negative age stereotypes; no interaction effect could be observed between these variables.

Secondly, for the relationship between negative age stereotypes and flexible working options (i.e. the second mediator), empirically, a moderation effect might have been observed because the relationship between the predictor and flexible working options was significant. Nonetheless, this was not the case; no significant moderation effect of age dissimilarity was found with the data. Although several studies have been conducted involving age dissimilarity as a moderator or predictor variable (e.g. Williams, Parker & Turner, 2007; Van der Heijden, Scholarios et al., 2010), no studies are known to the researcher concerning a similar predictor and outcome variable (i.e. individual HR practices) as in this research. Hence, for this hypothesis no comparison could be made to earlier research concerning the findings of this study.

An alternative explanation for the absence of an interaction effect of age dissimilarity (i.e. moderator) and negative age stereotypes (i.e. predictor) could be that the dyadic tenure of the supervisor and employee as a moderator has a more profound impact on than the hypothesised moderator age dissimilarity. Dyadic tenure (Van der Heijden, 2016) means that the supervisor has had more opportunities to interact and gather relevant information about a positive experience with the employee, which results in less age-related stereotyping. This premise is in line with the Contact theory (Pettigrew, 1998) and Common Ingroup Identity Model (Dovidio et al., 2016) proposed in an earlier paragraph. Both these theories revolve around the salience of a common group or positive associations with persons from another social (e.g. age) group, which reduces the tendency to rely on stereotypical assumptions as a basis for important, employability related decisions.

Reflecting on the chosen control variables in this study

Two control variables, namely gender and educational level of the employee, were included in the regression analyses in order to increase the validity of this study. Both control variables were often found to have a significant effect on either the mediator or outcome variable; although usually not for the mediator flexible working options and the employability dimension balance. As explained in the methodology section, gender and educational level were chosen as control variables in line with previous studies (e.g. Bal et al., 2015; Van der Heijde & Van der Heijden, 2006; Van der Heijden, 2016). Age and tenure were not included in the regression analyses as: 1) age dissimilarity was already a moderator variable in this study, and 2) tenure has been shown to highly correlate with age (e.g. Hassan & Davies, 2003; Shirom et al., 2008).

Limitations and recommendations for future research

Despite the contributions made to the academic discussions concerning negative age stereotypes, individual HR practices, employability, and age dissimilarity there are, however, some limitations to this research. First of all, the statistical power of this research was rather weak due to the fact that a small sample of 117 respondent pairs was used to conduct the analyses (Field, 2013). The collection of a larger respondent sample was hindered because of both time restrictions and contacted potential respondents who, in the end, did not complete the survey. Additionally, several cases were observed in the data in which the respondent stopped halfway through the survey; obviously, these cases had to be deleted along with the other respondents in the pairs. This might have been because the survey was rather long, especially for the employees, despite the fact that the respondents were informed beforehand how much time it would approximately take to fill out the survey. As a result, the credibility of the study might have been undermined since respondents could have filled out the survey without properly considering their answers. For supervisors, the survey was much shorter per employee they would fill it out for; however, this group showed the lowest response rate. Another reason for the relatively small respondent group could have been the rather personal and sensitive nature of the questions; for example, questions regarding stereotyping might deter some people from answering, despite the researcher's best efforts to convey the anonymity of the survey.

In line with the last point, another limitation is the sensitivity of the questions in the survey. For instance, the questions about stereotyping, which might have resulted in socially desirable answers. Moreover, as the survey also involved subjects such as age discrimination and career insecurity, this might have had an influence on the respondents' state of mind while filling out the survey, thereby perhaps influencing their answers negatively. However, some steps had already been taken prior to the survey distribution to prevent at least social desirability (Netemeyer et al., 2003); for instance, forcing the respondent to give either positive or negative answers by using six-point scale (e.g. for employability), also by formulating the questions neutrally (e.g. for stereotyping).

