
Munich Personal RePEc Archive

Feeling discriminated means poor self-perceived health: a gender analysis using SHARE

Pinillos-Franco, Sara and Cantarero-Prieto, David and Lera, Javier

Universidad Autónoma de Madrid, Universidad de Cantabria
IDIVAL, IDIVAL

2022

Online at https://mpra.ub.uni-muenchen.de/114028/
MPRA Paper No. 114028, posted 11 Aug 2022 07:27 UTC

Feeling discriminated means poor self-perceived health: a gender analysis using SHARE

Sara Pinillos-Franco[1*], David Cantarero-Prieto[2,3] Javier Lera[3]

[1] Dpto. Análisis Económico, Facultad de Ciencias Económicas y Empresariales. Universidad Autónoma de Madrid, Calle Francisco Tomás y Valiente 5, 28049, Madrid, Spain

[2] Department of Economics, University of Cantabria

[3] Research Group of Health Economics and Health Services Management, IDIVAL

*Corresponding Author

Abstract

Most part of the literature has highlighted the detrimental effects of discrimination on health. However, the influence of past and perceived discrimination on older workers' self-assessed health has been understudied. We aim to study whether reported discrimination is associated with self-assessed health among old men and women of working ages (50-65 years of age). Data was retrieved from the seventh wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) to obtain the regular panel of questions, and the third and seventh waves of the SHARELIFE questionnaire, that includes information about discrimination (n=30,019). We first used Latent Class Analysis (LCA) to detect groups of individuals in our sample and afterward, we used logistic regression models to determine the impact of discrimination on old men and women workers' health separately. The results show that 49.0% of our sample was composed of highly discriminated old women, while the remaining percentage covered old men and women (42.3% males and 8.7% females) that reported lower levels of discrimination. Our estimations reveal a significant association between discrimination and poor health status, especially in the case of old men ranging from OR=1.807 (95% CI 1.497 – 2.182) to OR=1.619 (95% CI 1.356 – 1.933). In the case of women our results range from OR= 1.729 (95% CI 1.456 – 2.055) to OR= 1.197 (95% CI 0.981 – 1.462). These findings are essential to highlight the importance of tackling discrimination as a determinant of health that negatively affects both sexes, men and women.

Keywords

Discrimination; Mental Health; Physical Health; self-assessed health; SHARE; LCA

JEL Classification

I14; D63; J14

1. Introduction

Discrimination entails giving unfair treatment to a person or a community for reasons of race, ethnicity, religion, politics, sex, age, physical or mental health condition, etc. When individuals are discriminated against based on any reason, this might have negative consequences on their physical and mental health (Pascoe and Richman 2009). Perceived discrimination is then considered a stressor that negatively affects individuals' health, and it is commonly suffered by older people (Luo et al. 2011).

Discrimination based on age (i.e., *ageism*) is one of the most widespread in the EU[1], and its effects on general health are more relevant compared to other types of discrimination in Europe (Alvarez-Galvez and Salvador-Carulla 2013). Ageism can be expressed in a huge variety of ways in daily life. Furthermore, it covers different negative stereotypes toward the elderly such as incompetence, weakness, senility, sexual inactivity, or troublesomeness, among others, and it is a 'two-way prejudice', i.e., not only other individuals (different from the elderly) hold this prejudice, but also the elderly themselves. Therefore, when the prejudice comes from other individuals, e.g. general practitioners, this might affect the health care provision and the treatment received by the elderly (Diehn et al. 2021; Wyman, Shiovitz-Ezra, and Bengel 2018) and in the labor market (Stypińska and Nikander 2018). Additionally, if the older adult owns a negative self-perception of aging, the odds of experiencing worse physical health outcomes are higher (Levy et al. 2009).

EU legislation does not protect Europeans from age discrimination out of the labor field (European Commission; Directorate - General for Justice and Consumers; Dewhurst 2020), and it is still an 'admissible' prejudice in society compared to other types of discrimination (Ayalon and Tesch-Römer 2017). In 2019, the AGE Platform Europe launched a social media campaign using the hashtag *#AgeingEqual* to reach awareness about this type of discrimination and highlighted, among others, its adverse effects on health and wellbeing.

[1] The special Eurobarometer 493 conducted in 2019 to examine discrimination in the European Union identified that 40% of interviewed individuals considered that discrimination based on age was one of the most broad in the EU.

Besides ageism, older people are affected by the convergence of other types of discrimination (Lu et al. 2021), including gender discrimination. The majority of older adults are women and anti-aging views are mainly directed at them (Rochon, Kalia, and Higgs 2021), increasing their burden of discriminatory experiences. Discrimination also tends to greatly affect women's health compared to men's (Nakhaie and Wijesingha 2015). However, the corrosive effects of gender discrimination should be also analyzed for men, as this type of discrimination is a gender role prejudice that may subtlety or directly affects the health of both genders (de la Torre-Pérez et al. 2022).

Additionally, considering that discrimination mainly occurs in the workplace (Borrell et al. 2011), older workers (i.e., those from 50 to 65 years of age) might also suffer from discrimination at work, rising again their discriminatory burden compared to other groups of individuals. The labor market is horizontally and vertically segregated, leading women to be concentrated in a small range of positions and occupy less-authority positions compared to men (Artazcoz et al. 2007). Women are thus less protected in the labor field, which might increase their odds of suffering from more forms of discrimination (Borrell et al. 2011).

Discrimination has been traditionally measured by asking questions related to recent events of unfair treatment in public places, which is labeled as 'everyday discrimination' (Krieger, Williams, and Moss 1997); and questions regarding past unfair experiences that may have implied barriers to the labor market, housing or applying for a bank loan, among others, i.e., 'major lifetime discrimination' (Luo et al. 2011; Qin et al. 2020). Both instances of discrimination are related to worse physical (Cobb, Thorpe, and Norris 2020; Lewis et al. 2010) and mental health outcomes (Ayalon and Gum 2011; Qin et al. 2020), as well as to higher risks of mortality (Barnes et al. 2008) among older adults.

Studies analyzing the association between discrimination and health have been normally restricted to the US population (Ayalon and Gum 2011; Barnes et al. 2008; Lu et al. 2021), minority groups such as African older adults (Qin et al. 2020), women (Bécares and Zhang 2018; Borrell et al. 2011), or adolescents and young adults (Huynh et al. 2021). The few studies which analyze the effects of discrimination on health in Europe are mainly focused on the general working population

(Alvarez-Galvez and Salvador-Carulla 2013) or limited to a specific country (Eimontas et al. 2021).

