

Original Article

Are Older Adults Perceived as A Threat to Society? Exploring Perceived Age-Based Threats in 29 Nations

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Abstract

Objectives: The present study adds to the current body of literature by simultaneously examining the public perception of young and old people as posing realistic threats (e.g., to the group's power, resources, and welfare) and symbolic threats (e.g., to one's world view, belief system and values).

Methods: The fourth wave of the European Social Survey was administered to individuals from 29 countries. Analysis is based on 56,170 individuals, who had data on the four relevant indicators. The study relied on a latent profile analysis to develop a typology of perceived realistic and symbolic threats to society by younger and older adults.

Results: A three-profile solution indicated that the perception of older and younger adults as threats to society often co-occurs. Sociodemographic characteristics at the individual-level and the Gini coefficient (e.g., an inequality indicator) at the country-level had differential associations with the profiles identified.

Conclusions: The study calls for a more balanced approach which evaluates attitudes toward both younger and older adults as potential sources of threat. Attention should be paid to individual- and national-level characteristics associated with age-based threats (e.g., the perception of a group, defined by its chronological age, as threatening).

Keywords: Ageism, Age discrimination, Cluster, Epidemiology, Group identity, Intergenerational conflict, Threat

The intergroup threat theory suggests that individuals react in hostile ways toward outgroups, particularly when outgroups are perceived as potentially harmful. The theory has identified two major sources of threat, which enhance intergroup hostility and conflict: realistic and symbolic threats. Realistic threats refer to threats to the group's power, resources, and welfare, whereas symbolic threats are threats to one's world view, belief system, and values (Stephan & Mealy, 2011). The framework proposed by the intergroup threat theory has been used in a variety of studies to explain intergroup tension, conflict and discrimination on the basis of ethnicity, culture, religion, and age (Oh, Bailenson, Weisz, & Zaki, 2016; Stephan, Ybarra, Martinez, Schwarzwald, & Tur-Kaspa, 1998; Velasco González, Verkuyten, Weesie, & Poppe, 2008; Walker, 1990).

Using the intergroup threat theory as a framework, a meta-analysis, which consisted of 95 samples, has found a relationship between different types of threats and negative attitudes toward outgroups (Riek, Mania, & Gaertner, 2006). For instance, a recent study has documented a relationship between incarceration rates of minorities and attempts to maintain white dominance in the labor market (Olzak & Shanahan, 2014). A different study has demonstrated an association between financial instability and more negative attitudes toward immigrants (García-Faroldi, 2017), whereas a third study has provided support to the theory by showing that both economic conditions and cultural values are related to prejudice (Meeusen & Kern, 2016).

Capitalizing on the intergroup threat theory (Stephan & Mealy, 2011), the present study specifically addresses

age-based threats of realistic and symbolic nature. Age-based threats represent the perceptions of a group, which is defined by its chronological age, as a threat to society. It is important to distinguish between ageism and age-based threats. Ageism reflects a much broader concept that consists of cognition, feelings, and behaviors toward individuals because of their perceived chronological age (Levy, 2001), whereas perceived age-based threats are solely cognitive in nature. Moreover, ageism may include both positive and negative aspects (Levy, 2001), whereas perceived age-based threats reflect negative perceptions of individuals as a threat to society because of their age-group membership.

A considerable body of research has examined the ways younger people perceive older adults as a threat to society. Consistent with the intergroup threat theory, North and Fiske (2013a) have identified three bases for intergenerational conflict. These conflicts are exacerbated by the expectations that younger generations hold toward older generations, who are seen as a threat to the financial wellbeing, welfare, values and social status of the younger generations. They include the expectation of the younger generations for the (a) succession of resources from the older to the younger generations, (b) minimal consumption of shared resources by older generations, and (c) age-appropriate symbolic identity maintenance, which means that the older generation should not attempt to “cross the line” and become indistinguishable from younger generations (North & Fiske, 2013a). In line with the intergroup threat theory, the first two bases can be seen as representing realistic threats as they concern the distribution of resources in society, whereas the latter basis of intergenerational conflict represents a symbolic threat, associated with the perceived status of older and younger adults in society.

