The Relationship Between Perceived Age Discrimination in the Healthcare System and Health: An Examination of a Multi-Path Model in a National Sample of Israelis Over the Age of 50

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Abstract

Objectives: The present study aims to examine possible pathways that potentially account for the relationship between perceived age discrimination in healthcare settings (as one form of ageism) and health outcomes.
Methods: We relied on 1570 complete surveys, which constitute a representative national sample of adults aged 50 and above in Israel.
Results: We found a direct link between perceived age discrimination and health outcomes. This link was partially mediated by self-perceptions of aging and subsequently by health behaviors (e.g., eating vegetables) and preventive health behaviors (e.g., medical check-ups). The link between perceived age discrimination and health behaviors was moderated by age, thus, particularly detrimental for older people over the age of 65 as compared with those between the ages of 50 and 65.
Discussion: This study adds to the literature as it examines comprehensive mechanisms to account for the path between perceived age discrimination and health status. Our findings point to the unique aspects associated with perceived age discrimination, which potentially make older people more susceptible to its negative effects.

Keywords

ageism, discrimination, older people, health, prevention behaviors, health behaviors

The World Health Organization defines ageism as stereotypes, prejudice, and discrimination based on age (Officer & de la Fuente-Núñez, 2018). Ageism is manifested in the way we think, feel, and act toward people due to their age. It can be socially constructed at the institutional level, but also at the individual level and can even be directed toward oneself. Although ageism can be directed toward any age group and can be either positive or negative, there has been considerable attention to the negative effects of ageism against older adults (Ayalon & Tesch-Römer, 2017).

The most comprehensive systematic review and meta-analysis conducted to date on the topic of ageism and health outcomes has relied on data from 7 million participants (Chang et al., 2020). The main conclusions of this review were that ageism at the structural but also at the individual level is highly detrimental for older people's health. The negative impact of ageism goes beyond a single country or continent as it is present in all five continents examined (Chang et al., 2020). Moreover, the effects of ageism also can be quantified financially. Relying on various data sources,

research has shown that yearly, the cost of ageism in the American healthcare system stands at $63 billion (Levy et al., 2020). These dramatic findings have led the World Health Organization to develop a global campaign to reduce and prevent ageism with the realization that ageism hinders older people from fulfilling their potential and has a substantial impact of older people's health and wellbeing (Officer & de la Fuente-Núñez, 2018). Following this clear and persistent connection between perceived age discrimination and health, the present study aims to examine possible pathways that potentially account for the relationship between perceived

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age discrimination in healthcare settings (as one form of ageism) and health outcomes.

The focus on perceived age discrimination in the healthcare system, rather than in general contexts represents an advantage as our spotlight is on health behaviors, preventive health behaviors, and health outcomes, which likely are directly related to experiences in the healthcare setting. Past research conducted among healthcare professionals in Israel has highlighted both explicit ageism and also implicit ageist attitudes and practices that can be considered as compassionate ageism (Ben-Harush et al., 2017). The present study brings the view of older adults instead. The study provides a nuanced understanding into the possible associations between perceived age discrimination in the healthcare system and one's health. It is important to note, however, the distinction between perceived age discrimination and actual discrimination (Ayalon, 2018). Nonetheless, research has stressed the fact that even perceived discrimination can represent a stressful experience which carries a negative impact (Brodish et al., 2011).

What Explains the Relationship Between Perceived Age Discrimination and Health?

One explanation for the relationship between perceived age discrimination and health comes from the literature on racism and ethnic discrimination (Pascoe & Smart Richman, 2009). This line of research suggests that discrimination, whether objectively present or perceived by the individual, is a major source of stress. The mere exposure to stress is considered a health hazard. This is because stress is known to impact people's health status via the autonomic and neuroendocrine systems (O'Connor et al., 2021). The activation of these systems occurs in order to maintain homeostasis. This is adaptive as long as the systems switch off and on, as required. However, in the case of stress, such as exposure to (perceived) discrimination, the body experiences wear and tear as a result of over activation of these systems and the stress response (O'Connor et al., 2021).