This paper aims to fill this gap in the literature by analyzing how reported past discrimination is associated with health status in a large European sample of old men and women workers aged 50-65 years. We hypothesized that the corrosive effects of discrimination would be stronger for older women, as they suffer from more forms of discrimination compared to men (Diehn et al. 2021). The results of this study aim at disentangling and measuring the impact of perceived discrimination on the self-assessed health status in people aged 50-65. First, we justify the relevance of examining the side effects of discriminatory events. Secondly, we design a descriptive and econometric model to carry out our analysis. Finally, to our knowledge this paper is the first to examine this relationship using SHARE data. Therefore, our results might be interesting for policymakers to plan better intervention aimed at tackling and reducing discrimination and its side effects.

The rest of this paper is organized as follows. Second section describes the methodology followed and the database. In section three, results by gender and health outcome are presented. Section four aims at discussing the main findings and limitations of the study. Finally, section five summarizes the study and provides further research lines.

2. Methodology

2.1 Study design and sample

The data for this study was retrieved from the Survey of Health, Ageing and Retirement in Europe (SHARE) (Börsch-Supan et al. 2013). The SHARE survey is a biennial survey focused on people aged 50 or older that includes information on health, social, economic, social networks and past experiences of people from 28 European countries and Israel. This study is based on the wave 7 from 2017 that includes the regular panel questionnaire and the SHARELIFE questionnaire made in wave 3 and wave 7. This last questionnaire focuses in people's life and experiences and help us to retrieve information on discrimination.

2.2. Measures

Discrimination

To measure discrimination, we use the question GL022 included in the SHARELIFE questionnaire from Wave 3 and 7 "Have you ever been the victim of such persecution or discrimination?". It takes value 1 if respondent declares having suffered from discrimination and 0 otherwise. The variable *Discrim* measures self-perceived discrimination

Health variables

Our dependent variable was self-assessed health status (SAHS). We used SAHS as it is a reliable measure of general health that predicts factors such as mortality or hospitalization (Idler and Benyamini 1997; Jylhä 2009). Additionally, previous studies linked experiences of discrimination to poor self-assessed health in a large sample of working women (Borrell et al. 2011).

SAHS is a single question asking individuals to rate their general health status by choosing five different answers: (1) excellent, (2) very good, (3) good, (4) fair, and (5) poor. We created a dichotomous variable that takes a value of 1 if the individual reported fair/poor health (hereafter *PoorSAHS*), and 0 otherwise. We included 'fair' response as individuals who report fair or worse health status present higher risks of mortality than those individuals who assess their health as good or very good (Nery Guimarães et al. 2012).

Control variables

As socioeconomic status might influence self-assessed health status, we have included individuals' educational level and their labour situation to capturing these issues. Individuals' educational attainment was assessed with a categorical variable: (0) No education, (1) Primary education, (2) Secondary education, and (3) Tertiary education. Labour situation was also included by a categorical variable: (1) retired, (2) employed, (3) unemployed, (4) permanently sick, and (5) homemaker.

We considered individuals aged between 50 and 65 years old, their sex to account for the different effects that discrimination might have on men and women, and individuals marital status by four categories: (1) married, (2) never married, (3) divorced, and (4) widowed.

Regional characteristics

Culture and regional specific characteristic might influence the level of discrimination or the self-perceived health, we have included four dummy variables to capture these effects. We divided our observations by Northern, Southern, Eastern and Western Europe.

2.3 Estimation Methods

To test our hypotheses, first we carry out a latent class analysis (LCA) to look for groups in our sample and secondly, we develop econometric regression to assess for the impact of discrimination on self-assessed health.

The objective of the LCA method is to classify similar observations into latent, that is, unobserved, groups based on their responses to selected indicators to build clusters (Nylund-Gibson and Choi 2018). LCA does not provide the number of clusters, therefore it is necessary to use the goodness of fit indexes of the different models to select the best one. We also checked other information criterions such as the BIC. According to Nylund, Asparouhov, and Muthén (2007), it provides the best information to select the most suitable model. Hence, the selected model is the one whose indexes is lower (Magidson and Vermunt 2004; McCutcheon 1987).

Moreover, as our objective is to examine the relationship between these clusters and the differences in health, we develop an econometric analysis. Our variable of interest is binary: *LessthanGoodSAHS.* It takes value 1 if the respondent declares not having at least a good self-assessed health status (with probability *p)* and 0 otherwise (with probability (1-*p)).* The probability of declaring not having a good self-assessed health status (p) is a function of two vectors: one of explanatory variables (x) and other of unknown parameters (β) . Thus, the discrete choice models are as follows:

$$Prob\ (y = 1) = F(x, \beta) \qquad (1)$$

$$Prob\ (y = 0) = 1 - \ F(x, \beta) \qquad (2)$$

$$y = 1 \ \ if \ y^* > 0 \quad (3)$$

$$y = 0 \ \ if \ y^* \leq 0 \quad (4)$$

Considering this, the latent interpretation from both equations leads to the following specification: where

$$y^* = x'\beta + \varepsilon \quad (5)$$

Therefore, we carry out logistic regression models to estimate the impact of past discrimination or persecution on the good self-assessed status. We control for personal characteristics, job situations and health variables. Table 1 provides a complete description of the variables. In the logit model, the conditional probability allows the predicted probabilities being bounded between 0 and 1, by assuming the conditional probability takes the following form:

$$p = Prob\,(X) = \frac{exp\,(X'\beta)}{1 - exp\,(X'\beta)} \quad (6)$$

Considering that the non-linearity of our models does not allow interpreting the coefficients as usual, the odds ratios are calculated. They are the ratio of the probability of success and the probability of failure:

$$ln\left(\frac{p}{1-p}\right) = X'\beta \quad (7)$$

3. Results

3.1 Descriptive analysis

We restricted our analysis to individuals aged between 50 and 65 years of age, therefore, our sample consisted of 30,019 old workers living in 26 European countries. Around 5% of our sample reported having been discriminated against based on any reason (Table 1). 32% of individuals reported less than good health status and a low number of limitations in daily activities and chronic diseases. Respondents average age was of 59 years and they mainly had an upper-secondary level of education.

