



Utrecht University

**The Effect of Job Involvement on the Relation between Age Discrimination at Work and
Job Satisfaction of Young Female and Male Employees**

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Abstract

Age discrimination is one of the most common forms of discrimination in the workplace and negatively impacts essential aspects of employees' work life, such as job satisfaction. It is mainly associated with older employees, although young employees are experiencing more age discrimination (Marchiondo et al., 2016). Therefore, the current study will focus on young employees. One aspect of work that can buffer against this negative effect on job satisfaction is job involvement. It is an important factor to increase job satisfaction and therefore, has a strong positive influence on it. Previous research found that women were more discriminated against because of their age in the workplace compared to men (Stypinska & Turek, 2017). Surprisingly, women had higher job satisfaction and involvement than men (Bender et al., 2005; Reid et al., 2008). Therefore, this study hypothesizes that age discrimination at work is negatively associated with low job satisfaction. This association will be moderated by job involvement. Further, this moderation will be moderated by gender, to determine gender differences in young employees for the impact of job involvement on the relation between age discrimination at work and job satisfaction. The sample consisted of 308 respondents, 192 female and 116 male employees between 18 and 30. The outcomes revealed that the first hypothesis was supported, while the second and third were not supported. The implications of this study are that organizations should offer educational workshops about age discrimination and create a positive work climate. The study showed that age discrimination also affects young employees, and not just older employees.

Keywords: age discrimination at work, job satisfaction, job involvement, gender.

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Introduction

According to the U.S Equal Employment Opportunity Commission (EEOC), 14,183 workplace discrimination charges were filed by workers who were discriminated against because of their age. Workplace discrimination charges were described as signed statements reporting that an employee was discriminated against by an employer, union, or labor organization engaged in employment. Age discrimination has been found to be one of the most common forms of discrimination in the workplace. It was discovered that it negatively influence the relation and feelings an employee has towards their job (Cheung et al., 2016; Colella et al., 2012; Naegele & Walker, 2006). This is due the fact, that age discrimination at works acts like a stressor, which leads employees to separate themselves from their job and generally reduces their job satisfaction (Johnson & Neumark, 1996). This is important since job satisfaction has been a crucial factor in the workplace; it impacted employees' motivation and their performance at work (Octaviannand et al., 2017; Ayub & Rafif, 2011). Thus, when work-related factors, such as age discrimination at work, have negatively influenced job satisfaction, it resulted in decreased employee motivation and reduced performance at work (Malakolunthu et al., 2010; Afshar & Doosti, 2016). A possible work-related factor that might reduce this negative relation is job involvement as it has been found to positively increase job satisfaction (Abdallah et al., 2016). Therefore, in this study we propose that the negative effect of age discrimination at work on job satisfaction could be positively reinforced through job involvement (Abdallah et al., 2016) and therefore, weaken the negative effect of age discrimination at work on job satisfaction. Moreover, gender differences are taken into account for this study, since women were found to be more discriminated against due to their age (Stypinska & Turek, 2017). Nonetheless, they are more involved and satisfied than men in their job (Carvajal et al., 2018; Lorence, 1987). Therefore, job involvement can potentially

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weaken the negative effect of age discrimination at work, and especially of female employees, due to their higher levels of job satisfaction and job involvement.

To understand the described relations and effects of age discrimination at work, job involvement and gender on job satisfaction in more detail, it is crucial to know what each factor and relation entails. Age discrimination at work has been defined as the exclusion of people through behavior solely due to their age, resulting in disadvantages (Zharovska et al., 2021; McMullin & Marshall, 2001). This study will focus on studying the effect of age discrimination on young employees, since it was often associated with only older workers (Marchiondo et al., 2016). However, not only older workers, but also middle-aged workers, and young workers suffered from age discrimination at work (Marchiondo et al., 2016). Furthermore, it was discovered that young workers under the age of 30 reported the highest level of age discrimination at work compared to other age groups (Blackham 2019). According to the young employees, their ability to achieve their goals was slowed down due to age discrimination. Previous research discovered that they were discriminated against since they were perceived as not mature enough to handle the extra responsibility (Sargeant, 2010). However, these severe outcomes for young employees were not taken into account for most policies and laws, and therefore, most of them only focus on protecting older employees. For example, in the U.S, only employees that are 40 and older are legally protected from age discrimination (Marchiondo et al., 2016), thus, employees below the age of 40 are not protected by it. There is still a lack of knowledge and acknowledgment regarding the age discrimination young employees face and their suffering, thus, this study will investigate the effect of age discrimination on young employees.

Age Discrimination at Work and Job Satisfaction

One negative consequence of age discrimination at work that previous research has found is its effect on job satisfaction. According to Johnson and Neumark (1996), age

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discrimination acts as a stressor like other types of discrimination resulting in consequences such as detachment from the job and a general reduction of satisfaction. This is important, since job satisfaction is a crucial factor in an employee's life because they spend a lot of time and put a lot of effort into their work and value their job as an essential part of their life (Snape & Redman, 2003). Stamps (1997) defined job satisfaction as the degree to which someone likes their work and the feelings that someone has towards their work (Stahl, 2004). It was described as the extent to which someone experiences a positive effect on their job and its components (Adam & Bond, 2000). Job satisfaction can be divided into two subscales, extrinsic and intrinsic job satisfaction. While extrinsic job satisfaction is focused on work-related aspects such as salary and working conditions, intrinsic job satisfaction includes the employees' expectations of their job and attitude towards their job (Bektaş, 2017).

To study the relation between age discrimination at work and job satisfaction, we investigate job satisfaction as one scale, since we would not expect any differences between the scales regarding the negative impact of age discrimination at work. However, because each subscale has been studied individually before, and were approved as reliable scales, we investigated them in relation to age discrimination at work in additional analyses (Bektaş, 2017). Therefore, we conclude that our first hypothesis proposes that age discrimination at work is related to low job satisfaction.

