

# Age Discrimination and Employability in Healthcare Work: A Double-Edged Sword for Older Workers?

Karen Pak <sup>1,2,\*</sup>, Trude Furunes <sup>2,3,4</sup> and Annet H. De Lange <sup>3,4,5,6,7</sup>

<sup>1</sup> Institute for Management Research, Radboud University, 6525 AJ Nijmegen, The Netherlands

<sup>2</sup> Faculty of Social and Behavioral Sciences, Tilburg University, 5037 AB Tilburg, The Netherlands; trude.furunes@uis.no

<sup>3</sup> Norwegian School of Hotel Management, University of Stavanger, 4021 Stavanger, Norway; annet.delange@han.nl

<sup>4</sup> Faculty of Psychology, Open University, 6419 AT Heerlen, The Netherlands

<sup>5</sup> Faculty of Economy and Management, HAN University of Applied Sciences, 6500 JK Nijmegen, The Netherlands

<sup>6</sup> The Department of Psychology, Universidade de Coruna, 15701 A Coruna, Spain

<sup>7</sup> The Faculty of Psychology, Norwegian University of Science and Technology (NTNU), 7491 Trondheim, Norway

\* Correspondence: k.pak@tilburguniversity.edu

**Abstract:** Due to the aging workforce, older workers, especially in the healthcare industry, must remain employable. However, older healthcare workers may face age discrimination that can limit their employability chances. In this study, we examined (a) the causal direction of the relationship between age discrimination and internal employability and (b) differences between age groups (young ( $\leq 30$ ), middle-aged (31–44), and older ( $\geq 45$ ) healthcare workers) in this relationship. Based on the Selection Optimization Compensation theory, we postulated that (i,ii) internal employability and age discrimination are inversely negatively related to one another over time and that (ii–iv) this relationship would be strongest for older employees compared to other age groups. We conducted a two-wave complete panel study among 1478 healthcare professionals to test these hypotheses. The results of our multi-group structural equation modeling analyses suggested that internal employability is a significant negative predictor of age discrimination. Moreover, results suggested that internal employability and age discrimination have a reciprocal relationship among older workers but are unrelated for younger and middle-aged workers. Theoretical and practical implications of our results are discussed.

**Keywords:** age discrimination; aging workforce; employability; healthcare; longitudinal research

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## 1. Introduction

Due to the aging population, it is important to prolong the working lives of aging workers to reduce pressure on pension systems and avoid labor shortages [1]. Therefore, employees must remain employable as they age [2], especially in the healthcare industry, where workforce shortages are looming [3,4]. In their meta-analysis, Ng and Feldman [5] showed that older workers are equally productive compared to their younger counterparts and showed higher levels of organizational citizenship behavior and safety-related behavior compared to younger workers [6]. However, older workers may face ageism at work, which refers to biased behavior and attitudes in the workplace based on one's calendar age and can include negative stereotypes about the productivity of older workers [7,8], limiting the opportunities of older workers in the labor market [9,10]. Age discrimination can affect workers of all ages, but it tends to be most dominant among younger and older workers [11]. Iversen et al.'s [12] conceptual analysis of ageism pinpointed the complexity of the concept, including cognitive (e.g., stereotypes), affective (e.g., prejudice), and behavioral (e.g., discrimination) components. Stereotypes and prejudice that

are not contradicted or reacted upon by management may lead to discriminatory actions [13]. Workplace age discrimination could thus be encouraging older employees to retire [14] either through discriminatory organizational practices related to recruitment, development, and retention or through more covert forms of ageism (i.e., prejudice and stereotypes) or both. Even though the term ageism may include discrimination due to age against all age groups in the workplace, the most common use of the term is as a label for age discrimination against the elderly [15]. Earlier research has pointed out the negative effects of age discrimination on-the-job performance of older workers and called for more longitudinal research on the relations between age discrimination and the perceived employability of aging workers [16,17].