By gender, our sample highlights that the share of respondents declaring having been discriminated was slightly higher among males than females (4.9% vs. 4.3%). However, there were more women than men reporting less than good health status (32.2% vs. 31.8%) and they also presented a higher number of chronic diseases compared to their male counterparts (1.415 vs. 1.349).

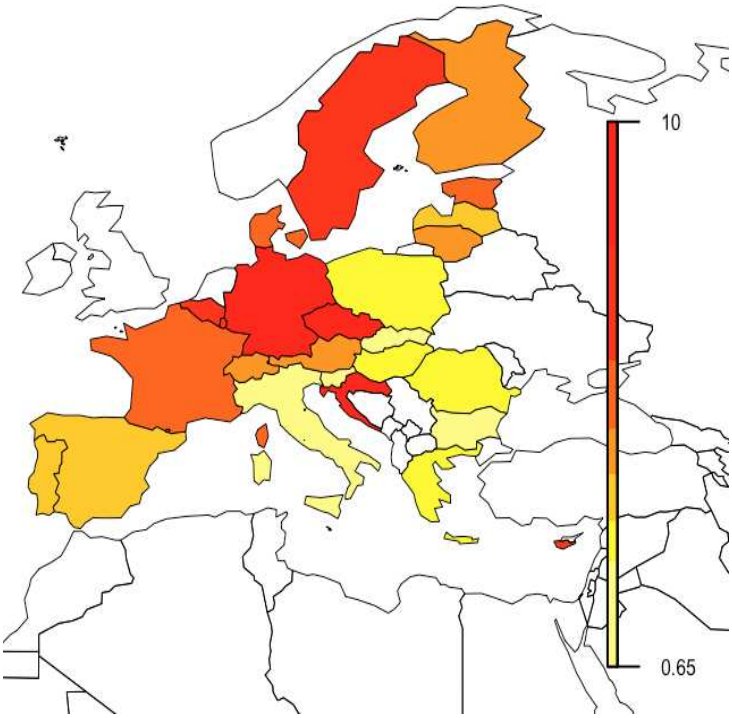
Reported discrimination and dispossession was not constant across the analyzed countries. Figure 1 represents the share of respondents in our dataset that have declared having suffered from discrimination or persecution. We might cluster countries into three differentiated groups. *Group 1* composed by Germany, Belgium, Czech Republic, Luxembourg, Croatia, Cyprus, Sweden, or Malta, where there is a higher percentage of discriminated individuals. *Group 2* that includes countries with a lower share of declared discrimination, viz. Austria, France, Denmark, Switzerland, Estonia, Lithuania, or Finland. And *Group 3* covers countries where nearly nobody has declared having been discriminated, such as Spain, Portugal, Italy, Greece, Poland, Hungary, Slovenia, Bulgaria, Romania, and Slovakia. Nevertheless, the share of discrimination/persecution was not higher than 10% in any country.

Table 1. Variables definition and summary of statistics (N=30,019)

			Total Sample (N=30,019)		***Females (N= 17,337)***		***Males (N=12,682)***	
Variables	**Definition**	**Coding**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**
Health Status								
LessGSAHS	Less than Good Self-Assessed Health Status	1: Respondent declares not having at least a good self-assessed health status; 0: otherwise	0.320	0.466	0,322	0,467	0,318	0,465
ADL	Limitations in activities of daily living	Number of limitations in activities of daily living	0.116	0.567	0,113	0,553	0,119	0,585
NCD	Number of chronic diseases	Number of chronic diseases	1.394	1.418	1,415	1,437	1,349	1,388
Personal Characteristics and Socioeconomic Status								
Age	Age of respondent	Number of years	59.346	3.946	59,162	4,014	59,655	3,829
MarStat	Marital status	1: Married; 2: never married; 3: divorced; 4: widowed	1.438	0.885	1,511	0,973	1,332	0,731
Educ	Education level	0: No Education; 1: Primary Education; 2: Secondary Education; 3: Tertiary Education	1.959	0.762	1,953	0,782	1.965	0,373
EmploStat	Employment Status	1: Retired; 2: Employed; 3: unemployed; 4: permanently sick; 5: homemaker	2.144	1.156	2,311	1,322	1,968	0,742
Region	Region of the country	1: Northern Europe; 2: WesternEurope; 3 SouthernEurope; 4: EasternEurope	2.637	1.059	2,634	1,051	1,927	0,839
Discrimination								
Discrim	Discrimination or persecution	1: respondent declared having been discriminated or persecuted; 0: otherwise	0.045	0.208	0,043	0,202	0,049	0,216

Source: Authors' calculations based on wave 7 from the SHARE survey and SHARELIFE 3 and 7

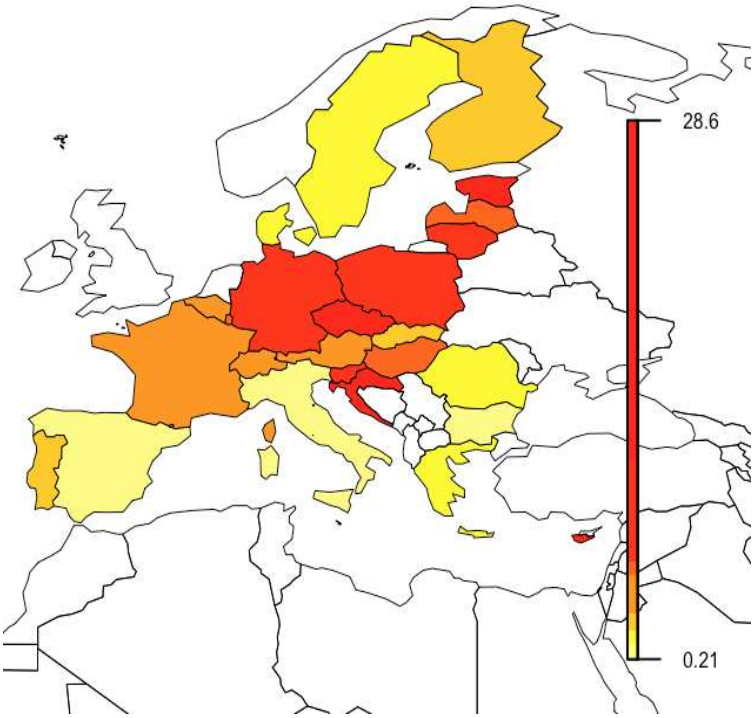
Fig 1. % of respondents declaring being discriminated



Note: Dark colors indicate higher share of discriminated individuals, whereas light colors indicate lower proportions of individuals who declared being discriminated against based on any reason. For white countries there is no available data.