The relationship between perceived age discrimination and health might also be indirectly accounted for by people's engagement in health behaviors. There is ample research to show that stress results in poorer health behaviors (Hooker et al., 2019). Binge drinking, unhealthy eating, and smoking are more likely to occur when people are stressed (Pelletier et al., 2016; Stein & Nyamathi, 1998). These unhealthy behaviors often are used as ineffective means to reduce and/or cope with stress. Nonetheless, despite their immediate calming effects, they might result in hazardous health outcomes in the long run (Jones et al., 2018; Saunders et al., 2020; Sherratt et al., 2017).

A related, yet, somewhat different pathway to explain the relationship between perceived age discrimination and health is through an indirect mediational path of preventive health behaviors (Powell et al., 2019). The rationale is that when people are under stress, they might pay less attention to their health conditions and might be less active in monitoring and identifying possible health problems. Alternatively, drawn from the literature on racism, research has shown that the experience of perceived discrimination on the basis of race or ethnicity is associated with high levels of distrust in the healthcare system. This in return might prevent people from accessing the healthcare system, a system which represents the hegemony, whom they distrust (Musa et al., 2009).

The Stereotype Embodiment Theory and Self-Perceptions of Aging

The stereotype embodiment theory suggests that people internalize negative age stereotypes throughout their life. As they age, these stereotypes become self-relevant (Levy, 2009). Self-perceptions of aging (SPA), which represent a form of self-ageism, might also explain the link between perceived age discrimination and health outcomes (Hooker et al., 2019). Perceived age discrimination might be particularly deleterious as it activates people's negative self-stereotypes concerning old age and aging (Hooker et al., 2019). The self-relevance of these stereotypes operates like a self-fulfilling prophecy (Ayalon & Tesch-Römer, 2017). If people think negatively of their own age and aging process, they may not engage in required health behaviors (e.g., smoking, drinking, or medical checkup) and as a result, their health might deteriorate even further (Levy & Myers, 2004).

There also is ample research to show the negative effects of SPA on people's mortality and morbidity. Relying on a longitudinal study of 23 years, a study has shown that those with more positive SPA lived 7.5 years longer than those with more negative ones (Levy et al., 2002b). Similarly, those with more positive SPA reported better functional health 18 years after the first measurement (Levy et al., 2002a). Interestingly, even negative age stereotypes that are directed toward older people in general, rather than toward oneself, have shown to have an effect. Having negative age stereotypes early in life is associated with a higher risk for cardiovascular effects (Levy et al., 2009) and with Alzheimer's neuropathology in later life (Levy et al., 2016).

The Present Study

There are currently several possible pathways to explain the association between perceived age discrimination and health. Although research on perceived discrimination and health has been extensive, it has flourished mainly in the context of racism and ethnic discrimination, whereas research on the pathways between perceived age discrimination and health outcomes has been more limited. As this review suggests, there are different pathways to explain the association between perceived age discrimination and health (e.g., a pathway from
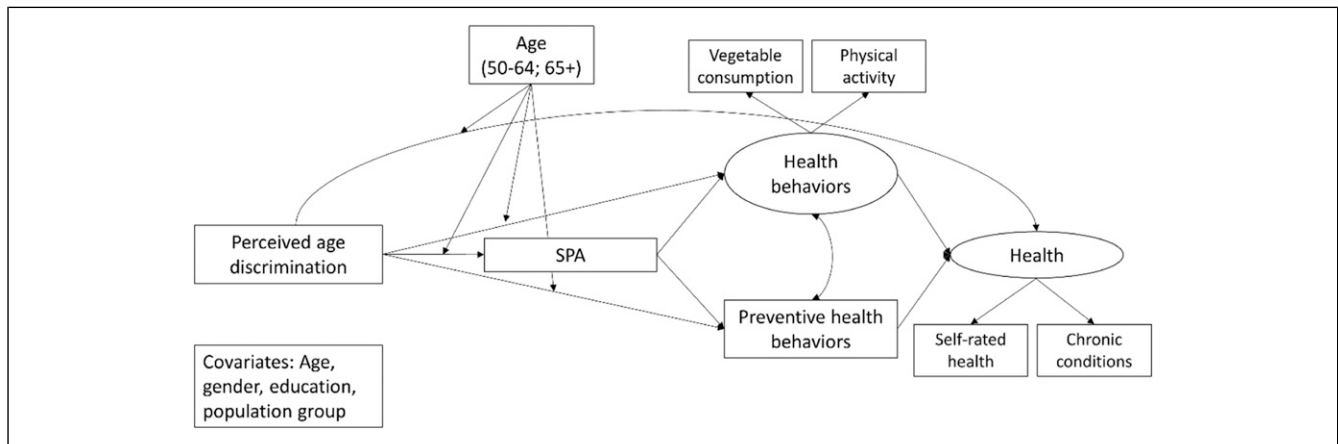
Figure 1. Illustration of the study model. *Note.* SPA = Self-perception of aging; the model also controlls for age, gender, education, and population group; observed variables are drawn as squares and latent variables are drawn as circles.