The workforce is one arena, where the expectation for the succession of resources is clearly evident. Specifically, older adults are expected to retire and give their position as well as power to the younger generations (North & Fiske, 2013b). An example for the expectation of younger generations for minimal consumption of shared resources by older adults can be seen in fears about the “aging tsunami” (Barusch, 2013) and concerns about the depletion of the pension system by the baby-boom generation (Binstock, 2010). These concerns also are evident in the health care system. Given the fact that the health care costs are disproportionately high in the case of older adults, philosophers have questioned whether older adults have a duty to die (Hardwig, 1997). Consistently, policy makers are also concerned with the depletion of finite resources in the health care system by older adults and as a result, have proposed a variety of mechanisms for the allocation of scarce resources, with some of these mechanisms taking chronological age into consideration (Persad, Wertheimer, & Emanuel, 2009).

Evidence concerning symbolic threat as a cause of tension and discrimination of older generations by younger generations can be found in the use of terms such cougar

or manther to describe older adults who “cross the lines” and “prey” on younger adults of the opposite sex (Ames & Burcon, 2016). Symbolic threat also can be found in societal disapproval of older adults, when they attempt to assume values and characteristics of younger age groups (North & Fiske, 2012). Hence, although a youthful appearance is appreciated in society, when older adults attempt to look younger than their chronological age, this often is devalued by younger adults (Schoemann & Branscombe, 2011).

Much less is known about the situations during which older adults perceive younger adults as a threat to society. However, there is a growing evidence to show that discrimination toward young people exists. This discrimination by adults toward youth is termed adultism (Flasher, 1978). Some have claimed that younger adults are thought to be less capable morally and intellectually and that these faulty assumptions are responsible for their exclusion from society (Bessant, 2008). In support of the intergroup threat theory, research has attributed the exclusion of young people from the workforce to economic considerations (France & Wiles, 1997). When resources are scarce, as in the case of the recent financial crisis, younger people are the first to get hurt, resulting in very high unemployment rates especially among this age group (Choudhry, Marelli, & Signorelli, 2012; Verick, 2009). Consistently, research has shown that younger people, rather than older ones are more likely to report perceived discrimination based on age (Ayalon, 2014). Although these studies do not necessarily imply that older adults perceive younger adults as a threat, they do suggest that age-based discrimination is experienced by both young and old and that younger adults are disproportionately hurt at times of crisis, as would be predicted by the intergroup threat theory.

It is important to acknowledge that research on discrimination toward kids and youth has received only limited attention. Hence, even though the term ageism is currently used to describe age-based discrimination toward individuals of any age group (Iversen, Larsen, & Solem, 2009), it has been examined mainly in relation to older adults (Ayalon & Tesch-Römer, 2017). By focusing primarily on discrimination toward older adults, thus far, research has perpetuated the division between young and old (Hagestad & Uhlenberg, 2005) and has failed to examine whether similar mechanisms are responsible for threats attributed to either age group.

The present study examined whether views of older and younger adults as a threat to society co-occur and what mechanisms at the country- and the individual-level are responsible for this. The present study adds to the current body of literature by examining older and younger adults as the targets of perceived realistic and symbolic threats to society. To the best of my knowledge, this is the first study to do so. In this study, perceived threats to society by two specific age groups were examined: those in their 20's and those over 70. This corresponds to the inverse U shaped

distribution found concerning the relationship between age and social status and power in society (Eaton, Visser, Krosnick, & Anand, 2009; Zebrowitz & Montepare, 2000). This inverse U-shaped relationship is also apparent with regard to wellbeing (Blanchflower & Oswald, 2008). Those in their 20's and those over 70 likely represent two extreme age groups, which might be the target of high levels of age-based threats and subsequent age-based discrimination. It is important to note, however, that this categorization is somewhat arbitrary as there is no consensus regarding the ending of youth and the beginning of old age (Ayalon, Doron, Bodner, & Inbar, 2014; Lachman, Teshale, & Agrigoroaei, 2015).