When respondents declared having been dispossessed of properties as a consequence of persecution, we found more significant disparities among countries (Figure 2) than in Figure 1. The share of dispossessed individuals due to discrimination overcome 10% in countries such as Cyprus, Germany, Czech Republic, Croatia, and Estonia. However, in other countries such as Spain, Italy, Bulgaria and Malta, this percentage was below 1%. This information highlights that discrimination and its consequences are real, tangible, and more pronounced than the reported discrimination by individuals.

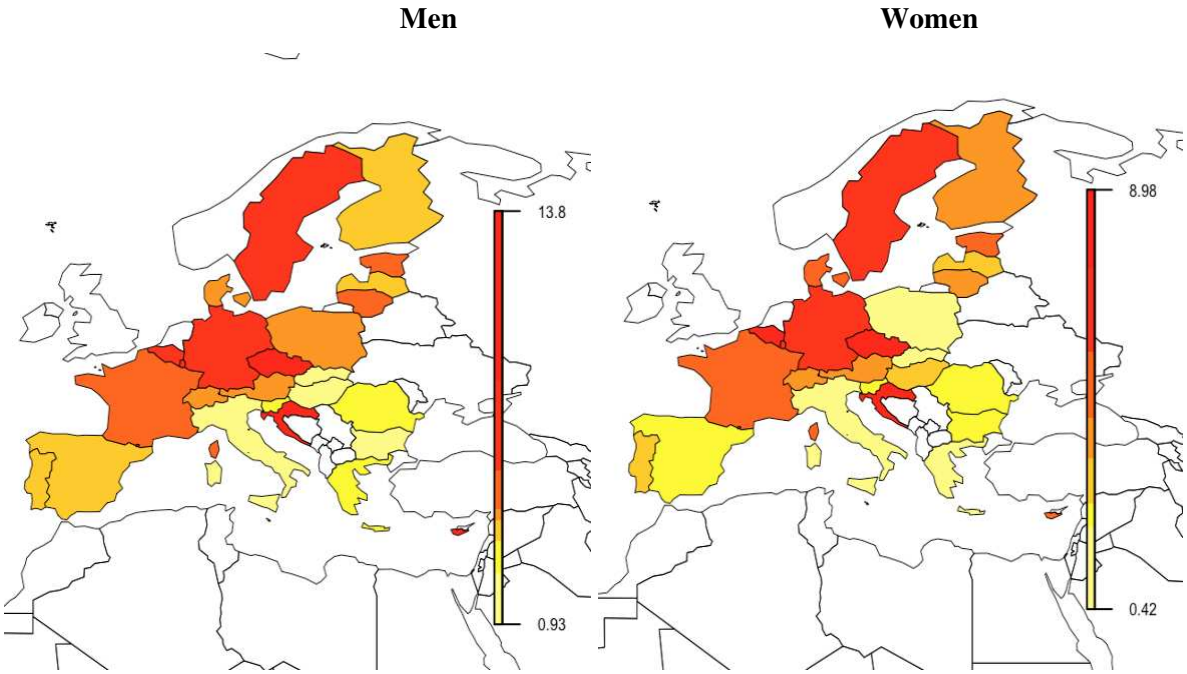
Fig 2. % of respondents declaring being dispossessed due to discrimination



Note: Dark colors indicate higher share of dispossessed individuals due to persecution, whereas light colors indicate lower proportions of individuals who declared being dispossessed of properties. For white countries there is no available data.

Additionally, there exist gender differences when reporting discrimination. Men present higher levels of perceived discrimination compared to women (Figure 3), especially in countries such as Malta, Cyprus and Croatia, where the discrimination rate was above 10% among old men workers. In case of old women, we observe high levels of discrimination in countries such as Croatia and Czech Republic, where the reported discrimination rate was above 8% in both countries. The lowest discrimination rates were located in Slovakia, Italy, Romania and Slovenia for both genders, where these rates did not overcome 3%.

Fig 3. % of men and women declaring being discriminated



Note: Dark colors indicate higher share of discriminated individuals, whereas light colors indicate lower proportions of individuals who declared being discriminated against based on any reason. For white countries there is no available data

The LCA results are depicted in Table 4. These results show that three classes can be analyzed. We developed several models to test the latent characteristics that might represent our sample. We included gender, marital status and having ever been discriminated. 49% of our sample represents females who reported more discrimination, 42.3% are men who nearly did not report discrimination and 8.7% are women who report low levels of discrimination.

Table 4. Results LCA

	Class I	Class II	Class III
Female	1	0	1
	(3.18e-09)	(1.96e-09)	(1.19e-09)
Discriminated	0.361	0.096	0.053
	(0.135)	(1.63e-09)	(6.9e-09)
Single	0.191	0.171	0.221
	(0.004)	(2.37e-09)	(3.32e-09)
Percentage of individuals per class	0.490	0.423	0.087
	(0.005)	(0.003)	(0.005)

Considering the LCA results and to simplify the analysis according to the information provided by the SHARE survey, we split the second part of our analysis depending on the respondent's gender.

3.2 Econometric analysis

To test for the significance and the impact of past discrimination on the self-assessed health status, we have developed two econometric models. Model 1 includes personal characteristics, marital status, education level, the employment status, and regional dummies. Model 2 adds variables that capture the health status: number of limitations of activities of daily living and the number of chronic diseases.

Table 5 includes results of Model 1 by gender to assess gender disparities on discrimination. Our variable of interest "Discrim" is statistically significant for male and women. Moreover, the gender differences on the impact on the poor self-assessed health status is not very significant when the model only includes socioeconomic variables.

In general, not being married increases the probability of reporting poor health for both men and women. Nevertheless, the fact of being widowed is only significant for women. Regarding the education variables, respondents with higher level accounts for better health status. Having a higher education level (at least secondary) would act as a protector against poor health. Finally, the employment status is a key variable for explaining the poor self-assessed health status. For both genders, other status than being retired affects significantly to the self-report of poor health. Specifically, women self-reported health is more affected by their job status than for their male peers. Being employed is the best protective factor against poor health for women followed by being a homemaker. Other status such as being unemployed or being permanently sick affect the probability of reporting poor health. Both impacts are higher for women.