perceived age discrimination to SPA, a pathway from SPA to preventive health behaviors, see Figure 1). However, to date, a simultaneous examination of these various pathways in the same model in the context of perceived age discrimination in the healthcare system has not taken place. This is unfortunate as, unlike race or ethnicity, age is a changing characteristic, which does not remain constant over time. As such, the association between perceived age discrimination and health outcomes might vary based on age. Although the moderating effect of age on the association between perceived age discrimination and health has not received much attention, it is possible that the association might be particularly detrimental for older adults. This is based on the vast amount of research on the negative consequences of ageism, including perceived age discrimination's negative impact on older people's health compared with the more limited research on the effects of perceived age discrimination on younger people's health (Chang et al., 2020; de La Fuente-Núñez et al., 2021).

Our comprehensive study aimed to simultaneously examine several possible pathways to explain the strong and consistent association between perceived age discrimination in the healthcare system and health outcomes. Figure 1 outlines our hypotheses. Specifically, we tested both direct and indirect effects between perceived age discrimination in the healthcare system and health. We expected perceived age discrimination to be associated with worse health. This relationship was thought to be medicated via self-perceptions of aging, which mediates the association between perceived age discrimination in the healthcare system, health behaviors, and preventive health behaviors, which subsequently relate to health. Specifically, those who perceive age discrimination have worse self-perceptions of aging. This in return is associated with fewer health behaviors and fewer preventive health behaviors, which subsequently relate to worse health. Last, we examined whether these associations between

perceived age discrimination, health behaviors, and preventive health behaviors vary based on age, with stronger associations being more likely to be found among older people compared to younger age groups.

Methods

Participants and Data Collection

We relied on a representative national survey of adults aged 50 and above in Israel. The surveys were conducted in Hebrew, Arabic, or Russian via the telephone by trained interviewers between April and November 2020. On average, telephone surveys took about 20 minutes each and the response rate was 40%. The participants were not compensated for participating in the research. The sample was composed of 1570 participants and was representative of the population of adults aged 50 and above in Israel. The study sample was reached via registry lists bought by the survey agency and its representativeness was determined by comparing it to the proportions in the Israeli population in terms of age, gender, population group, and region. The age range of the sample was 50–96. The average age of participants was 64 (Table 1), with 849 (54%) participants aged 50–64 years old and 721 (46%) aged 65+ years old.

Measures

Perceived Age Discrimination. We measured experiences of discrimination based on age in the healthcare system (i.e., during visits to doctors, HMOs, or hospitals). Respondents were asked how often they had four discriminatory experiences in the healthcare system because of their age in the past year. Three of these options were based on the leave-behind questionnaire of the Health and Retirement Survey (Leacock, 2006); "You are treated with less courtesy or respect than

Table 1. Descriptive Characteristics of the Study Sample and a Comparison Between Those Who Experienced and Did Not Experience Age Discrimination in Health Care.