The influence of Job Involvement

We wanted to investigate a possible factor that reduce the negative relation between age discrimination at work and job satisfaction. Therefore, other work-related aspects can be considered that positively influences job satisfaction and potentially weaken the relation. One such factor could be job involvement, which was described as the extent to which an employee is cognitively engaged in and concerned with their job (Paullay et al., 1994). The relation between age discrimination at work and job involvement has rarely been studied. The

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few studies that did investigated this relationship in the past found negative associations between the two constructs (Redman & Snape, 2006). However, high job involvement has been shown to impact stressors, such as stressful events, since highly involved employees tended to ignore stressors compared to low involved employees (Innes & Clarke, 1985). Employees with high involvement also display a high satisfaction with their job (Metha, 2011) and further, job involvement was revealed to have a strong, positive impact on job satisfaction, since it is a key factor in increasing job satisfaction (Henessey et al., 2010; Abdallah et al., 2016). Therefore, previous research has found that highly involved employees can deal with stressors better and are more focused on their needs at work, which also entails their job satisfaction (Innes & Clarke, 1985). Based on this, we hypothesize that the more an employee is involved in their job, the lower the effect of age discrimination at work on job satisfaction will be and therefore, job satisfaction will be higher compared to those who are less involved in their job.

The influence of Gender

The last factor that we added to our final investigation is gender. This was done to determine its influence on the effect of job involvement on the relation between age discrimination at work and job satisfaction and identify possible gender differences. Female employees were more likely to be associated with age discrimination at work than their male counterparts, since women are also more likely to suffer from other types of discrimination, such as gender discrimination, making them more sensitive to discrimination (Stypinska & Turek, 2017; Palmore, 2001). According to Duncan and Lorreto (2004), age discrimination at work, such as being considered 'too young', was found to be more often directed towards women than men since being female intensifies age prejudice towards women. No gender differences were found for job satisfaction and job involvement when the right conditions were met (Bender et al., 2005; Reid et al., 2008). These right conditions included for example

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social aspects such as receiving social support at work and having rewarding relations to colleagues and supervisors (Andrade et al., 2019). However, this was only displayed for job satisfaction when the working conditions are equal for women and men. For job involvement, equal conditions would lead to more involved women (Lorence, 1987), while for job satisfaction women were found to score higher when the conditions were not equal (Carvajal et al., 2018), especially for women under 30 compared to young men (Magee, 2014). The differences in job satisfaction arise because men value different work-related factors and these factors to a different extent than women (Carvajal et al., 2018). For example, men favored extrinsic factors such as salary more than women (Bender et al., 2005). In comparison, female employees valued the flexibility to balance work and family life more and having good relationships with co-workers (Carvajal et al., 2018). Linz and Semykina (2013) found that women's job satisfaction is connected to intrinsic rewards, such as a chance to learn new things, and to extrinsic rewards like receiving a bonus. For men, however, it is mostly just linked to extrinsic rewards; therefore, women's overall satisfaction with their job is higher, due to the fact that their job satisfaction is based on both intrinsic and extrinsic factors. Based on these findings, we propose that the moderating effect of job involvement will weaken the negative effect of age discrimination at work and job satisfaction more for female employees than male employees, when they have high job involvement and low age discrimination.

Research Question and Hypotheses

In summary, this study aimed to investigate the effect of job involvement on the relation between age discrimination at work and job satisfaction. Furthermore, the impact of gender will be studied to explore if female or male employees differ in terms of the influence of job involvement on the relation of age discrimination at work on job satisfaction. Lastly, these effects are tested for young employees due to the still existing lack of knowledge and acknowledgment regarding their suffering from age discrimination at work. Therefore, the

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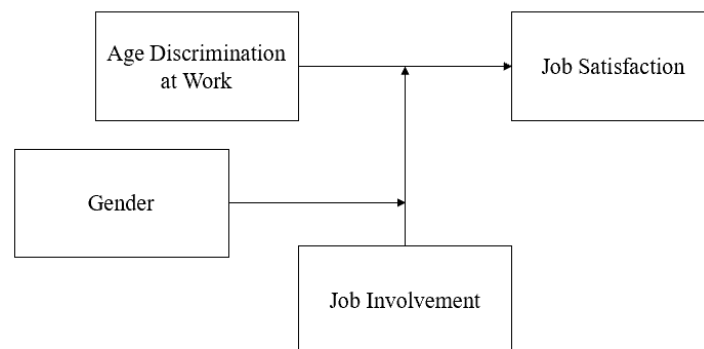
following research question developed: What are the possible influences that gender can have on the effect of job involvement on the relation between age discrimination at work and job satisfaction?, as well as the three hypotheses and the resulting model (Figure 1).

Hypothesis 1: Age discrimination at work will be associated with low job satisfaction.

Hypothesis 2: The negative relation between age discrimination at work and job satisfaction will be moderated by job involvement such that the relation will be weaker for employees who are more involved than less involved employees.

Hypothesis 3: Gender moderates the moderating effect of job involvement on the relation of age discrimination at work and job satisfaction, such that the moderating effect of job involvement will weaken the negative effect of age discrimination at work and job satisfaction more for female employees than male employees, when they are more involved in their job and less discriminated because of their age.

Figure 1



Method

Participants

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An a priori power analysis was calculated to establish the necessary sample size to test the hypotheses. Previous research with similar topics and statistical models had relatively small effect sizes (Aguinis et al., 2005). Therefore, a small effect size was chosen for this study with $d = 0.3$. To compute the final sample size, the software program G*Power was used and calculated a required sample size of 395 to achieve a power of 0.8. In total, 405 participants took part in the study of whom 97 needed to be removed. For the sake of simplicity, only female and male participants were chosen for the final sample. Therefore, not only participants who did not complete their answers ($N = 79$) or gave unreasonable answer ($N = 2$) were removed, such as stating to be 28 years old, but working in the current position for 34 years. Also, participants that chose the gender option “others” ($N = 14$), which entails those respondents do not identify as male and female. Additionally, participants were removed, who did not want to not mention their gender at all ($N = 2$). Therefore, the final sample consisted of 308 participants, of which 192 were female and 116 were male workers. The population was between the ages 18 and 30, and thus, classified as young workers (Snape & Redman, 2003). The average age was 25 ($SD = 3,25$).