Table 5. Model 1. Less than Good Health Status as dependent variable

Variable	Male		Female	
	Odds Ratio	***Conf. Interval***	***Odds Ratio***	***Conf. Interval***
Personal Characteristics and Discrimination				
Age	1,009	[0.995 – 1.022]	1.014***	[1.004 – 1.025]
	-0.008		*0,006*	
Discrim	1.807***	[1.497 – 2.182]	1.729***	[1.456 – 2.055]
	0.173		*0,152*	
Marital Status (Married as reference category)				
Never married	1.321***	[1.137 – 1.534]	1.148*	[0.974 – 1.354]
	0,101		*0,096*	
Divorced	1.279***	[1.106 – 1.477]	1.217***	[1.083 – 1.368]
	0,094		*0,073*	
Widowed	0,949	[0.693 – 1.301]	1.285***	[1.130 – 1.461]
	0,153		*0,084*	
Education level (No education as reference category)				
PriEduc	1,137	[0.859 – 1.505]	1,014	[0.819 – 1.254]
	0,163		*0,11*	
SecEduc	0,841	[0.637 – 1.111]	0.646***	[0.523 – 0.799]
	0,119		*0,07*	
TerEduc	0.573***	[0.429 – 0.764]	0.428***	[0.341 – 0.535]
	0,084		*0,049*	
Employment status (Retired as reference category)				
Employed	0.424***	[0.381 – 0.473]	0.541***	[0.489 – 0.599]
	0,023		*0,028*	
Unemployed	0,994	[0.732 – 1.189]	1.371***	[0.156 – 1.626]
	0,091		*0,119*	
Permanently Sick	8.390***	[6.752 – 10.426]	9.618***	[7.769 – 11.906]
	0,929		*1,047*	
Homemaker	0,927	[0.617 – 1.394]	0.819***	[0.729 – 0.922]
	0,193		*0,049*	
Region (Northern Europe as reference Category)				
Western Europe	0.559***	[0.492 – 0.635]	0.588***	[0.525 – 0.659]
	0,037		*0,034*	
Southern Europe	0.507***	[0.445 – 0.577]	0.579***	[0.517 – 0.651]
	0,034		*0,034*	
Eastern Europe	0.492***	[0.433 – 0.559]	0.651***	[0.580 – 0.729]
	0,032		*0,038*	
Constant	0,678	[0.286 – 1.606]	0.464**	[0.227 – 0.950]
	0,298		*0,169*	
Number of obs	11,866		16,225	

Source: Authors' calculations based on SHARE *(Börsch-Supan 2013)*

Note: Standard deviation are in italics. ***, **, *, are the significance at level 1, 5 and 10% respectively

Table 6 includes results of Model 2 also by gender to assess gender disparities on discrimination by controlling for health variables. As in Model 1, our variable of interest "Discrim" is statistically significant, and the associated odds ratio is reduced for both men and women. Nevertheless, the self-assessed poor health status from men would be more affected by self-perceived past discrimination than for their female peers. Suffering from chronic diseases and/or having limitations in activities of daily living affects very significantly the report of poor self-assessed health status. The other variables are not significantly affected by the inclusion of the health variables and report similar results for the new model.

Table 6. Model 2. Less than Good Health Status as dependent variable

Variable	**Male**				**Female**			
	Odds Ratio	***Conf. Interval***	***Odds Ratio***	***Conf. Interval***	***Odds Ratio***	***Conf. Interval***	***Odds Ratio***	***Conf. Interval***
Personal Characteristics and Discrimination								
Age	1.009	[0.996 – 1.022]	0.994	[0.980 – 1.008]	1.017 ***	[1.006 – 1.029]	0.998 *	[0.978 – 1.000]
	0.006		*0.007*		*0.006*		*0.006*	
Discrim	1.738 ***	[1.434 – 2.107]	1.567 ***	[1.275 – 1.926]	1.619***	[1.356 – 1.933]	1.197 *	[0.981 – 1.462]
	0.171		*0.165*		*0.146*		*0.122*	
Marital Status (Married as reference category)								
Never married	1.335 ***	[1.147 – 1.555]	1.422 ***	[1.208 – 1.673]	1.141	[0.966 – 1.349]	1.178 *	[0.987 – 1.407]
	0.094		*0.118*		*0.097*		*0.107*	
Divorced	1.261 ***	[1.090 – 1.459]	1.344 ***	[1.152 – 1.568]	1.186 ***	[1.052 – 1.338]	1.181 **	[1.034 – 1.348]
	0.094		*0.106*		*0.073*		*0.080*	
Widowed	0.872	[0.616 – 1.235]	0.837	[0.594 – 1.178]	1.263***	[1.107 – 1.441]	1.262 ***	[1.094 – 1.455]
	0.155		*0.146*		*0.085*		*0.092*	
Education level (No education as reference category)								
PriEduc	1,143	[0.860 – 1.519]	1.041	[0.775 – 1.398]	1.028	[0.825 – 1.282]	0.975	[0.776 – 1.225]
	0,166		*0.157*		*0.116*		*0.114*	
SecEduc	0,857	[0.646 – 1.136]	0.820	[0.613 – 1.098]	0.673***	[0.539 – 0.839]	0.692 ***	[0.551 – 0.870]
	0.123		*0.122*		*0.076*		*0.081*	
TerEduc	0.586***	[0.438 – 0.785]	0.551 ***	[0.407 – 0.745]	0.458***	[0.363 – 0.578]	0.471 ***	[0.370 – 0.600]
	0.087		*0.085*		*0.054*		*0.058*	
Employment status (Retired as reference category)								
Employed	0.456***	[0.407 – 0.507]	0.536 ***	[0.447 – 0.602]	0.591***	[0.533 – 0.655]	0.673 ***	[0.602 – 0.753]
	0.025		*0.032*		*0.031*		*0.038*	
Unemployed	1.008	[0.840 – 1.210]	1.155	[0.944 – 1.413]	1.415***	[1.198 – 1.683]	1.490 ***	[1.234 – 1.798]
	0.094		*0.119*		*0.125*		*0.143*	
Permanently Sick	6.644***	[5.299 – 8.331]	5.863 ***	[4.604 – 7.466]	8.127***	[6.516 – 10.137]	6.635 ***	[5.231 – 8.417]
	0.767		*0.723*		*0.916*		*0.805*	
Homemaker	0.967	[0.639 – 1.464]	1.217	[0.790 – 1.874]	0.881 **	[0.782 – 0.993]	0.879 *	[0.773 – 1.001]
	0.205		*0.268*		*0.054*		*0.060*	