Variable	Full sample Mean (SD)/n (%)	Range	No age discrimination Mean (SD)/n (%)	Age discrimination Mean (SD)/n (%)	Bivariate analysis
Ageism in health care	444 (28.28%)				
Physical activity	3.35 (1.48)	1–5	3.52 (1.41)	2.93 (1.57)	$t = 6.88^{***}$
Vegetable consumption	5.37 (1.40)	1–7	5.55 (1.22)	4.93 (1.71)	$t = 7.06^{***}$
Preventive health behaviors	7.67 (1.97)	3–12	7.74 (1.92)	7.47 (2.10)	$t = 2.35^{*}$
SPA	4.13 (1.26)	1–6	4.31 (1.28)	3.70 (1.11)	$t = 9.4^{***}$
Self-rated health	3.06 (1.12)	1–5	3.23 (1.05)	2.64 (1.19)	$t = 9.11^{***}$
Chronic conditions	1.17 (1.30)	0–6	1.06 (1.19)	1.47 (1.50)	$t = -5.2^{***}$
Age	64.16 (9.39)	50–96	63.41 (9.01)	66.08 (10.05)	$t = -4.88^{***}$
Education (years)	13.47 (4.65)	0–30	14.11 (4.02)	11.85 (5.63)	$t = 7.71^{***}$
Gender					
Men	818 (52%)		596 (73%)	222 (27%)	$\chi^2 (1) = 0.98$
Women	752 (48%)		530 (70%)	222 (30%)	
Population group					
Veteran Jews	1183 (75.35%)		941 (80%)	242 (20%)	$\chi^2 (1) = 146.65^{***}$
Israeli-Arabs	283 (18.03%)		130 (46%)	153 (54%)	
Immigrants from the Former Soviet Union	104 (6.62%)		55 (53%)	49 (47%)	

Note. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$; SPA = Self-perceptions of aging; physical activity and vegetable consumption represent health behaviors.

other people because of your age," "People act as if they think you are not smart because of your age," "You receive poorer service or treatment than other people from doctors or hospitals because of your age"). We added an additional variable of "Talking to your companion instead of directly to you," based on previous research on ageism in the Israeli healthcare system (Ben-Harush et al., 2017). Kuder-Richardson, a reliability coefficient for dichotomous scale variables, was 0.93 for this scale. We calculated a dummy variable that received 1 if participants reported having any such experience and 0 if they reported no such experiences.

Self-Perceptions of Aging (SPA). This measure was used as a proxy of reported ageism toward oneself. Adults' perceptions of their aging were assessed using the 5-items "Attitudes toward aging" subscale of the "Philadelphia Geriatric Center Morale Scale" (Liang & Bollen, 1983). This scale assesses participants' evaluation of their experiences of aging. Each item has response options ranging from "Strongly disagree" (1) to "Strongly agree" (6), and a mean score was calculated. Higher scores on the SPA scale indicate more positive perceptions of aging. The scale had good internal reliability in the current sample (α = 0.75).

Health Behaviors. We asked participants how often they engaged in moderate or vigorous physical activity, with responses ranging between 1 "5–7 times a week" to 5 "Never, or almost never." Answers were reverse coded so that higher scores represent more frequent physical activity. We also inquired about frequency of consuming fruit or vegetables.

Responses ranged between 1 "5 or more portions per day" and 7 "less than once a week" and responses were reverse coded so that higher scores indicate higher consumption of fruit and vegetables.

Preventive Health Behaviors. We asked participants to indicate whether they have conducted various preventive check-ups over the "previous 12 months." These check-ups were: heart activity, fecal occult blood test (that can detect colon cancer or polyps in the colon or rectum), blood pressure and blood test. Responses to these inquiries were 0 "No," 1 "Done once," and 2 "Done more than once." We summed these tests into a list ranging between 0 and 12. Their alpha Cronbach coefficient was 0.68 and factor analysis indicated they loaded on a single factor.