The majority of the sample was employed either full-time (46.1%) or part-time (33.9%). The rest of the sample was relatively evenly distributed over the other types of employment, including, shift worker, trainee, working student and intern. The average amount of working experience was 2.64 years ($SD = 1.98$). Regarding the working sector, most of the respondents worked to a small extent in many different working sectors (24%), therefore categorized as “others”. The other participants were somewhat evenly distributed over the working sectors IT, Retail and Healthcare, Education and Government (see Appendix C, Table 1).

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The recruitment of the respondents took place via online platforms such as Survey Swap and Survey Circle, and via social media, including WhatsApp and Instagram. The participants did not receive any incentives for taking part in the study.

Design and Procedure

The execution of the study was done via an online questionnaire on Qualtrics. At the start, information was provided regarding the nature of this study, the candidates options, and whom to contact in case of questions or problems. The study was advertised as gaining inside into the experiences and perceptions of young workers regarding their work-life and their encountered work-related actions and interactions. The next four questions required the participants consent and their understanding of their options. The respondents confirmed that they were 18 years old, if they did not, the questionnaire ended. After testing the variables, which will further explained below, they were asked to indicate their gender and age. This was followed by three questions requiring them to report their type of employment, their years of experience, and lastly in which sector they work in. After completing the questionnaire, a short debrief appeared to inform the respondents about the nature of the study and a notice to contact the researchers if they might had any questions (see Appendix B).

In total, the questionnaire consisted of 58 questions, and it took approximately five to ten minutes to complete. The respondents' answers were anonymous, and no IP addresses were registered. The data were collected at one moment in time, so the study can be determined as a cross-sectional design.

Ethical approval

The University of Utrecht acts according to the Code of Ethics for Psychologists. This research project was registered at the Utrecht University Student Ethics Review & Registration Site (UU-SER). The Faculty Ethics Review Board approved this study.

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Material and Measures

Age Discrimination at Work

Age Discrimination at work was measured with the Workplace Age Discrimination Scale (WADS) (Marchiondo et al., 2016). The final version consisted of nine questions, such as “*I have been passed over for a work role/task due to my age*” and were answered on a scale from one to five (*1=quite often; 5=never*), indicating how often they experienced it (see Appendix A for the full scale). The WADS was the first measurement validated for targets’ perspectives of workplace age discrimination and for all age groups (Lagacé et al., 2020). To match the scale of job satisfaction, the scale needed to be reversed (*5=quite often; 1=never*). The scale was reliable ($\alpha = 0.93$).

Job Satisfaction

To estimate job satisfaction, the Minnesota Satisfaction Questionnaire (MSQ) (Weiss et al., 1967) was used. The statements could be answered on a five point Likert-scale regarding the level of satisfaction (*1=very satisfied; 5=very dissatisfied*). In total, job satisfaction was measured by three subscales including general job satisfaction with statements such as “*The chances for advancement on this job.*”, extrinsic job satisfaction “*The competence of my supervisor in making decisions.*” and intrinsic job satisfaction “*The feeling of accomplishment I get from the job.*” (Hirschfeld, 2000). “*On my present job, this is how I feel about....*” was the introduction for each statement (see Appendix A for the full scale). Previous studies concluded that the MSQ was a well-validated and reliable measurement for testing job satisfaction ($\alpha = 0.7$) (Nunnally, 1978; Martins et al., 2012; Mathieu et al., 2014). Further, it is one of the most used tools to estimate job satisfaction (Scarpello and Campbell, 1983). We found that the overall reliability of the complete scale was ($\alpha = 0.92$). Each subscale was reliable too, intrinsic job satisfaction ($\alpha = 0.86$), extrinsic job satisfaction ($\alpha = 0.80$) and general job satisfaction ($\alpha = 0.68$).

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Job Involvement

Job Involvement was tested with the 20 statements developed by Lodahl and Kejnar (1965) which were answered on a 5-point scale indicating the level of agreement (*1=strongly agree; 5= strongly disagree*). Statements such as “*I avoid taking on extra duties and responsibilities in my work.*” were displayed (see Appendix A for the full scale). The scale was proven to be valid and reliable by past studies ($\alpha = 0.90$) (Mendoza, 2019) ($\alpha = 0.71$) (Rahati et al., 2015). Also, this scale was reversed for 12 items in order to be compatible with the job satisfaction scale (*5 = strongly disagree; 1 = strongly agree*). Further, we found the job involvement scale to be reliable ($\alpha = 0.80$).

Statistical Analysis

The software Statistical Package IBM SPSS Statistics v28 (2021) was used to conduct the statistical analysis. The dependent variable was job satisfaction, and the independent variable was age discrimination at work. Furthermore, job involvement and gender were entered as moderators. *PROCESS macro SPSS package version 4.1* by Hayes (2022) was used to estimate the effect of the moderation and moderated moderation.

Results

A simple linear regression, a moderation analysis, and a moderated moderation analysis were conducted to investigate the above-mentioned hypotheses. Before performing the analyses, the correlations between all variables were estimated to determine which variables, besides age discrimination at work and job involvement, significantly affected job satisfaction. Only age and gender significantly correlated with job satisfaction; thus, they were controlled for during the analyses (Table 2).

Table 2

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Correlations between Job Satisfaction and all Other Variables

Variable	1	2	3	4	5	6	7	8
1. Job Satisfaction	-							
2. Age Discrimination ^a	-.56**	-						
3. Job Involvement	.45**	-.27**	-					
4. Gender	-.12*	.10	-.07	-				
5. Age	.12*	-.20**	-.12*	.07	-			
6. Type of Employment	-.03	.09	-.05	-.00	-.21**	-		
7. Years of Experience	.00	-.06	.02	.11*	.40**	-.26**	-	
8. Working Sector	.04	-.03	-.01	-.01	-.10	.05	-.08	-

Note. $N = 308$. ** $p < 0.01$; * $p < 0.05$. ^aAge Discrimination at Work.