Variable	**Male**				**Female**			
	Odds Ratio	***Conf. Interval***	***Odds Ratio***	***Conf. Interval***	***Odds Ratio***	***Conf. Interval***	***Odds Ratio***	***Conf. Interval***
Health status								
ADL	*3.104****	[2.512 – 3.835]			*3.374* ***	[2.833 – 4.018]		
	0.335				*0,179*			
Chronic			*2.063* ***				*2.067* ***	[1.999 – 2.178]
			0.042	[1.983 – 2.146]			*0.035*	
Region (Northern Europe as reference Category)								
Western Europe	0.548***	[0.481 – 0.624]	0.503 ***	[0.437 – 0.579]	0.595***	[0.530 – 0.668]	0.512 ***	[0.452 – 0.579]
	0.036		*0.036*		*0.035*		*0.032*	
Southern Europe	0.523***	[0.459 – 0.596]	0.544 ***	[0.473 – 0.626]	0.609***	[0.542 – 0.685]	0.599 ***	[0.529 – 0.678]
	0.035		*0.039*		*0.036*		*0.038*	
Eastern Europe	0.483***	[0.425 – 0.550]	0.507 ***	[0.442 – 0.582]	0.662***	[0.589 – 0.743]	0.573 ***	[0.505 – 0.650]
	0.032		*0.036*		*0.039*		*0.037*	
Constant	0.584	[0.242 – 1.405]	0.512	[0.202 – 1.300]	0.319 ***	[0.154 – 0.660]	0.664	[0.305 – 1.446]
	0.262		*0.244*		*0.118*		*0.264*	
Number of obs	11,866				16,225			

Source: Authors' calculations based on SHARE *(Börsch-Supan 2013)*

Note: Standard deviations are in italics. ***, **, *, are the significance at level 1, 5 and 10% respectively

4. Discussion

This study analyses the relationship between reported discrimination and self-assessed health among old men and women workers (50-65 years old) across 26 European countries. By applying several logistic regression models, we found a significant relationship between reported discrimination and self-assessed health, revealing that discrimination is an important determinant of individuals' health.

Contrary to our expectations, we found that reported discrimination affected more to old men's health than old women's, even after controlling for relevant characteristics. Previous studies found that women's health is more negatively influenced by discrimination experiences compared to men's (Coley et al. 2017; Hackett, Steptoe, and Jackson 2019), however, these studies focused their attention on much younger age groups than those included in our sample. This is a key issue to bear in mind since knowledge and awareness about discriminatory experiences have evolved over time. Some decades ago, there exist different types of prejudice and/or discrimination that were admissible and invisible in society. Nowadays, this type of practices are socially punished

and not accepted by a large share of individuals. Thus, individuals who were born during the 50s and 60s have coexisted with social norms than do not correlate with the actual ones, leading them to interpreter discrimination differently or to not detect discrimination at all. For example, traditional gender roles characterized by women being those in charge of the domestic chores (i.e., cooking, cleaning, dependent care, etc.) and men being the breadwinners, were seen as the normal rule in that society, and treating working women differently from men might not be seen as a discriminatory experience for none of them. We then suspect that reported discrimination might be biased given the age of our sample, what might explain why we observed a low share of old women workers reporting discrimination. There also exist mixed evidence about gender discriminatory experiences in the labor market. For instance, in countries such as the US (Mukhopadhyay 2021), Mexico (Campos-Vazquez and Gonzalez 2020) or Spain (Mora 2009), women who are obese are less paid, and have less chances of being hired compared to obese men. However, in Sweden, there is evidence that the penalty of being obese in the labor market is only suffered by men and not by women (Dackehag, Gerdtham, and Nordin 2015). Moreover, another study for elderly people aged more than 60 (Lyons et al. 2018) suggests that young heterosexual men are more affected by discrimination due to age than other people.

Our results also point to gender differences in the association between marital status and self-assessed health, as previously highlighted by previous studies (Bulanda, Yamashita, and Brown 2021; Han et al. 2014; Molsted et al. 2021; Tatangelo et al. 2017). We found that being divorced or single is more negatively associated with reporting poor health in case of old men than old women. However, widow(er)hood was only statistically significant for old women's health.

Finally, we also detected that educational attainment is a protective factor for individuals' health, especially in case of old women. A recent study analyzing the gender gap in self-assessed health for the general Spanish working population found that higher education is associated with better SAHS, especially in case of women, since this help them to overcame this gap (Pinillos-Franco and García-Prieto 2017).

5. Conclusions

In this paper, the impact of perceived past discrimination has been analyzed for a sample of 30,000 Europeans aged 50-65. In particular, the paper focused on the corrosive effects of discrimination in the self-assessed health status.

The descriptive analysis showed low levels of reported past discrimination for individuals in Europe. Nevertheless, differences between countries remain relevant. In general, male report higher levels of past discrimination than women. Similarly, individuals from richer countries recognize having suffered from discrimination in their lives.

The econometric analyses produced more evidence on the effect of suffering discrimination on self-assessed bad health. We develop several models to control for personal and regional characteristics but also for objective health status. We prove that even when controlling for the physical health status (chronicity and limitations in daily activities), discrimination plays a key role increasing the probability of reporting bad health. Our results also suggest that discrimination would have a greater impact for older European men than their female peers.

Overall, this study determined the importance of past self-perceived discrimination on health. This study has certain limitations arising from the SHARE database. Firstly, discrimination is measured through a self-reported question which implies some bias on the reporting and measurement of discrimination. Secondly, a further analysis on the specific types of discrimination, reasons for it and side effects was not developed due to a lack of enough observations in the sample.

Therefore, further research is needed on several fields: Firstly, other measures of discrimination should be analyzed through other databases or administrative data. Secondly, developing a regional analysis aiming at disentangling the gender differences in the self-reported discrimination by focusing on the cultural background of the different regions/countries.