Health. We examined five chronic illnesses: diabetes, high blood pressure, heart problems, high cholesterol, and arthritis. These variables were dummy coded to indicate the existence or absence of each illness. These illnesses were summed to a variable ranging from 0 to 5 chronic illnesses. Their Kuder-Richardson coefficient was 0.60 and factor analysis indicated they loaded on a single factor. We also used a single-item self-rated health (range: 1–5).

Covariates. Demographic characteristics, such as age, gender, and education were obtained via self-report. Age was a continuous indicator, as was education, measured as years in formal education. We also accounted for ethnicity of participants: Veteran-Jews, Arab-Israelis, or immigrants from the former Soviet Union.

Data Analysis

We began our analyses with descriptive data of the study sample. We compared adults who reported perceived age discrimination in healthcare and those who did not perceive such discrimination in terms of the study variables. Bivariate analyses were conducted with t-tests for continuous variables and chi-square tests for categorical variables. We also conducted bivariate analyses of the study variables using Pearson correlations. The main stage of analysis was a single structural equation model with mediation analyses, as shown in Figure 1. This model predicted health, measured as a latent variable composed of self-rated health and chronic conditions. Health was predicted by perceived age discrimination in health care. The model also examined whether perceived age discrimination was related to health behaviors and preventive health behaviors, which were in turn related to health. It also examined whether perceived age discrimination was related to SPA which was related to health behaviors and preventive health behaviors. We used a p-value of $p = .01$ in the main analyses to correct for alpha inflation. To explore whether the effects differ between adults of different age groups we conducted group comparison between those aged 50–64 and aged 65+. This age categorization was determined based on past research indicating 65 as the beginning of old age (Orimo et al., 2006). We compared the model when all paths are allowed to differ between the groups and a model in which we constrained one path to be equal. We constrained one path to equality each time—between perceived age discrimination and SPA, perceived age discrimination and health behaviors, perceived age discrimination and preventive tests, perceived age discrimination and health. We compared each model to the model without constrains and assessed whether model fit deteriorated using a Satorra-Bentler test (Swaine-Verdier et al., 2004). Model fit deterioration, were it to occur, indicates that the paths of interest differ between the age groups. In a sensitivity analysis, we examined a three age-group categorization (50–64, 65–74, 80+) as a moderator.

We used the Lavaan package in R for SEM model estimation (Rosseel, 2012). Full information maximum likelihood (FIML) was used to handle missing data. The models were run with a maximum likelihood estimator with robust standard errors (MLR) to allow variables to deviate from multivariate normality. The use of MLR entailed adjustment of model comparisons to better approximate chi-square under non-normality (Satorra & Bentler, 2010).

Results

Table 1 contains a description of the study variables, in addition to comparing participants who experienced perceived age discrimination in healthcare to those who did not. Overall, 28% of the sample reported perceived age discrimination in health care. Bivariate analyses showed that those who reported perceived age discrimination engaged in physical activity less frequently, reported eating vegetables less frequently, reported less preventive health behaviors, had worse SPA, rated their health as worse, and reported more chronic conditions. They were also older, had less years of education, and were more likely to belong to minority groups of Israeli-Arabs and immigrants from the Former Soviet Union. They did not differ from those who did not report perceived age discrimination in terms of gender. Table 2 shows Pearson correlations between the main study variables. It indicates that participants who had better health engaged in more frequent physical activity, consumed vegetables more frequently (e.g., health behaviors), engaged in fewer health preventive behaviors, and rated their aging as more positive.