Further, the descriptive statistical aspects were investigated. The outcomes revealed that each variable was answered without showing a tendency to either high or low scores, since the participants scores were normally distributed (Table 3). This means, that the sample was not highly involved in, satisfied or dissatisfied with their job and neither high nor low levels of age discrimination at work were reported.

Table 3

Descriptive Statistic

Variables	<i>M</i>	<i>Maximum</i>	<i>Minimum</i>	<i>SE</i>	<i>SD</i>	<i>Kurtosis</i>	<i>Skewness</i>
Job Satisfaction	3.45	4.85	1.40	.04	.91	.04	-.56
Age Discrimination ^a	2.51	4.89	1.00	.05	.63	-.75	.24
Job Involvement	2.91	4.30	1.50	.03	.48	.16	-.09

Note. $N = 308$. ^aAge Discrimination at Work

Numerous assumptions were checked to determine whether the variables were compatible for conducting the analyses. The first assumption, the linear relation between age

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discrimination at work and job involvement and job satisfaction was tested by inspecting the scatterplot and determining the linear relation via a line. Next, multicollinearity was tested by checking the correlation between each relation of the variables. No correlation was higher than 0.8 and therefore fulfilled the assumption (Table 2). Another way to test this assumption is by checking the VIF value, which cannot exceed 10. Since no VIF value did, the assumption was met. The assumption of independence of residuals was checked and met by estimating the Durbin-Watson statistic variable. It needed to exceed a value of 1, be smaller than 3, and be as close as possible to the value of 2. All values matched the requirement. Further, the variance of the residuals, known as homoscedasticity, was checked for being constant. This assumption was fulfilled since the scatterplot for all variables was random and not shaped in a funnel structure. The assumption of normally distributed residuals was fulfilled since the p-plot showed that the value of the sample was close to the ideal line. Further, normality was tested with skewness and kurtosis. All values were between -1 and +1 and revealed that the data was normally distributed (Table 3). Lastly, no influential cases were detected that bias the model, which was determined via the Cook's values. None of these values exceeded 1; therefore, the assumption was met.

Hypothesis 1

The first hypothesis was investigated with a simple linear regression to test the relation between age discrimination at work and job satisfaction while controlling for age and gender. The outcomes revealed that age discrimination at work explained 33% variance in job satisfaction, $R^2 = 0.33$, $F(3, 304) = 48.82$; $p < 0.001$. The outcomes showed that for every unit age discrimination at work increased job satisfaction decreased by -0.87 units. Further, age discrimination at work significantly and negatively predicted job satisfaction, $B = -0.87$, $p < 0.001$ (Table 4).

Table 4

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Regression of Association Between Age Discrimination at Work and Job Satisfaction

Variable	<i>B</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Age Discrimination ^a	-.87	-.56	.07	-11.52	.001***	[-1.02, -.72]
Gender	-1.56	-.06	1.24	-1.26	.21	[-4.02, .89]
Age	.06	.02	.19	.35	.73	[-.31, .44]

Note. *N* = 308. ^aAge Discrimination at Work. ****p* < 0.001.

Hypothesis 2

The second hypothesis researched the moderating role of job involvement on the relation between age discrimination at work and job satisfaction, while controlling for age and gender. The outcomes showed that 43% of the variance of job satisfaction can be explained by the model ($F(5, 302) = 39.19, R^2 = 0.43, p < 0.001$). However, the interaction term was not found to be statistically significant ($B = 0.01, t(302) = 0.84, p = 0.40$). The analysis was not statistically significant, meaning that job involvement did not influence the relation as a moderator (see Appendix C, Table 5 and Figure 2).

Hypothesis 3

The third hypothesis was tested with a moderated moderation, while controlling for age. The model explained 43% of the variance of job satisfaction ($F(8, 299) = 24.99, p < .001, R^2 = .43$). Four interaction terms were tested, only three will be displayed here, since the interaction between age discrimination at work and job involvement was already determined for hypothesis two. The interaction term for between job involvement and gender ($B = 0.14, t(299) = 1.05, p = 0.30$) were not found to be significant, as well as, the interaction between age discrimination at work, job involvement and gender was not found to be statistically significant ($B = 0.0185, t(299) = 1.02, p = 0.31$). This indicated that gender did not influence the moderating effect of job involvement on the relation between age discrimination at work and job satisfaction. Lastly, also the interaction for age discrimination at work and gender was

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not found to be statistically significant ($B = -0.08$, $t(299) = -0.49$, $p = 0.63$), which meant that gender did not influence the relation between age discrimination at work and job satisfaction as a moderato (see Appendix Table 6, Figure 3 and 4).

Additional analyses

With two simple linear regression, the relations between age discrimination at work and extrinsic and intrinsic job satisfaction were tested while controlling for age and gender. The outcomes revealed that age discrimination at work explained 27% variance in extrinsic job satisfaction ($R^2 = 0.27$, $F(3, 304) = 37.17$; $p < 0.001$) and 30% variance in intrinsic job satisfaction ($R^2 = 0.30$, $F(3, 304) = 42.77$; $p < 0.001$). The outcomes showed that for every unit age discrimination at work increased extrinsic job satisfaction decreased by -0.27 units and intrinsic job satisfaction decreased by -0.41 units. Moreover, age discrimination at work significantly and negatively predicted extrinsic job satisfaction, $B = -0.27$, $p < 0.001$ and intrinsic job satisfaction $B = -0.41$, $p < 0.001$ (Table 7 and Table 8). This means that age discrimination at work negatively affected intrinsic and extrinsic job satisfaction. However, between the subscales were no differences detected, that would indicate that age discrimination at work has not affected one subscale more than the other (Table 6 and Table 7).

Table 7*Regression of Association Between Age Discrimination at Work and Extrinsic Job Satisfaction*

Variable	<i>B</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Age Discrimination ^a	-.27	-.52	.03	-10.30	.001***	[-.33, -.22]
Gender	.18	.02	.44	.42	.68	[-.68, 1.05]
Age	.01	.00	.06	.08	.93	[-.13, .136]

Note. $N = 308$. ^aAge Discrimination at Work. *** $p < 0.001$.