Acknowledgments

This paper uses data from SHARE Waves 3 and 7 (DOIs: 10.6103/SHARE.w3.800, 10.6103/SHARE.w7.800), *see Börsch-Supan et al. (2013) for methodological details.*(1) *The SHARE data collection has been funded by the European Commission, DG RTD through FP5 (QLK6-CT-2001-00360), FP6 (SHARE-I3: RII-CT-2006-062193, COMPARE: CIT5-CT-2005-028857, SHARELIFE: CIT4-CT-2006-028812), FP7 (SHARE-PREP: GA N°211909, SHARE-LEAP: GA N°227822, SHARE M4: GA N°261982, DASISH: GA N°283646) and Horizon 2020 (SHARE-DEV3: GA N°676536, SHARE-COHESION: GA N°870628*, *SERISS: GA N°654221, SSHOC: GA N°823782, SHARE-COVID19: GA N°101015924) and by DG Employment, Social Affairs & Inclusion through VS 2015/0195, VS 2016/0135, VS 2018/0285, VS 2019/0332, and VS 2020/0313. Additional funding from the German Ministry of Education and Research, the Max Planck Society for the Advancement of Science, the U.S. National Institute on Aging (U01_AG09740-13S2, P01_AG005842, P01_AG08291, P30_AG12815, R21_AG025169, Y1-AG-4553-01, IAG_BSR06-11, OGHA_04-064, HHSN271201300071C, RAG052527A) and from various national funding sources is gratefully acknowledged (see www.share-project.org).*

- *Börsch-Supan, A., M. Brandt, C. Hunkler, T. Kneip, J. Korbmacher, F. Malter, B. Schaan, S. Stuck, S. Zuber (2013). Data Resource Profile: The Survey of Health, Ageing and Retirement in Europe (SHARE). International Journal of Epidemiology. DOI: 10.1093/ije/dyt088*

Authors gratefully acknowledge the feedback received during the XL+1 Conference of the Spanish Health Economics Association, the XV Labour Economics Meeting of the Spanish Labour Economics Association, and the 2022 EuHEA Conference, as they have clearly improved this paper.

References

Alvarez-Galvez, Javier and Luis Salvador-Carulla. 2013. “Perceived Discrimination and Self-Rated Health in Europe: Evidence from the European Social Survey (2010).” *PLOS ONE* 8(9):e74252.

Artazcoz, Lucía, Carme Borrell, Imma Cortàs, Vicenta Escribà-Agüir, and Lorena Cascant. 2007. “Occupational Epidemiology and Work Related Inequalities in Health: A Gender Perspective for Two Complementary Approaches to Work and Health Research.” *Journal of Epidemiology and Community Health* 61(Suppl 2):ii39--ii45.

Ayalon, Liat and Amber M. Gum. 2011. "The Relationships between Major Lifetime Discrimination, Everyday Discrimination, and Mental Health in Three Racial and Ethnic Groups of Older Adults." *Aging & Mental Health* 15(5):587–94.

Ayalon, Liat and Clemens Tesch-Römer. 2017. "Taking a Closer Look at Ageism: Self- and Other-Directed Ageist Attitudes and Discrimination." *European Journal of Ageing* 14(1).

Barnes, Lisa L., Carlos F. Mendes De Leon, Tené T. Lewis, Julia L. Bienias, Robert S. Wilson, and Denis A. Evans. 2008. "Perceived Discrimination and Mortality in a Population-Based Study of Older Adults." *American Journal of Public Health* 98(7):1241.

Bécares, Laia and Nan Zhang. 2018. "Perceived Interpersonal Discrimination and Older Women's Mental Health: Accumulation Across Domains, Attributions, and Time." *American Journal of Epidemiology* 187(5):924–32.

Borrell, Carme, Lucia Artazcoz, Diana Gil-González, Katherine Pérez, Glòria Pérez, Carmen Vives-Cases, and Izabella Rohlfs. 2011. "Determinants of Perceived Sexism and Their Role on the Association of Sexism with Mental Health." *Women & Health* 51(6):583–603.

Börsch-Supan, Axel, Martina Brandt, Christian Hunkler, Thorsten Kneip, Julie Korbmacher, Frederic Malter, Barbara Schaan, Stephanie Stuck, and Sabrina Zuber. 2013. "Data Resource Profile: The Survey of Health, Ageing and Retirement in Europe (Share)." *International Journal of Epidemiology* 42(4):992–1001.

Bulanda, Jennifer Roebuck, Takashi Yamashita, and J. Scott Brown. 2021. "Marital Quality, Gender, and Later-Life Depressive Symptom Trajectories." *Journal of Women & Aging* 33(2):122–36.

Campos-Vazquez, Raymundo M. and Eva Gonzalez. 2020. "Obesity and Hiring Discrimination." *Economics & Human Biology* 37:100850.

Cobb, Ryon J., Roland J. Thorpe, and Keith C. Norris. 2020. "Everyday Discrimination and Kidney Function Among Older Adults: Evidence From the Health and Retirement Study." *The Journals of Gerontology: Series A* 75(3):517–21.

Coley, Sheryl L., Carlos F. Mendes de Leon, Earlise C. Ward, Lisa L. Barnes, Kimberly A. Skarupski, and Elizabeth A. Jacobs. 2017. "Perceived Discrimination and Health-Related Quality-of-Life: Gender Differences among Older African Americans." *Quality of Life Research* 26(12):3449–58.

Dackehag, Margareta, Ulf G. Gerdtham, and Martin Nordin. 2015. "Productivity or

Discrimination? An Economic Analysis of Excess-Weight Penalty in the Swedish Labor Market." *European Journal of Health Economics* 16(6):589–601.

Diehn, Christina Garrison, Clair Rummel, Yiu Ho Au, and Kelly Scherer. 2021. "Attitudes toward Older Adults and Aging: A Foundational Geropsychology Knowledge Competency." *Clinical Psychology: Science and Practice* 29(1):4.

Eimontas, Jonas, Albinas Bagdonas, Antanas Kairys, Olga Zamalijeva, Vilmantė Pakalniškienė, and Raimonda Sadauskaitė. 2021. "The Links between Childhood Life Circumstances, Family Persecution and Discrimination Experiences, and Well-Being in Later Life." *Psichologija* 63(0):118–36.

European Commission; Directorate - General for Justice and Consumers; Dewhurst, E. 2020. *Age Discrimination Law Outside the Employment Field: 2020*.

Hackett, Ruth A., Andrew Steptoe, and Sarah E. Jackson. 2019. "Sex Discrimination and Mental Health in Women: A Prospective Analysis." *Health Psychology* 38(11):1014–24.

Han, Kyu Tae, Eun Cheol Park, Jae Hyun Kim, Sun J. Kim, and Sohee Park. 2014. "Is Marital Status Associated with Quality of Life?" *Health and Quality of Life Outcomes* 12(1).