We continued our analysis with the main model of interest, estimated using SEM (Table 3; Figure 2). The model estimated the direct and indirect effects of perceived age discrimination in healthcare on health. It showed adequate fit to the data [$\chi^2 = 130.78$, df = 17, CFI = 0.94, RMSEA = 0.065, SRMR = 0.03]. The model indicated, first, that perceived age discrimination in health care was negatively related to SPA, that is, adults who reported perceived age discrimination also perceived their aging in a more negative manner. It showed that reporting perceived age discrimination was related to fewer health behaviors, measured as physical activity and eating vegetables. Better SPA, on the other hand, was related to more health behaviors. Perceived age discrimination and having better SPA were related to engaging in fewer preventive health behaviors. Finally, perceived age discrimination was directly related to worse health, measured as a latent variable of self-rated health and chronic conditions. Those with better health had more positive SPA, more engagements in health behaviors and fewer preventive health behaviors.

The indirect effects between perceived age discrimination and health were all significant. First, those who reported more perceived age discrimination were also less likely to engage in health behaviors, which were related to their worse health (B (SE) = -0.15 (0.04), $p < .001$). Secondly, perceived age discrimination was related to health via performing fewer preventive health behaviors, which were related to worse health (B (SE) = 0.07 (0.02), $p = .004$). Perceived age discrimination was also related to health via SPA—those who experienced more perceived age discrimination had worse SPA, which was related to fewer health behaviors, which were related to worse health (B (SE) = -0.04 (0.02), $p = .025$). Last, perceived age discrimination was related to worse SPA, which were related to fewer preventive health behaviors (i.e., medical check-ups), which were associated with worse health (B (SE) = 0.16 (0.03), $p < .001$).

We finally checked whether the associations differed between age groups, comparing adults aged 50–64 to those aged 65 and above. The comparisons showed a difference between the age groups in the associations between perceived age discrimination and health behaviors (χ^2 (1) = 7.99, $p = .005$).

Table 2. Pearson Correlations Between the Main Study Variables.

	Physical activity	Vegetable consumption	Preventive health behaviors	SPA	Self-rated health	Chronic conditions
Physical activity	—					
Vegetable consumption	0.37***	—				
Preventive health behaviors	0.07**	0.16***	—			
SPA	0.16***	0.05*	−0.22***	—		
Self-rated health	0.26***	0.14***	−0.21***	0.33***	—	
Chronic conditions	−0.11***	0.01	0.29***	−0.23***	−0.47***	—

Note. *p < .05, **p <.01, ***p < .001; SPA = Self-perceptions of aging; physical activity and vegetable consumption represent health behaviors.

Table 3. Path Models of the Association of Age Discrimination in Healthcare with SPA, Health Behaviors, Preventive Health Behaviors, and Health.

Paths			B (SE)	Beta
Age discrimination in healthcare	->	SPA	−0.43 (0.08)	−0.15***
Age discrimination in healthcare	->	Health behaviors	−0.55 (0.08)	−0.25***
SPA	->	Health behaviors	0.09 (0.03)	0.11**
Age discrimination in healthcare	->	Preventive health behaviors	−0.56 (0.12)	−0.13***
SPA	->	Preventive health behaviors	−0.36 (0.04)	−0.23***
Age discrimination in healthcare	->	Health	−0.16 (0.06)	−0.09**
SPA	->	Health	0.18 (0.02)	0.26***
Health behaviors	->	Health	0.28 (0.05)	0.32***
Preventive health behaviors	->	Health	−0.13 (0.01)	−0.31***
R^2				
SPA			0.08	
Health behaviors			0.12	
Preventive health behaviors			0.11	
Health			0.50	