A third limitation was the representativeness and generalisability of the study. As described in the methodology section, some occupational sectors, age groups, educational levels and organisational sizes were underrepresented in the data set. Thus, a suggestion for future research is to redo this study with a larger and more representative sample of the total working population.

Finally, a limitation of this study was the unexpected result of the factor analysis for the employability scale. Only four instead of five factors were extracted from the data, despite the fact that this a thoroughly validated scale (Van der Heijde & Van der Heijden, 2006; Van der Heijden et al., 2009). Still, the choice was made to use five factors. The reason for this unexpected outcome might have been that a shortened questionnaire was used to measure the five dimensions of employability. The original scale comprised 47 items; in this study, 22 items were used in the survey questionnaire considering the length of the overall questionnaire and the response rate desired for this study. However, this is unlikely as the short version has also been extensively validated (Van der Heijden et al., 2017).

Moreover, more research ought to be performed concerning the absence of the relationship between training and development HR practices and employability; for instance, by incorporating a mediator such as employability orientation (cf. Van Dam, 2004). Finally, an interesting study can be conducted regarding the relationship between negative age stereotypes and flexible working options, which was found to have a positive relationship instead of a negative one as hypothesised. Perhaps a moderating variable (e.g. dyadic tenure; Van der Heijden, 2016) influences this relationship towards the observed result.

Conclusions and practical implications

Notwithstanding the limitations described above, this study's findings do contribute to some extent to the academic literature concerning the topics in this research. The aims of this research were: 1) to investigate the effects of negative age stereotyping on older workers' employability, mediated by individual HR practices, and 2) to research a possible moderation effect of absolute age difference between supervisor and employee on the relationship between negative age stereotypes and individual HR practices. As stated earlier, this is the first study investigating this specific combination of concepts; therefore, this study fulfils an exploratory function for future research, giving indications of the existency or absence of relationships between the concepts. Despite the fact that this study could not confirm the hypotheses regarding mediation and moderation, some individual relationships were shown to be significant. For instance, the significant, though unexpectedly positive, effect of negative age stereotypes on flexible working options was observed. This finding ought to be used for further research, to check for both possible spuriousness of the relationship and to elaborate on for societal interventions for example. The practical implication of this finding is that, at least in this area, the effects of negative age stereotyping are being fought against. In other words, instead of discriminating against older workers because of prevailing negative age stereotypes, organisations are investing in this vulnerable group of older workers using flexible working options (e.g. part-time work). This is an encouraging finding which

perhaps can be extrapolated to other kinds of stereotyping, for instance to negative age stereotyping regarding younger employees or gender stereotyping.

Other instances in which significant effects were found, were the relationships between flexible working options and three of the dimensions of employability, namely occupational expertise, anticipation and optimisation, and corporate sense. All three dimensions displayed positive relationships with flexible working options. These findings corroborated previous research on this subject, that is the existence of a relationship between HR practices and employability. For practice, the implications of results are useful in that they might inform older workers how to continue employment for a longer period of time in a manner that meets their needs, if investments are made in flexible working options. For example, if older workers are allowed to use flexible working schedules (i.e. item from the measurement scale of flexible working options), they are more likely to proactively enhance their adaptability. This would presumably increase their employability as adaptability is one of the most important dimensions of employability (Van der Heijden & Van der Heijden, 2006).

Unfortunately, the relationship between training and development HR practices was not found to be significant. Although, if the possible effects of a moderator, such as employability orientation (Van Dam, 2004), or a confounding variable, such as perceived organisational support (Allen et al., 2003) are investigated, perhaps the beneficial effects of training and development HR practices for employability of older workers can be revealed. This also would contribute to the longer employment of older workers and protecting their sustainable employment (i.e. the degree to which workers are willing and able to remain in employment now and in the future) (Van Dam, 2016).