Huynh, Virginia W., Danny Rahal, Evelyn Mercado, Michael R. Irwin, Heather McCreath, Theresa Seeman, and Andrew J. Fuligni. 2021. "Discrimination and Health: A Dyadic Approach." *Journal of Health Psychology* 26(7):962–74.

Idler, E. L. and Y. Benyamini. 1997. "Self-Rated Health and Mortality: A Review of Twenty-Seven Community Studies." *Journal of Health and Social Behavior* 38(1):21–37.

Jylhä, Marja. 2009. "What Is Self-Rated Health and Why Does It Predict Mortality? Towards a Unified Conceptual Model." *Social Science & Medicine* 69(3):307–16.

Krieger, N., D. R. Williams, and N. E. Moss. 1997. "Measuring Social Class in US Public Health Research: Concepts, Methodologies, and Guidelines." *Annual Review of Public Health* 18(1):341–78.

de la Torre-Pérez, Laura, Alba Oliver-Parra, Xavier Torres, and Maria Jesús Bertran. 2022. "How Do We Measure Gender Discrimination? Proposing a Construct of Gender Discrimination through a Systematic Scoping Review." *International Journal for Equity in Health* 21(1):1–11.

Levy, Becca R., Alan B. Zonderman, Martin D. Slade, and Luigi Ferrucci. 2009. "Age Stereotypes Held Earlier in Life Predict Cardiovascular Events in Later Life." *Psychological Science*

20(3).

Lewis, Tené T., Allison E. Aiello, Sue Leurgans, Jeremiah Kelly, and Lisa L. Barnes. 2010. "Self-Reported Experiences of Everyday Discrimination Are Associated with Elevated C-Reactive Protein Levels in Older African-American Adults." *Brain, Behavior, and Immunity* 24(3):438.

Lu, Peiyi, Dexia Kong, Mack Shelley, and Joan K. Davitt. 2021. "Intersectional Discrimination Attributions and Health Outcomes Among American Older Adults: A Latent Class Analysis:" *The International Journal of Aging and Human Development*.

Luo, Ye, Jun Xu, Ellen Granberg, and William M. Wentworth. 2011. "A Longitudinal Study of Social Status, Perceived Discrimination, and Physical and Emotional Health Among Older Adults:" *Research on Aging* 34(3):275–301.

Lyons, Anthony, Beatrice Alba, Wendy Heywood, Bianca Fileborn, Victor Minichiello, Catherine Barrett, Sharron Hinchliff, Sue Malta, and Briony Dow. 2018. "Experiences of Ageism and the Mental Health of Older Adults." *Aging & Mental Health* 22(11):1456–64.

Magidson, J. and J. Vermunt. 2004. "Latent Class Models." Pp. 175–98 in *Handbook of quantitafive methodology for the social sciences*. Newbury Partk: SAGE.

McCutcheon, A. 1987. *Latent Class Analysis*. Newbury Partk: SAGE.

Molsted, Stig, Sofie Wendelboe, Marius M. Flege, and Inge Eidemak. 2021. "The Impact of Marital and Socioeconomic Status on Quality of Life and Physical Activity in Patients with Chronic Kidney Disease." *International Urology and Nephrology* 53(12):2577–82.

Mora, Toni. 2009. "BMI and Spanish Labour Status: Evidence by Gender from the City of Barcelona." *The European Journal of Health Economics 2009 11:3* 11(3):239–53.

Mukhopadhyay, Sankar. 2021. "Do Employers Discriminate against Obese Employees? Evidence from Individuals Who Are Simultaneously Self-Employed and Working for an Employer." *Economics & Human Biology* 42:101017.

Nakhaie, Reza and Rochelle Wijesingha. 2015. "Discrimination and Health of Male and Female Canadian Immigrant." *Journal of International Migration and Integration* 16(4):1255–72.

Nery Guimarães, JM, D. Chor, GL Werneck, MS Carvalho, CM Coeli, CS Lopes, and E. Faerstein. 2012. "Association between Self-Rated Health and Mortality: 10 Years Follow-up to the Pró-Saúde Cohort Study." *BMC Public Health* 12(1).

Nylund-Gibson, Karen and Andrew Young Choi. 2018. "Ten Frequently Asked Questions about

Latent Class Analysis." *Translational Issues in Psychological Science* 4(4):440–61.

Nylund, Karen L., Tihomir Asparouhov, and Bengt O. Muthén. 2007. "Deciding on the Number of Classes in Latent Class Analysis and Growth Mixture Modeling: A Monte Carlo Simulation Study." *Structural Equation Modeling: A Multidisciplinary Journal* 14(4):535–69.

Pascoe, Elizabeth A. and Laura Smart Richman. 2009. "Perceived Discrimination and Health: A Meta-Analytic Review." *Psychological Bulletin* 135(4):531.

Pinillos-Franco, Sara and Carmen García-Prieto. 2017. "The Gender Gap in Self-Rated Health and Education in Spain. A Multilevel Analysis" edited by S. A. Kavanagh. *PLOS ONE* 12(12):e0187823.

Qin, Weidi, Ann W. Nguyen, Dawne M. Mouzon, Tyrone C. Hamler, and Fei Wang. 2020. "Social Support, Everyday Discrimination, and Depressive Symptoms Among Older African Americans: A Longitudinal Study." *Innovation in Aging* 4(5).

Rochon, Paula A., Surbhi Kalia, and Paul Higgs. 2021. "Gendered Ageism: Addressing Discrimination Based on Age and Sex." *The Lancet* 398(10301):648–49.

Stypińska, J. and P. Nikander. 2018. "Ageism and Age Discrimination in the Labour Market: A Macrostructural Perspective." Pp. 91–109 in *Con- temporary Perspectives on Ageism*, edited by L. Ayalon and C. Tesch-Römer. Springer.

Tatangelo, Gemma, Marita McCabe, Stephen Campbell, and Cassandra Szoeke. 2017. "Gender, Marital Status and Longevity." *Maturitas* 100:64–69.

Wyman, M. F., S. Shiovitz-Ezra, and J. Bengel. 2018. "Ageism in the Health Care Sys- Tem: Providers, Patients, and Systems." Pp. 193–213 in *on- temporary Perspectives on Ageism*, edited by L. Ayalon and C. Tesch-Römer. Springer.