Research on age discrimination in the workplace is scarce [18]. Most studies on age discrimination have focused on supervisors' and co-workers' stereotypes and discriminatory behavior and less on the association between employees' experiences of age discrimination and other work outcomes [19,20]. Drawing on data from 1478 Dutch healthcare workers, the present study was designed to fill this research gap by examining: (a) the causal direction of the relationship between age discrimination and internal employability and (b) differences between age groups (young ( $\leq 30$ ), middle-aged (31–44), and older ( $\geq 45$ ) healthcare workers) [21].

Before addressing our main research questions and hypotheses, we first define the concepts and relevant theories of age discrimination and employability.

### 1.1. Age Discrimination

Furunes and Mykletun [22] developed a measure of (overt) workplace age discrimination called the Nordic Age Discrimination Scale (NADS). NADS is a six-item measure assessing employees' perceptions of (discriminatory) organizational practices at work related to recruitment, training, and retention of older employees. The concept may be viewed as a proxy for creating a culture to stimulate sustainable working lives. The study of Furunes and Mykletun [22] conducted with 2653 schoolteachers from Norway, Sweden, and Finland indicated that workers who reported higher levels of age discrimination had lower levels of work outcomes (i.e., self-efficacy, work ability, work motivation, organizational commitment, job satisfaction, and life satisfaction) and higher levels of stress and perceived bullying. Furthermore, age discrimination was negatively related to perceptions of the social climate, co-worker support, and supervisor support.

Moreover, Marchiondo, Gonzales, and Williams [18] found that age discrimination in the workplace negatively affected mental health. Additionally, Boehm et al. [23] reported that a positive age diversity climate (i.e., a climate in which age discrimination is not present) was related to better organizational performance and lower turnover intentions. Finally, Schermuly et al. [24] indicated that age discrimination was negatively related to the desired retirement age. Workers of all ages can experience age discrimination; however, it is most common among labor market entrants and older workers [11]. Wilson et al. [25] designed different studies in which between 48% and 91% of older people reported age discrimination. Common stereotypes about older employees are that they are less productive, more resistant to change, less able to learn, have a shorter tenure, and are more costly [7], whereas common stereotypes about younger employees are that they are unreliable, inexperienced, emotionally unstable [26], but also more enthusiastic and enterprising compared to their older peers [27]. In sum, these studies highlight the negative consequences of age discrimination against older workers, affecting their perceived employability levels at work.

### 1.2. Internal Employability

Employability can be operationalized differently. For example, competence-based employability focuses on a person's skills and talents [28], whereas labor-market-based employability focuses on individual differences in labor market chances [29]. This study focused on self-perceptions of labor market employability, defined as the perceived

likelihood of employees to maintain their current job or find a new job when necessary [30]. This study focused specifically on employees' perceived opportunities within their current organization (i.e., internal employability). Previous studies have generally found that (internal) employability decreases with age [9,31–33]. One of the reasons for this decline in employability with age is that older employees are perceived to be more expensive compared to younger employees. When people want to change jobs but perceive few labor market possibilities, this can create a feeling of being “locked-in” to one's job, which is detrimental to one's well-being [34], whereas high levels of perceived employability are positively associated with health and well-being [35].

### 1.3. Age Discrimination and Internal Employability

Selection Optimization Compensation Theory (SOC) [36] proposes that older workers deal with the gains and losses associated with aging by shifting from focusing on growth and development to focusing on maintenance and regulation of work-related losses. In line with this proposition, Kooij et al. [37] showed in their meta-analysis that growth motives at work decline with age. This suggests that the focus on (internal) employability decreases with age [11]. This change in focus may trigger stereotyping by supervisors and colleagues, resulting in age discrimination. In line with this proposition, Mazzetti et al. [38] found lower discrimination of older employees engaged in developmental activities, indicating that changes in employability might lead to changes in age discrimination.