Table 8*Regression of Association Between Age Discrimination at Work and Intrinsic Job Satisfaction*

Variable	<i>B</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Age Discrimination ^a	-.41	-.50	.04	-10.16	.001***	[-.49, -.33]
Gender	-1.99	-.15	.67	-2.99	.003**	[-3.31, -.68]
Age	.08	.04	.10	.82	.415	[-.12, .28]

Note. *N* = 308. ^aAge Discrimination at Work. ****p* < 0.001., ***p* < 0.05

Discussion

The purpose of this study was to gain a better understanding of the consequences of age discrimination at work in young employees. In particular, the impact of job involvement on the relation of age discrimination at work and job satisfaction was studied by comparing young female and male employees.

Research Results and Previous Research

Age discrimination at work and job satisfaction

In line with the hypothesis one, it was found that age discrimination at work predicted lower job satisfaction, meaning that employees that were discriminated against because of their age are less satisfied with their job. This is in accordance with previous research, that also found a negative relation between age discrimination at work and job satisfaction (Griffin et al., 2016; Kunze et al., 2011). Furthermore, as an additional analysis, the impact of age discrimination on intrinsic and extrinsic job satisfaction was studied. These outcomes showed that age discrimination at work negatively impacted intrinsic and extrinsic job satisfaction.

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However, no differences were found between the two impacts of age discrimination at work on the subscales, intrinsic job satisfaction and extrinsic job satisfaction.

The study contributes to previous research by providing evidence that age discrimination at work is negatively associated with low job satisfaction for young employees. This is a rare finding, since age discrimination at work and its effect on job satisfaction is often studied for older employees (Marchiondo et al., 2016). Also, the effect of age discrimination at work on intrinsic and extrinsic job satisfaction has not been investigated yet in scientific literature and research.

The moderating effect of job involvement

Contrary to the second hypothesis, job involvement did not weaken the relation between age discrimination at work and job satisfaction. This means that job involvement did not impact the relation between age discrimination at work and job satisfaction, and further, cannot weaken the negative effect of age discrimination at work more for employees who are more involved than less involved employees.

Although, this outcome is unexpected, it still contributes to research, since according to our knowledge, this relation has not been studied before. A possible reason for the missing outcome is that job involvement is not enough to weaken the negative effect of age discrimination on job satisfaction. The effect of job involvement is weak, which might be due to the sample's job involvement, since they were neither low nor highly involved in their job. Previous research found that high job involvement has an impact on stressors and job satisfaction (Innes & Clarke, 1985; Ollo-Lopéz et al., 2016), but these high levels were not found in our sample. Another reason for the missing effect of job involvement might be that it is not the key factor to minimize this negative relation. Job involvement might have a stronger effect on other aspects, such as working climate, since highly involved employees want to fulfill their needs within the climate they are working in (Batlis, 1978). This is not only

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enhancing an employee's job involvement even more, but also their job satisfaction and can also counter age discrimination (Ayalon & Tesch-Römer, 2018). Therefore, we would suggest future research to investigate the tested relation with a working climate of highly involved employees.

The moderating effect of gender

The third and last hypothesis is also not supported since gender did not influence the effect of job involvement on the relation of age discrimination at work and job satisfaction. This means that no differences between female and male employees were found for employees who are highly involved in their job and only discriminated against their age to a small extent. Moreover, gender also did not influence the relation between age discrimination at work and job satisfaction and therefore, no gender differences were found overall.

This study can contribute to previous research with the provision of new evidence, since to our knowledge, up until now no study has used gender as an influencing factor for the investigated relation. One reason for the missing gender differences might be that the gap between female and male employees is getting smaller in the workplace. Beerman et al., 2008 revealed that this is related to changed and improved opportunities for women. Furthermore, working condition are improving, societal differences are getting smaller, and expectations and norms are lining up more (Ross & Mirowsky, 2002). This leads to female and male employees being equally involved in their job and showing similar levels of job satisfaction (Reid et al., 2008). This might also equalize the impact of age discrimination at work on female and male employees, since age discrimination is linked to societal and cultural norms (Ayalon, 2013).

Limitations and Strengths

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The study had some limitations which are worth noting. Regarding the demographic questions more topics should have been approached, such as the level of education and country of origin. This demographic information could help to determine more adequately who is affected by age discrimination, and how it is related to different demographic situations and factors, which should be done by further research. Additionally, certain limitations regarding the sample are found, such as the fact that the sample did not show a tendency towards higher or lower levels of job involvement, job satisfaction and age discrimination at work. A possible reason for that is social desirability bias, which is that respondents answer questions in a socially desirable way instead of giving their real answer (Grimm, 2010). Another limitation regarding the sample is that it consisted of more women, therefore the estimation of gender difference was not completely adequate. An equally balanced sample could reveal different outcomes for the tested relation. It might show differences between female and male employees. Future research should take this limitation into account and aim for a sample which consists of groups that represents female and male participants equally strong. This helps to better determine whether there are existing differences between women and men for the relation of job involvement, age discrimination at work and job satisfaction. Related to this, only differences between female and male participants were studied, instead of taking further gender categories into account. Therefore, it would be interesting to study the difference between people identifying not only as female or male but for instance as non-binary and determine the consequences they experience due to age discrimination at work. They are discriminated in the workplace as well and experience more discrimination in their lives overall compared to people or employees identifying as female or male (Tabaac et al., 2017; Richards et al., 2016). However, another limitation is the used job involvement scale by Lodahl and Kejnar (1965), which does not measure the variable as strongly as it is supposed to, although it is often used in research. Previous research finds multiple aspects that have a negative impact on the assessment of job

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involvement, such as the fact that the scale entails psychological noise, which leads to some disrupted psychometric properties and unstable dimensionality (Ramsey et al., 1995; Reeve & Smith, 2001). Therefore, future research should use a different scale to estimate job involvement more accurately. A last limitation is the developed model and outcomes for this study. Since this research project is focused on young employees, we would not expect to receive similar outcomes for older employees. Previous research show that they report higher levels of job satisfaction and job involvement (Hennekam, 2016; Lorence & Mortimer, 1985), but lower levels of age discrimination at work compared to young employees (Blackham 2019). However, the model that these effects were tested with could still be applied to older employees since the tested relations also play an important role for their working life (Aristovnik & Jaklič, 2014; Matagi et al., 2022). Lastly, one strength of the study was that a sample size of 308 was achieved, which helps to lead to more accurate outcomes, higher reliability and validity, and more power.