Note. **p <.01, ***p < .001; SPA = Self-perceptions of aging; the model controls for age, gender, education, and population group.
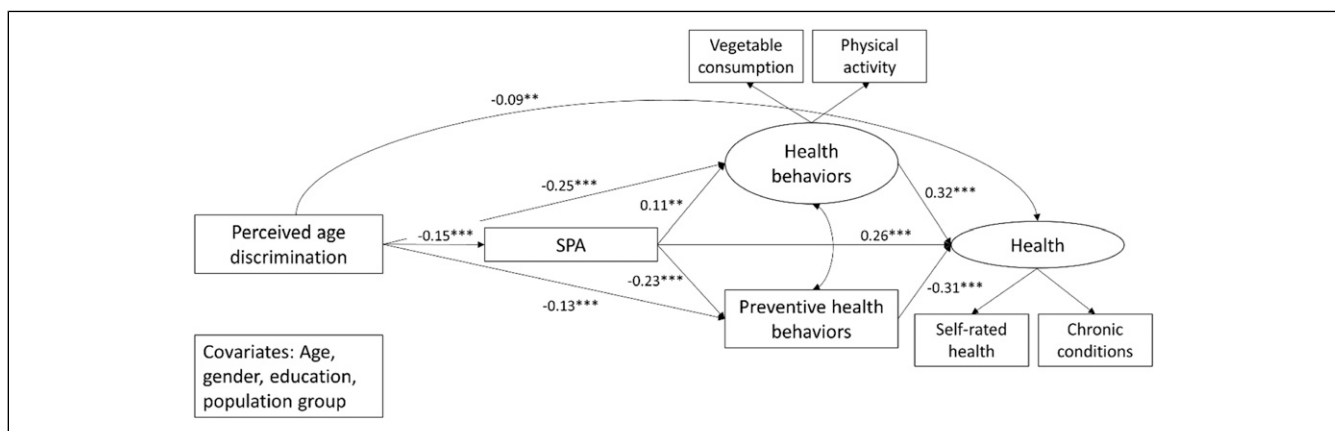

Figure 2. Illustration of the study model results. *Note.* SPA = Self-perception of aging; **p <.01, ***p < .001; beta (standardized) coefficients are shown; the model also controlled for age, gender, education, and population group; Observed variables are drawn as squares and latent variables are drawn as circles.

The association of perceived age discrimination with fewer health behaviors was stronger among the older age group ($\beta = -0.32$, $p = < .001$), compared to the younger age group ($\beta = -0.13$, $p = .022$). No age group differences emerged in relation to the associations of perceived age discrimination with preventive health behaviors ($\chi^2 (1) = 1.61$, $p = .205$), SPA ($\chi^2 (1) = 0.01$, $p = .974$) or with health ($\chi^2 (1) = 0.84$, $p = .358$). The sensitive analysis, which relied on the categorization of age along three age-groups also was non-significant.

Discussion

Most people in Israel have several yearly encounters with the healthcare system (Nathan et al., 2017). As such, it is particularly important to evaluate their experiences and see how these experiences relate to their actual health status. This study examined simultaneously, relying on a representative sample, several pathways to the relationship between perceived age discrimination in the healthcare system and actual health. Our findings suggest that perceived age discrimination may represent a true health hazard for people over the age of 50. Moreover, this association between perceived age discrimination in the healthcare system and health is mediated through several related, though distinct mechanisms as detailed below.

Overall, 28% of the sample reported perceived age discrimination. These findings are consistent with past research that has found that 30% of the older adults perceived age discrimination in the healthcare system in the United Kingdom (UK) (Dobrowolska et al., 2017). Perceived age discrimination is not synonymous with objective discrimination (Ayalon, 2018). Hence, the same UK study has found that students were more likely to identify age-based discrimination directed toward older people than older people themselves (Dobrowolska et al., 2017). Either way, however, the experience of discrimination, perceived or real, is considered to be highly stressful (Brodish et al., 2011).

The present study has verified a comprehensive model which possibly accounts for this association between perceived age discrimination and health. Although past research has examined the various associations evaluated in the present study, this was done in a segmented way, examining one or two possible pathways at a time. The present study, in contrast, attempted to develop a comprehensive model which taking into consideration multiple pathways between perceived age discrimination and health simultaneously. Another advantage of this study is the focus on perceived age discrimination in the healthcare system. This is because the healthcare system represents a setting in which ageism takes place both at the individual and the institutional levels (Wyman et al., 2018). Our findings contribute by pointing out to the presence of perceived age discrimination in the healthcare system and its negative association with health among older people.