On the other hand, age discrimination by supervisors and colleagues might signal to employees that they will have fewer opportunities to continue working within this organization, in line with signaling theory [39]. Corrington, Ng, Phetmisy, Watson, Wu, and Hebl [16] identified several additional pathways through which age discrimination can harm employee outcomes, such as employability. First, age discrimination can create a cognitive strain that inhibits employees' emotion regulation abilities [17] and learning abilities [7]. As learning is important for the maintenance of employability [40], experiences of age discrimination are likely to undermine employability. Moreover, stereotype threat (i.e., the risk of confirming negative stereotypes) can lead to anxiety and reduced performance [41]. Second, age discrimination can have a negative effect on health [42,43]. Third, age discrimination inhibits employees from showcasing their abilities, leading to lowered employability and motivation [13]. Johnson and Neumark [43] found that older workers who experienced age discrimination were more likely to have spells of unemployment compared to older workers who did not experience age discrimination. Thus, age discrimination may have a negative effect on internal employability and vice versa, thereby suggesting a reciprocal relationship.

Previous studies have supported reciprocal relationships between psychosocial work characteristics and mental health [43–49], work engagement [47,48,50], personal initiative [51], and work-related learning [52]. However, the longitudinal and dynamic relationship between age discrimination and internal employability has not been examined yet.

Following the aforementioned literature on the relationship between psychosocial work characteristics and various work-related outcomes, we tested a reciprocal relationship between age discrimination and internal employability over time. Accordingly, we proposed the following hypotheses:

**Hypothesis 1.** *Age discrimination has a negative cross-lagged effect on internal employability.*

**Hypothesis 2.** *Internal employability has a negative cross-lagged effect on age discrimination.*

#### 1.4. Age Differences in the Relationship between Age Discrimination and Internal Employability

The classification of younger, middle-aged, and older workers is often based on the respondent's chronological age. Although the age threshold for "older workers" can vary from 40 to 75, the threshold of 45 years and older is most common in the literature regarding older workers [53,54]. Specifically, we will divide workers into older workers (>45 years), middle-aged workers (31–44), and young workers (<30 years).

As older workers are more likely to experience age discrimination [11] and are less likely to invest in their employability [10], it is plausible that the relationship between age discrimination and internal employability is more pronounced for older workers compared to young and middle-aged workers. Therefore, we examined differences between age groups in the dynamic relationship between age discrimination and internal employability.

**Hypothesis 3.** *The negative cross-lagged effect of age discrimination on internal employability is only significant for older workers.*

**Hypothesis 4.** *The negative cross-lagged effect of internal employability on age discrimination is only significant for older workers.*

## 2. Materials and Methods

### 2.1. Study Design and Procedure

Our study is part of a larger research project called "the healthy healthcare project." Longitudinal data were collected through online surveys at two time points with a time lag of 6 months. Employees of 25 healthcare institutions in The Netherlands were approached to participate in this study. The first measurement (T1) took place from December 2017 to January 2018. The second measurement (T2) took place from June 2018 to August 2018.

### 2.2. Participants

All employees from 25 healthcare institutions (N = 6866) were approached to participate in this study. Of these 6866 employees, 2697 employees completed the first questionnaire (response rate of 39.3% at T1), and 2132 employees filled out the second questionnaire (response rate of 31.1% at T2). Overall, 1478 employees responded to both the first and second questionnaires and were included in this study. According to Ford et al. [55], this sample size was sufficiently large to detect small effect sizes of lagged effects. The age of the employees included in this study ranged from 18 to 66 (M = 46.79, SD = 11.06) and 84% (N = 1242) of the respondents were female (cf. [56]). Most respondents (89.7%, N = 1325) had a fixed contract. As shown in Table 1, most had a vocational education degree or a bachelor's degree.

**Table 1.** Education Level.

Education Level	% (N)
Master	11.6% (N = 172)
Bachelor	35.7% (N = 527)
Vocational education	37.8% (N = 558)
High school	14.3% (N = 210)
Primary school	0.7% (N = 11)

### 2.3. Measures

#### 2.3.1. Internal Employability

Internal employability was measured with a four-item scale developed by Akkermans et al. [57]. An example item was, "I am able to get different jobs with my current employer." The items were measured on a five-point Likert scale that ranged from

“completely disagree” (1) to “completely agree” (5). Scale reliability was acceptable at both measurement moments (Cronbach’s  $\alpha_1 = 0.72$ ; Cronbach’s  $\alpha_2 = 0.73$ ). Confirmatory factor analysis also showed a good fit at both time points ( $T1 = \chi^2(2) = 28.436 p < 0.001$ , RMSEA = 0.098, CFI = 0.979, TLI = 0.937, SRMR = 0.024;  $T2 = \chi^2(2) = 20.523 p = 0.001$ , RMSEA = 0.082, CFI = 0.986, TLI = 0.958, SRMR = 0.020), although the RMSEA values were somewhat high. Moreover, the chi-square test is significant, but due to the large sample size the chi-square test is not considered to be reliable in this study (Bentler, 1990). The composite reliability and the composite average variance extracted can be found in Table 2.