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Appendices

Appendix 1. Net labour participation data (Statistics Netherland, 2017)

Geslacht	Leeftijd	Hoogst behaald onderwijsniveau	Onderverpen	Periodes	2014 1e kwartaal	2014 2e kwartaal	2014 3e kwartaal	2014 4e kwartaal	2015 1e kwartaal	2015 2e kwartaal	2015 3e kwartaal	2015 4e kwartaal	2016 1e kwartaal	2016 2e kwartaal	2016 3e kwartaal	2016 4e kwartaal
Totaal mannen en vrouwen	15 tot 75 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie	%	64,3	64,7	65,1	65,3	65,0	65,4	65,7	65,4	65,1	65,8	66,2	66,2
	15 tot 20 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		47,9	49,0	51,4	50,1	49,2	52,3	53,8	51,1	50,5	52,8	54,1	52,3
	20 tot 25 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		65,9	67,2	68,1	68,3	69,2	69,9	69,7	69,0	67,4	69,1	70,2	68,9
	25 tot 30 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		80,8	80,2	81,2	81,7	81,8	82,7	81,9	82,5	82,2	82,7	82,7	83,9
	30 tot 35 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		83,3	84,6	84,4	85,3	83,6	83,7	84,3	84,7	84,0	83,6	84,7	85,0
	35 tot 40 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		83,1	84,1	84,0	84,3	83,4	82,6	83,2	83,5	83,2	84,7	83,7	84,2
	40 tot 45 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		80,7	80,9	81,4	82,4	82,2	82,3	83,3	83,5	82,8	83,0	83,5	82,9
	45 tot 50 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		81,7	81,3	82,1	82,2	82,0	83,0	83,1	83,2	82,9	83,7	83,8	83,8
	50 tot 55 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		78,6	78,8	78,5	78,3	78,8	79,0	79,2	78,6	79,4	80,0	80,7	81,0
	55 tot 60 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		70,3	70,4	71,2	71,5	71,6	72,3	71,5	72,0	72,1	72,7	73,4	73,5
	60 tot 65 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		46,7	47,9	48,2	48,6	49,5	50,0	51,2	51,4	52,4	52,6	53,0	53,8
	65 tot 70 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		14,3	14,7	14,6	15,3	13,4	13,1	13,0	12,7	12,7	12,9	13,2	13,7
	70 tot 75 jaar	Hoogst behaald onderwijsniveau totaal	Netto arbeidsparticipatie		5,5	5,2	6,0	6,3	6,4	6,0	6,3	6,4	5,9	5,4	6,2	6,4

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Appendix 2. Examples of HR bundles from the sustainability framework of De Lange et al. (2015)

Development	Maintenance	Utilisation	Accommodative
Career planning	Flexible benefits	Participation	Additional leave
Continuous on-the-job development	Ergonomic adjustments	Task enrichment (knowledge transfer)	Long career break
Regular training	Performance pay		Early retirement
Promotion	Compressed working week		Demotion
	Health promotion		Exemption from overtime working

Appendix 3. Split case analysis for Gender on all main variables

Table 8. Descriptive statistics for male respondents on main variables (selected by employees) (N = 51)

Variables	Min.	Max.	M	SD
1. NAS	1.00	3.88	2.57	.71
2. TRAINDEV	1.00	3.00	1.69	.55
3. FLEX	1.00	3.00	1.64	.50
4. OCCEXP	2.80	5.60	4.33	.71
5. ANTIC	1.50	5.25	3.69	.84
6. PERSFLEX	1.80	5.20	4.25	.68
7. CORPSENSE	1.75	6.00	4.08	.81
8. BAL	2.50	5.00	4.16	.59

Table 9. Descriptive statistics for female respondents on main variables (selected by employees) (N = 66)

Variables	Min.	Max.	M	SD
1. NAS	1.00	4.00	2.66	.66
2. TRAINDEV	1.00	2.50	1.47	.45
3. FLEX	1.00	3.00	1.77	.52
4. OCCEXP	2.80	6.00	4.71	.69
5. ANTIC	1.50	5.75	4.01	.94
6. PERSFLEX	2.00	5.40	4.44	.65
7. CORPSENSE	2.00	5.75	4.34	.92
8. BAL	2.75	5.25	4.19	.56