Theoretical and Practical Implications

Despite the limitations, the study can offer multiple practical and theoretical implications for the investigated field of research. One implication of this study is the focus on young employees while investigating the effects of age discrimination at work. This gives an important insight in how job satisfaction is affected by age discrimination in a young age group. In particular, this is important, since the majority of research studied older employees to detect the consequences of age discrimination (Zacher & Steinvik, 2015). Therefore, this research project can be used as a basis for future research studying the effect of age discrimination at work on young employees. Furthermore, this study investigated relations which were rarely studied before, such as the association between age discrimination at work and intrinsic and extrinsic job satisfaction and between job involvement and age discrimination. The influence of age discrimination at work was similar for both job

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satisfaction subscales, which indicates that it is more useful to study the impact of age discrimination on job satisfaction overall rather than its subscales alone for future research.

A practical implication from this study is that organizations should take further action to raise awareness regarding age discrimination at work. This is achieved through workshops and trainings that help to educate employees and employers about it. The goal should be to communicate what age discrimination is, how to detect it and lastly how to prevent it. A special focus must be taken for age discrimination in the workplace, including the consequences resulting from it and how it affects the target group. Thereby, awareness is raised, and the employees and employers have a better chance of noticing age discrimination for themselves, their colleagues, and employees and can prevent it from happening again (Mutiani & Putra, 2020). Furthermore, organizations can implement aspects of age discrimination in their employee satisfaction questionnaires. In this way, an organization can determine how severely their employees feel discriminated against due to their age and if their job satisfaction is reduced. Further, they can start taking action to prevent these effects. Another aspect that should be taken seriously is the work climate. By creating a positive work climate, job involvement and job satisfaction can be further nurtured (Omolayo & Ajila, 2012), which also leads to higher performance and can reduce some of the negative effects of age discrimination at work (Yeung et al., 2021). The last implication would be to start expanding the law for age discrimination, since it only protects employees that are 40 and older (Marchiondo et al., 2016). The study showed that young employees are also negatively impacted by age discrimination at work and therefore, need to be included in this law to be legally protected.

Conclusion

In conclusion, the study shows that age discrimination at work is not only a problem for older employees, but also for young employees. The findings suggest that age

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discrimination at work has a negative impact on job satisfaction. Furthermore, the study demonstrates that there are no gender differences for the effect of age discrimination at work and that job involvement cannot reduce the negative relation between age discrimination at work and job satisfaction. However, the findings also show that age discrimination at work is a problem for young employees. Therefore, it is important to further investigate this to reduce the negative effects of age discrimination at work and to protect employees from it. This study provided implications and suggestions for future research to determine and reduce the effect of age discrimination at work and to enhance job satisfaction in young employees.

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Appendix A

Scales

Items to measure Age Discrimination at Work

Workplace Age Discrimination Scale

1	2	3	4	5
quite often	often	sometimes	rarely	never

1. I have been passed over for a work role/task due to my age
2. My contributions are not valued as much due to my age
3. I have been given fewer opportunities to express my ideas due to my age
4. I have unfairly been evaluated less favorably due to my age
5. I receive less social support due to my age
6. I have been treated as though I am less capable due to my age
7. I have been treated with less respect due to my age
8. Someone has delayed or ignored my requests due to my age
9. Someone has blamed me for failure or problems due to my age

Items for measuring Job Satisfaction

Minnesota satisfaction questionnaire (Short version)

Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
1	2	3	4	5

On my present job, this is how I feel about ...

1. Being able to keep busy all the time

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2. The chance to work alone on the job
3. The chance to do different things from time to time
4. The chance to be “somebody” in the community
5. The way my boss handles his/her workers
6. The competence of my supervisor in making decisions
7. Being able to do things that don't go against my conscience
8. The way my job provides for steady employment
9. The chance to do things for other people
10. The chance to tell people what to
11. The chance to do something that make use of my abilities
12. The way company policies are put into practice
13. My pay and the amount of work I do
14. The chances for advancement on this job
15. The freedom to use my own judgment
16. The chance to try my own methods of doing the job
17. The working conditions
18. The way my co-workers get along with each other
19. The praise I get for doing a good job
20. The feeling of accomplishment I get from the job

Items to measure Job Involvement

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	2	3	4	5

1. I'll stay overtime to finish a job, even if I'm not paid for it.
2. You can measure a person pretty well by how good a job he does.

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3. The major satisfaction in my life comes from my job.
4. For me, mornings at work really fly by.
5. I usually show up for work a little early, to get things ready.
6. The most important things that happen to me involve my work.
7. Sometimes I lie awake at night thinking ahead to the next day's work.
8. I am really a perfectionist about my work.
9. I feel depressed when I fail at something connected with my job.
10. I have other activities more important than my work.
11. I live, eat, and breathe my job.
12. I would probably keep working even if I didn't need the money.
13. Quite often I feel like staying home from work instead of coming in.
14. To me, my work is only a small part of who I am.
15. I am very much involved personally in my work.
16. I avoid taking on extra duties and responsibilities in my work.
17. I used to be more ambitious about my work than I am now.
18. Most things in life are more important than work.
19. I used to care more about my work, but now other things are more important to me.
20. Sometimes I'd like to kick myself for the mistakes I make in my work.

Appendix B

Information letter

Hello!

I am a Master student at the University of Utrecht, studying Social, Health and Organizational Psychology. This study is part of my Master thesis and conducted under the supervision of Dr. Bibiana Armenta Gutierrez.