**Table 2.** Composite reliability (CR) and composite average variance extracted (AVE).

	CR	AVE
Internal employability T1	0.752	0.692
Internal employability T2	0.761	0.693
Age discrimination T1	0.798	0.674
Age discrimination T2	0.793	0.682

### 2.3.2. Age Discrimination

Age discrimination was measured with the six-item Nordic Age Discrimination Scale [21]. An example item is, “Within my company, older employees do not get the same opportunities for training during working hours.” All items were measured on a five-point Likert scale that ranged from “completely disagree” (1) to “completely agree” (5). Scale reliability was good at both measurement points (Cronbach’s  $\alpha_1 = 0.79$ ; Cronbach’s  $\alpha_2 = 0.79$ ). Confirmatory factor analysis suggested that the factor structure fitted the data appropriately, ( $T1 = \chi^2(9) = 81.965 p < 0.001$ , RMSEA = 0.074, CFI = 0.970, TLI = 0.950, SRMR = 0.027;  $T2 = \chi^2(9) = 55.766 p < 0.001$ , RMSEA = 0.059, CFI = 0.980, TLI = 0.967, SRMR = 0.022), even though the RMSEA was somewhat high at T1. Moreover, the chi-square test is significant, but due to the large sample size, the chi-square test is not considered to be reliable in this study (Bentler, 1990). The composite reliability and the composite average variance extracted can be found in Table 2.

### 2.3.3. Age

Age, measured as a continuous variable, was used as a control variable in the initial stages of analysis. For the multi-group analyses, age groups were created in which employees below 30 were classified as younger employees, employees between the ages 30 and 45 were classified as middle-aged employees, and employees of 45 years and older were categorized as older employees.

## 2.4. Analysis

Structural equation modeling (SEM) in M-Plus (version 8) was conducted to analyze and compare competing models of the relationship between internal employability and age discrimination. This analysis consisted of four stages. First, confirmatory factor analysis was performed for all included variables. The chi-square test was used to assess model fit. However, this test is criticized as it is sensitive to sample sizes. Therefore, additional fit indices were included to assess model fit. More specifically, we included the CFI [58], TLI [59], RMSEA [60], and SRMR [61]. In line with Hu and Bentler’s [62] recommendations, scores above 0.90 for the CFI and TLI were considered acceptable, and scores above 0.95 are considered good. Furthermore, regarding the RMSEA and SRMR, we considered scores below 0.08 to be acceptable and scores below 0.05 to be good. We have also compared a two-factor structure (employability and age discrimination as two separate factors) to a one-factor structure. This confirmatory factor analysis suggested that the two-factor structure (i.e., employability and age discrimination are two separate factors) fit the data appropriately at T1  $\chi^2(34) = 165.121, p < 0.001$ , RMSEA = 0.051, TLI = 0.954, CFI = 0.965, SRMR = 0.032 and T2  $\chi^2(34) = 140.144, p < 0.001$ , RMSEA = 0.046, TLI = 0.962, CFI = 0.972,

SRMR = 0.031, and significantly better in comparison to a one-factor model at T1  $\chi^2(35) = 1358.851$   $p < 0.001$ , RMSEA = 0.160, CFI = 0.645, TLI = 0.544, SRMR = 0.125 and T2  $\chi^2(35) = 1364.064$   $p < 0.001$ , RMSEA = 0.160, CFI = 0.645, TLI = 0.543, SRMR = 0.125.