The findings show that perceived age discrimination is associated with fewer health and preventive health behaviors. These findings are consistent with past research examining racial discrimination among ethnic minorities (Forsyth et al., 2014). They also correspond with research that has shown that perceived age discrimination is associated with poorer health behaviors (Smart Richman et al., 2016). Our findings also show that self-perceptions of aging serve as mediators of the associations between perceived age discrimination in the healthcare system and health status. Specifically, as was found in past research (Hooker et al., 2019), we demonstrate that perceived age discrimination is associated with more negative self-perceptions of aging, which in return, reduces health behaviors and preventing health behaviors. This association between self-perceptions of aging and health behaviors also has been documented (Levy & Myers, 2004), though not within a comprehensive model, which simultaneously examined multiple pathways. As already noted, although these various pathways have been examined in the past, this was done in a highly fragmented way (e.g., examining a single path at a time). This study, in contrast, examines a comprehensive model of multiple pathways between perceived age discrimination in the healthcare system and health status.

Of note is the finding that the association between perceived age discrimination and health behaviors is particularly deleterious for older people. The majority of past research has focused on ageism toward older people (Ayalon & Tesch-Römer, 2018). Nonetheless, more recently, there has been increasing interest in ageism toward younger people (de la Fuente-Núñez et al., 2021). As the consequences of perceived age discrimination appear harsher for older people compared with younger ones, it is not surprising that the focus to date has been mainly on older people. We show that despite the move toward viewing the concept of ageism as affecting all age groups (de la Fuente-Núñez et al., 2021) and despite the fact that younger people are more likely to report exposure to ageism (Ayalon, 2014), it is older people who are most affected. Hence, our attention as researchers and policy stakeholders should be directed to the negative effects of age discrimination on older people. It is important to note however that once age was divided into three categories, it no longer served as a moderator. This suggests that our findings should be viewed with caution as it is possible that regardless of one's age, the association between perceived age discrimination, health behaviors and preventive health behaviors is maintained.

Despite its strength, this study has several limitations. First, we relied on a cross-sectional study that does not allow for the assessment of cause and effect. Future research will benefit from examining the proposed pathways using longitudinal methods. Second, we relied on perceived exposure to age discrimination, rather than on objective measures. We also acknowledge that our data were collected during the COVID-19 pandemic in Israel, which is still ongoing at the

time of writing this paper. This may have influenced the preventive check-ups reported by participants, as some people postponed routine medical checks due to the pandemic. However, we note that respondents were asked about medical check-ups during the "previous 12 months," a time period most of which did not include the pandemic (COVID-19 restrictions began in March 2020 in Israel). Furthermore, 93% of respondents reported at least one such behavior and it was positively correlated with age (r = 0.18, $p < .001$), indicating that older respondents were more likely to report such behaviors.

Nonetheless, this study adds to the literature as it examines multiple different mechanisms to account for the path between perceived age discrimination and health status. Our findings point to the unique aspects associated with perceived age discrimination, which potentially make older people more susceptible to its negative effects. Our findings stress the importance of the healthcare system in shaping older people's health via multiple pathways, detailed above. As past research has already highlighted the presence of ageism in the healthcare system (Ben-Harush et al., 2017), this study adds by bringing the point of view of older patients. This may serve as a catalyst for social change in the healthcare system given the associations found between perceived age discrimination, self-perceptions of aging, health behaviors, preventive health behaviors, and health. Past research has shown that both intergenerational contact and education can reduce ageist stereotypes (Burnes et al., 2019). In the case that perceived age discrimination reflects older people's actual experiences, rather than merely their perceptions, it is desired to include educational interventions that target ageism among healthcare professionals. Alternatively, interventions that target self-perceptions of aging might also be relevant. Research has shown that psychological resources can be effective in maintaining positive self-perceptions of aging (Sargent-Cox et al., 2012). Hence, assisting individuals to maintain positive self-perceptions of aging might have beneficial health effects, as suggested by this study.

Declaration of Conflicting Interests

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Ethical Approval

The study was approved by the ethics committee of the PI's university and all participants provided a verbal informed consent prior to participating in the phone interview.

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