The intention of this study is to examine people's experiences and perceptions about their working life. If you would like to discuss any aspect of the research with Dr. Armenta Gutierrez, you can contact her by email: b.m.amentagutierrez@uu.nl

If you need to contact me, you can reach me via email: p.m.breit@students.uu.nl

I would appreciate your participation, as this study could contribute to the understanding of young workers experiences and perception of their work-life and work-related actions and interactions. If you decide to participate in this study, you should be between the **ages of 18 and 30** and currently in any kind of employment relationship.

We will ask you to complete the series of questionnaires covering your perception, experiences, and behavior at work. The participation in this study is voluntary. If you choose to participate, you may withdraw at any time without giving any reason. The unfinished answers will be deleted and therefore not be used in the final evaluation. If you wish to withdraw your data after the study has finished. Please make a record of the times of your start and finish. This will help us to withdraw your data if you choose to do so. It will take around 10-15 minutes and will be conducted online.

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This study is completely anonymous, and all personal details will be saved separately from the data file. Thus, all information will be confidential. The survey will be stored for 10 years, however, your personal data will only be stored until the data collection is completed. Copies of this anonymous information may be made available for follow-up or further research. This study may be used for publication or used in presentation at conferences. Your participation will not be revealed, and all data will be fully anonymized.

If you have official complaints, you may address them to the Utrecht University's complaints officer: klachtenfunctionaris-fetscowet@uu.nl. If you have any questions regarding data protection, please contact the Data Protection Officer of Utrecht University:

<https://www.uu.nl/en/organisation/data-protection-officer>

Thank you!

Consent

To receive the confirmation of all participants that they want to participate in this study and are older than 18 years; the following questions were asked:

Have you read the information letter? Yes/No

Do you understand that you can email the researcher with any questions you may have? Yes/
No

Are you aware that you can withdraw the study at any time? Yes/ No

Do you agree to take part in the study and confirm that you are at least 18 years old? Yes / No

Debriefing

Debrief

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Thank you for your participation in this study, we appreciate your effort and cooperation. In the following summary, you will receive a brief explanation of what the study was about.

Explanation of this study

You completed a series of questionnaires designed to assess how age discrimination affects job satisfaction of young workers and how this process can be strengthened or weakened by job involvement in women and men. In case you felt uncomfortable at any point during the completion of the questionnaire, we would like to point out that you should not salient negative events in this study to your life or abilities.

Contact information

The study is being conducted by Paulina Breit under the supervision of Dr. Bibiana Armenta Gutierrez, at the Department of Social and Behavioral Sciences at Utrecht University. If you have any questions, comments or are interested in the results of this study, do not hesitate to contact me via email: p.m.breit@students.uu.nl

JOB INVOLVEMENT ON AGE DISCRIMINATION AND JOB SATISFACTION

Appendix C

Table 1

Sociodemographic Data of Participants

	Gender		Age			Type of Employment			Working Sector		Years of Experience			
	n	%	Min	Max	M	n	%		n	%	Min	Max	M	
Female	192	62,3	18	30	24,8	Full-time	143	46,4	IT	43	14	< 0	12	2,6
Male	116	37,7				Part-time	103	33,4	Retail	40	13			
						Shiftworker	12	3,9	Healthcare	39	12,7			
						Apprentice	12	3,9	Education	35	11,4			
						Trainee	12	3,9	Government	31	10,1			
						Working-Student	4	1,3	Food & Beverages Industry	11	3,6			
						Intern	22	7,1	Consultancy	14	4,5			
									Marketing	11	3,6			
									Real estate	10	3,2			
									Other	74	24			

Note. N = 308

JOB INVOLVEMENT ON AGE DISCRIMINATION AND JOB SATISFACTION

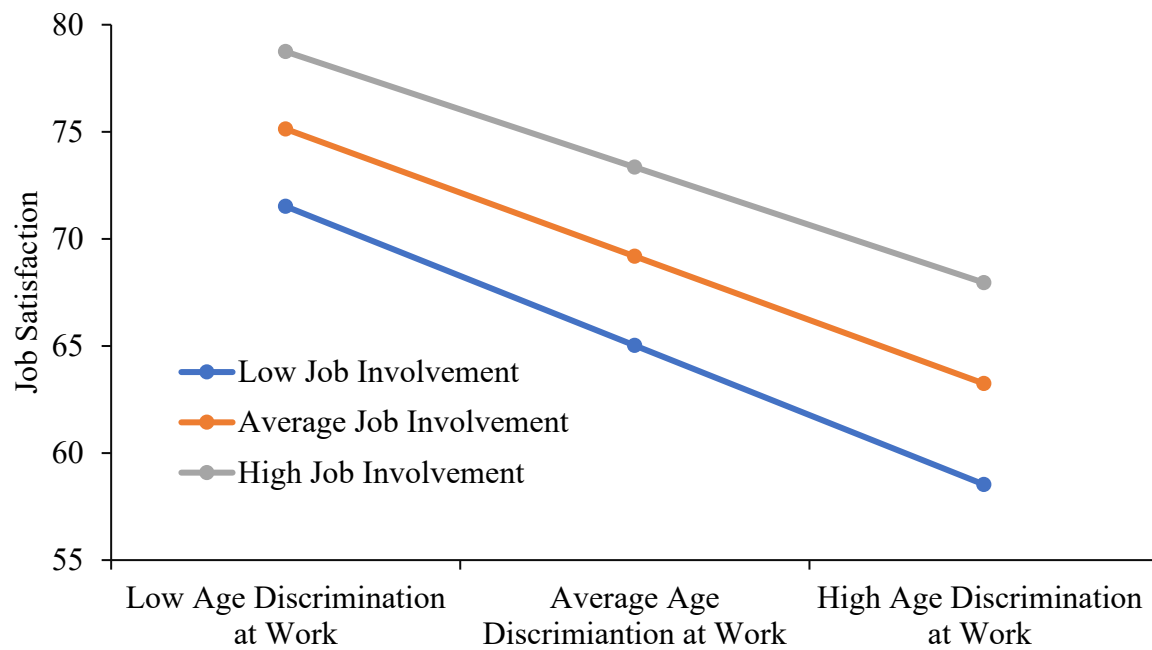
Table 5*Conditional Effects of Age Discrimination at Work and Job Involvement on Job Satisfaction*

Level of JI	Effect	SE	t
Low	-.79***	.10	-7.29***
Average	-.73***	.08	-9.02***
High	-.66***	.12	-5.57***

Note. N = 308, JI = Job Involvement, ***p < 0.001

Figure 2

Job Involvement as Moderator on the Relation Between Age Discrimination at Work and Job Satisfaction



Note. N = 308.