Second, measurement invariance over time and between age groups was tested following Van de Schoot et al.'s [63] recommendations. The factor structure of the two outcome measures at both time points was tested simultaneously to test measurement variance over time. First, all parameters were freely estimated. Second, the factor loadings were held equal across the two time points, but the intercepts were still allowed to vary (e.g., the metric model). In the third model, the factor loadings and the intercepts were constrained (e.g., the scalar model). Standard errors were also constrained in the fourth and final model (e.g., the unique measurement invariance model). The models were compared using the chi-square test and the CFI and RMSEA fit indices [64]. The model's fit was considered to decrease significantly if the CFI dropped by more than 0.010 and the RMSEA dropped by more than 0.030 [62]. The results are presented in Table 3. The requirements of measurement invariance were met for both outcome measures. Next, this process was repeated across the three different age groups. The results can be found in Table 4. The differences in CFI and RMSEA confirmed configural invariance. RMSEA differences supported metric invariance; however, CFI differences were slightly above the threshold.

**Table 3.** Measurement Invariance Over Time.

Variable	Type	$\chi^2$	df	CFI	RMSEA	$\Delta\chi^2$	$\Delta df$	$p$	$\Delta CFI$	$\Delta RMSEA$
Age discrimination over time	Configural	238.079	53	0.968	0.049	0	0	1	0	0
	Metric	238.079	53	0.968	0.049	6.884	5	0.229	0	0.002
	Scalar	244.963	58	0.968	0.047					
Employability over time	Configural	63.275	19	0.988	0.041	0	0	1	0	0
	Metric	63.275	19	0.988	0.041	1.993	3	0.574	0	0.003
	Scalar	65.268	22	0.988	0.038					

**Table 4.** Measurement Invariance Across Groups.

Variable	Type	$\chi^2$	df	CFI	RMSEA	$\Delta\chi^2$	$\Delta df$	$p$	$\Delta CFI$	$\Delta RMSEA$
Measurement invariance across groups	Configural	1778.454	492	0.864	0.073	66.73	32	0.001	0.005	0.001
	Metric	1855.184	524	0.859	0.072	183.51	32	0.000	0.014	-0.002
	Scalar	2038.698	556	0.843	0.074					

Third, the relationships between the latent variables were tested in the structural model. In this phase, several different models were tested. In Model 0, internal employability at T1 was added as a predictor of internal employability at T2, and age discrimination at T1 was added as a predictor of age discrimination at T2. Furthermore, internal employability at T1 correlated with age discrimination at T1 and internal employability at T2 correlated with age discrimination at T2. This model was the reference model. In Model 1, age discrimination at T1 was added as a predictor of internal employability at T2. This model was the normal causality model. In Model 2, instead of age discrimination at T1 predicting internal employability at T2, internal employability at T1 was added as a predictor of age discrimination at T2. This model was the reversed causality model. In Model 3, internal employability at T1 predicted age discrimination at T2, and age discrimination at T1 predicted internal employability at T2. This model was the reciprocal model. Age was included as a continuous control variable in all previous models.

In the fourth step of the analysis, a multi-group analysis was performed in which the cross-lagged model was tested separately for three age groups; namely, younger workers (<30), middle-aged workers (30–45), and older workers (45+), although, researchers

usually recommend using age as a continuous rather than categorical variable (see for example [65]). However, age discrimination is always targeted at age groups [66]. Therefore, we deemed it appropriate to use age groups in this study.

### 3. Results

Table 5 shows the correlations between all variables included in this study, the means, and standard deviations. Internal employability and age discrimination were negatively correlated at both time points ( $rt1 = -0.120, p < 0.01$ ;  $rt2 = -0.148, p < 0.01$ ). Furthermore, internal employability was negatively correlated with age at both time points ( $rt1 = -0.282, p < 0.01$ ;  $rt2 = -0.265, p < 0.01$ ). Age discrimination was not correlated with age at any of the time points ( $rt1 = -0.006, p = 0.83$ ;  $rt2 = 0.027, p = 0.31$ ).

**Table 5.** Means (M), Standard Deviations (SD), and Correlations.

	M.	SD.	1.	2.	3.	4.
1. Internal employability T1	3.18	0.71				
2. Age discrimination T1	2.32	0.58	-0.12 **			
3. Internal employability T2	3.20	0.71	0.61 **	-0.11 **		
4. Age discrimination T2	3.68	0.59	-0.14 **	0.54 **	-0.15 **	
5. Age	46.79	11.06	-0.28 **	-0.01	-0.27 **	0.03

\*\* Correlation is significant at the 0.01 level (2-tailed).

Model 0, the baseline model, tested whether internal employability at T1 predicts internal employability at T2 and whether age discrimination at T1 predicts age discrimination at T2. Furthermore, the variables measured at T1 were correlated with each other, as were the variables measured at T2. The model fit for this model was good, as shown in Table 6.

**Table 6.** Model Fit Culture Towards Working Longer and Internal Employability.

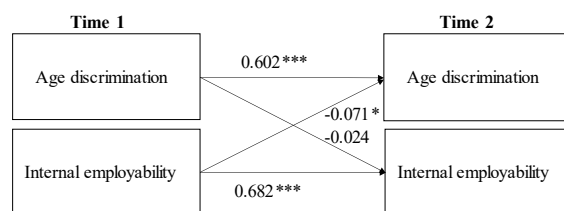
	$X^2$	Df	$p$	CFI	TLI	RMSEA	SRMR
Model 0	718.374	174	0.001	0.945	0.933	0.046	0.050
Model 1	717.601	173	0.001	0.945	0.933	0.046	0.049
Model 2	712.541	173	0.001	0.945	0.933	0.046	0.048
Model 3	711.800	172	0.001	0.945	0.933	0.046	0.048

Model 1 expanded upon the baseline model so that age discrimination at T1 was added as a predictor of internal employability at T2. Internal employability at T1 ( $\beta = 0.678, p < 0.01$ ) and age ( $\beta = -0.010, p < 0.01$ ), but not age discrimination at T1 ( $\beta = -0.024, p = 0.38$ ), significantly predicted internal employability at T2 (as visualized in Figure 1).



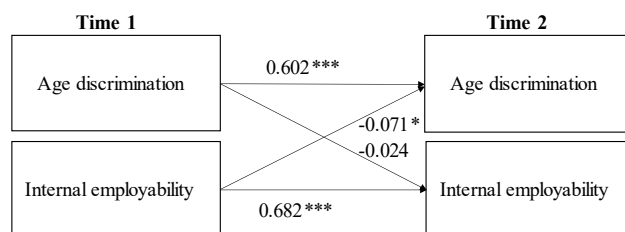
**Figure 1.** Model 1 (normal causality), \*\*\* =  $p < 0.001$ .

Model 2 extended the baseline model in that internal employability at T1 was added as a predictor of age discrimination at T2. The model fit was good. Age discrimination at T1 ( $\beta = 0.600, p < 0.01$ ) and internal employability at T1 ( $\beta = -0.071, p = 0.02$ ), but not age ( $0.027, p = 0.27$ ), significantly predicted age discrimination at T2 (as visualized in Figure 2).



**Figure 2.** Model 2 (reversed causality), \* =  $p < 0.05$ , \*\*\* =  $p < 0.001$ .

In Model 3, the cross-lagged relationship between employability and age discrimination and vice versa were added. Contrary to *Hypothesis 1*, internal employability at T1 ( $\beta = 0.682$ ,  $p < 0.01$ ) and age ( $\beta = -0.105$ ,  $p < 0.01$ ), but not age discrimination at T1 ( $\beta = -0.024$ ,  $p = 0.39$ ), significantly predicted internal employability at T2. In line with *Hypothesis 2*, age discrimination at T1 ( $\beta = 0.602$ ,  $p < 0.01$ ) and internal employability at T1 ( $\beta = -0.071$ ,  $p = 0.02$ ), but not age ( $\beta = 0.027$ ,  $p = 0.273$ ), significantly predicted age discrimination at T2 (as visualized in Figure 3).