Table 6

JOB INVOLVEMENT ON AGE DISCRIMINATION AND JOB SATISFACTION

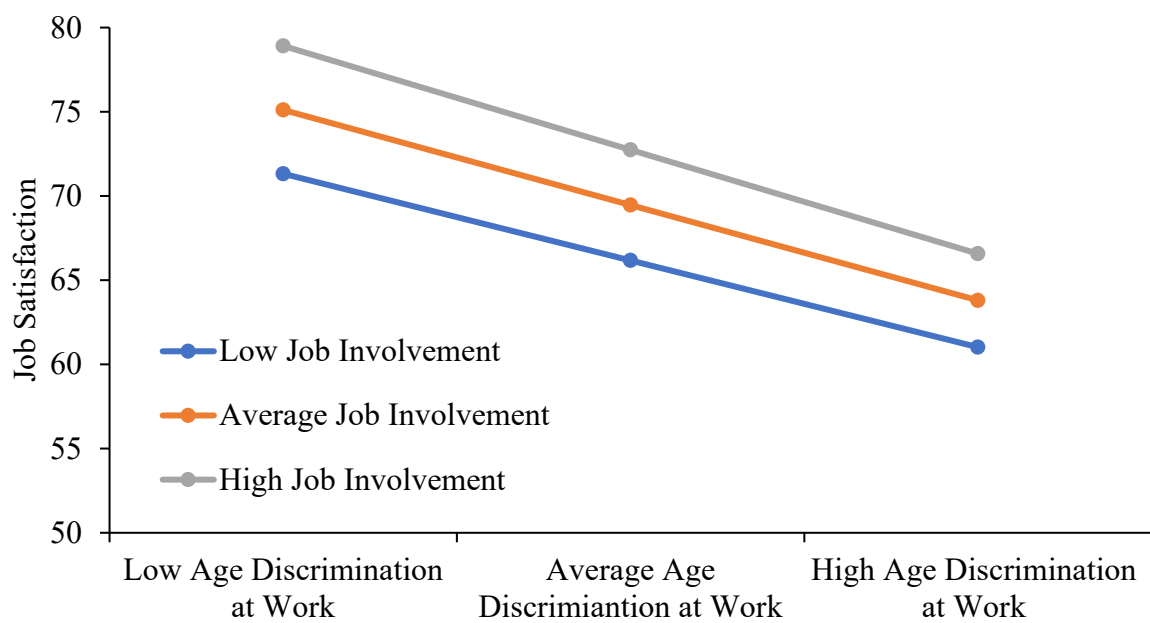
Conditional effects of Age Discrimination at Work and Job Involvement on Job Satisfaction for Female and Male Employees

Level of JI ^a	Female			Male		
	Effect	SE	t	Effect	SE	t
Low	-.63***	.16	-4.02***	-.89***	.16	-5.47***
Average	-.69***	.11	-6.44***	-.77***	.12	-6.40***
High	-.75***	.16	-4.66***	-.65	.19	-3.37***

Note. $N = 308$, *** $p < 0.001$. ^aJl = Job Involvement

Figure 3

Job Involvement as Moderator on the Relation between Age Discrimination at Work and Job Satisfaction for Female Employees

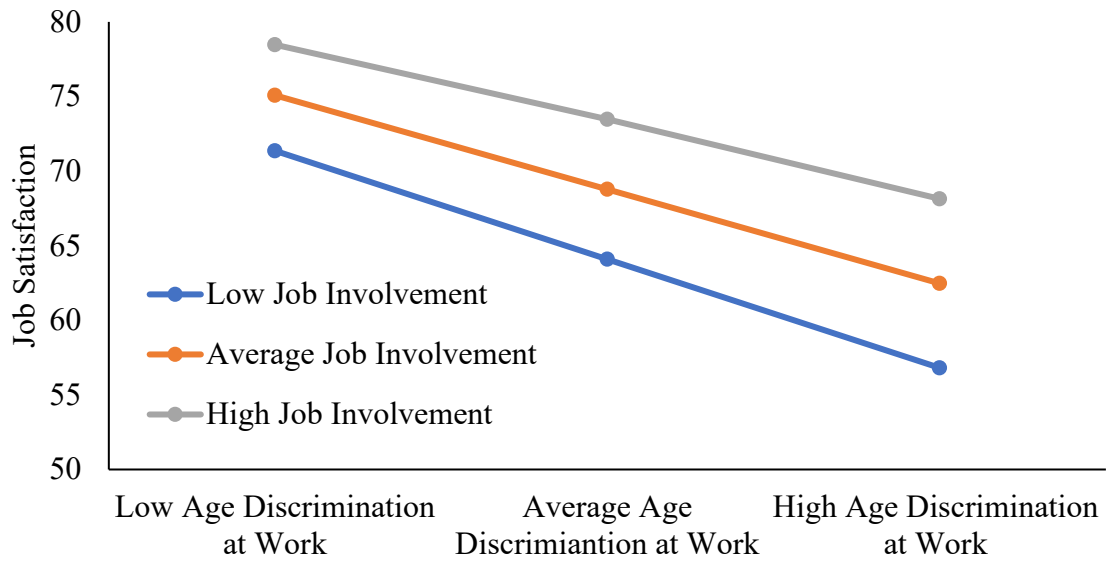


Note. $N = 308$.

Figure 4

JOB INVOLVEMENT ON AGE DISCRIMINATION AND JOB SATISFACTION

Job Involvement as Moderator on the Relation between Age Discrimination at Work and Job Satisfaction for Male Employees



Note. $N = 308$.