**Figure 3.** Model 3 (reciprocal model), \* =  $p < 0.05$ , \*\*\* =  $p < 0.001$ .

Finally, multi-group analyses were performed to examine differences in the cross-lagged relationships between internal employability and age discrimination across different age groups. First, the model was constrained so that the reciprocal relationships between internal employability and age discrimination were held equal across all three age groups. Second, the constraints were removed so that the reciprocal relationships between internal employability and age discrimination could differ between age groups. The chi-square difference test showed that model fit improved significantly after removing these restrictions, as shown in Table 7.

**Table 7.** Model Fit for the Constrained and Non-Constrained Multi-Group Model.

	$X^2$	Df	$p$	$\Delta X^2$	$\Delta Df$	$\Delta p$
Constrained model	421.641	14	0.001	421.641	14	0.000
Non-constrained model	0.000	0	0.001			

For younger employees, only internal employability at T1 predicted internal employability at T2 ( $\beta = 0.580$ ,  $p < 0.01$ ), but not age discrimination at T1 ( $\beta = -0.068$ ,  $p = 0.55$ ), in line with *Hypothesis 3*. Furthermore, only age discrimination at T1 predicted age discrimination at T2 ( $\beta = 0.363$ ,  $p < 0.01$ ) while internal employability at T1 did not ( $\beta = 0.015$ ,  $p = 0.83$ ), in line with *Hypothesis 4*.

For middle-aged employees, similar results were found. Only internal employability at T1 predicted internal employability at T2 ( $\beta = 0.677$ ,  $p < 0.01$ ), but not age discrimination at T1 ( $\beta = -0.029$ ,  $p = 0.55$ ), in line with *Hypothesis 3*. Furthermore, only age discrimination at T1 predicted age discrimination at T2 ( $\beta = 0.542$ ,  $p < 0.01$ ), whereas internal employability at T1 did not ( $\beta = 0.062$ ,  $p = 0.06$ ), in line with *Hypothesis 4*.

For older employees, different results were found. In line with *Hypothesis 3*, internal employability at T1 ( $\beta = 0.530$ ,  $p < 0.01$ ) as well as age discrimination at T1 ( $\beta = 0.089$ ,  $p = 0.01$ ) predicted internal employability at T2. Furthermore, in line with *Hypothesis 4*, age



discrimination at T1 ( $\beta = 0.551, p < 0.01$ ) as well as internal employability at T1 ( $\beta = 0.067, p = 0.01$ ) predicted age discrimination at T2.

#### 4. Discussion and Conclusions

This study aimed to examine (a) the causal direction of the relationship between age discrimination and internal employability, and (b) differences between age groups (young ( $\leq 30$ ), middle-aged (31–44), and older ( $\geq 45$ ) healthcare workers) in this relationship. The results showed that internal employability predicts subsequent age discrimination, but not vice versa. This suggests that decreases in internal employability trigger age discrimination. As age discrimination does not trigger reductions in internal employability, it seems that the lack of age discrimination functions as a hygiene factor rather than a motivation factor [67,68] and in turn does not lead to additional efforts to invest in one's employability. We expected, in line with signaling theory, that age discrimination would also influence employability. However, we did not find such an effect. This indicates that investing in the internal employability of workers of all ages might be more beneficial than investing in reducing age discrimination. These results add to the literature that internal employability can be seen as a predictor of other work outcomes. Furthermore, as we know from previous research that growth motives tend to decline with age [37], older workers might have a lower focus on internal employability [11] and may be more at risk for age discrimination.

When we examined the relationship between age discrimination and internal employability separately for younger, middle-aged, and older workers, we found, in line with our expectations, that internal employability and age discrimination are unrelated to each other for younger and middle-aged workers and that the relationship between internal employability and age discrimination is reciprocal for older workers. The pathway from age discrimination to internal employability appears stronger than the pathway from internal employability to age discrimination, indicating a causal predominance of age discrimination in the reversed relationship between age discrimination and internal employability [20], but this is only the case for older workers. This means that age discrimination toward older workers can undermine internal employability, in line with the pathways suggested by Corrington, Ng, Phetmisy, Watson, Wu, and Hebl [17]. Reduced internal employability can trigger age discrimination by confirming the stereotypical views of older workers [11]. This can cause a vicious cycle in which increased age discrimination and reduced internal employability reinforce one another. Therefore, we suggest that internal employability and age discrimination should not be labeled solely as antecedents or outcomes. In other words, these results suggest a dynamic process between these two variables. As such, our study contributes to the literature on employability and age discrimination by showing that age differences exist in the relationship between these two variables and by showing that among older workers a vicious cycle can be created if employability decreases or age discrimination increases. As previous research mainly stresses the role of the individual in upholding one's employability [17], this study shows that through age discrimination the employer can limit the employability of older workers. Therefore, we argue that employers have an important role to play in strengthening the employability of older workers. By focusing more on the strengths of older workers this vicious cycle between employability and age discrimination can be broken and the employability of workers can be supported as they age [17].

#### 4.1. Limitations and Suggestions for Future Research

This study has several limitations. First, we focused only on overt forms of age discrimination in this study, whereas older workers likely experience covert forms of age discrimination or other types of negative work behavior more frequently [21]. Therefore, it would be interesting to replicate this study with covert age discrimination (i.e., social exclusion) as a predictor rather than overt forms of age discrimination. Second, the findings of this study are based on self-reports; therefore, they are likely to be subject to common method bias that might have inflated the results. The design of this study (i.e., a panel study rather than a cross-sectional study) allowed us to control for previous levels of the studied variables [69], limiting the risk of common method bias to some extent [70]. However, other variables that we have not controlled for in this study may affect this relationship.

Furthermore, individual perceptions are the most important predictor of behavior (i.e., in this case, the decision to continue working) [71]; thus, it makes more sense to study individual perceptions than more objective measures or other reports of internal employability and age discrimination. However, it would be interesting to compare the results of this study to the findings of a study that used more objective or other reports of internal employability and age discrimination. Third, although the panel design allowed us to examine the relationship between internal employability and age discrimination over time, it does not automatically imply a causal effect [20]. To prove causality, intervention studies are needed. Fourth, this study was conducted in the healthcare sector in the Netherlands, and the results cannot be automatically generalizable to other sectors or countries. Therefore, we recommend replicating this study in other samples to better understand the boundary conditions of the reciprocal relationship between age discrimination and internal employability. Moreover, our sample mostly consisted of nurses with a relatively high average age [72]. The reciprocal relationships between age discrimination and internal employability may vary between relatively young-typed jobs (e.g., hairstylist) versus old-typed (e.g., doctor or professor).

#### 4.2. Practical Implications

This study has important implications for practice. The findings suggest that healthcare organizations that want to sustain their older workforce need to improve their psychosocial work environment and human resource practices. Healthcare workers 45 years and older are a valuable resource for organizations struggling to attract and recruit a competent workforce. In most countries, a nurse at 45 is very experienced and has around 20 years of work ahead. For healthcare organizations to provide quality care, it is important to provide a secure work environment where experiences and skills are appreciated and developed. Our implications are twofold, highlighting the need for organizations (1) to find ways to sustain the internal employability of aging healthcare workers and (2) to build an organizational culture that does not allow for age discrimination. Sustaining and boosting the internal employability of older workers could be done through training and development activities to increase older workers' psychological resources e.g., resilience and self-efficacy beliefs [73]. Moreover, to ensure the active participation of older workers in their employability, organizations should understand that older workers have different needs compared to younger workers. For instance, older workers might prefer mentorship and on-the-job training over traditional classroom training [74].

To prevent age discrimination, organizations need to scrutinize HR practices. In line with Allport's classical contact theory [75], one recommended intervention is to increase contact by increasing the number of older workers and developing strategies to enhance interaction between different age groups at the workplace, for example, by creating age-diverse teams [12]. To avoid an organizational culture characterized by overt age discrimination, it is important to make HR training practices available to workers of all ages [76]. Furthermore, it is important to maintain a dialogue between older workers, middle-aged

workers, and younger workers to avoid stereotyping and exclusion of age groups [77]. Additionally, organizations can offer identity-based and belief-based stereotype threat interventions to reduce stereotype threat for older workers [78].

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