The opportunity to examine older and younger adults simultaneously, as sources of perceived threats to society, is expected to provide a comprehensive picture of age-based threats. Such analysis does not a priori assume that age-based threats go only in one direction, for instance, threats expressed by younger generations toward older adults, but also allow examining the alternative direction. This facilitates the development of a typology, which takes into account the distribution of the different types of threats simultaneously. A typology promotes a more refined understanding of how different age-based threats correspond to each other.

Another advantage of the present study is the reliance on large representative samples of Europeans from 29 countries. This approach is in line with current efforts to identify a cultural basis for age-based discrimination (North & Fiske, 2015). Based on past research in the workforce (North & Fiske, 2016), the welfare system (Binstock, 2010), and the health care systems (Lloyd-Sherlock, Ebrahim, McKee, & Prince, 2016), it was expected that the largest profile would consist of individuals, who acknowledge older adults as a realistic source of threats. Given the limited research on perceived threats to society posed by younger adults, there were no clear hypotheses concerning threats associated with this age group.

Next, I examined potential country- and individual-level predictors of age-based threats. The present study examined the Gini coefficient as a potential country-level predictor of the typology of age-based threats. This indicator represents the overall level of inequality in the country. It was expected that countries that are characterized by larger profiles of perceived age-based threats, unrelated to the particular age group associated with these perceived threats, would have higher levels of inequality as measured by the Gini coefficient (e.g., greater competition over resources).

As for individual-level predictors, consistent with the proposed assumptions about intergenerational conflict (North & Fiske, 2012), it was expected that younger adults would be over-represented within the profile which reports older adults as a threat to society and older adults would be over-represented within the profile which reports younger adults as a threat to society. Given the nonsocially desirable nature of ageism (Cherry, Allen,

Denver, & Holland, 2015), it was expected that more educated people would be less likely to admit to age-based threats. There were no specific hypotheses with regard to gender, in the absence of consistent research on the topic (Kornadt, Voss, & Rothermund, 2013). As for subjective income, following the intergroup threat theory (Stephan & Mealy, 2011), it was expected that individuals of lower levels of subjective income would be classified into profiles characterized by high levels of perceived realistic threats to society associated with both young and old people. Consistently, it was expected that individuals of better subjective health (e.g., more physical resources) would feel less threatened by either younger or older adults.

Finally, the identified profile-solution was examined as a potential predictor of the perceived status of individuals in their 20's and those over 70. These two variables were selected to determine the criterion validity of the new typology. It was expected that a profile that is characterized by perceiving older adults as a high threat to society would predict worse perceived status of those over 70 and a profile characterized by high perceived threats to society by younger adults would predict worse perceived status of those in their 20's.

Methods

The European Social Survey (ESS) is a biannual cross-sectional survey of Europeans over the age of 15. The ESS is administered to identify trends in attitudes, beliefs and perceptions over time. In 2008, the ESS was administered to individuals from 29 countries (ESS Round 4: European Social Survey Round 4 Data, 2008). The present study is based on a special module on experiences and expressions of ageism, which was administered as part of the general survey. The final analysis is based on 56,170 who had data on the four indicators of perceived age-based threat. See Supplementary Table 1 for sample characteristics.

Measures

Profile indicators

Four items were used as indicators of perceived realistic and symbolic threats to society by younger and older adults, respectively. Respondents were asked the following questions:

Realistic threat—"All things considered, do you think people in their 20s/70s contribute very little or a great deal *economically* to [country] these days?" 10 = contribute very little economically, 0 = contribute a great deal economically.

Symbolic threat—"Please tell me whether you think most people in their 20s/70s have a good or bad effect on *country's customs and way of life*?" 10 = extremely bad effect, 0 = extremely good effect.

Predictors

Age, gender, education (number of years), subjective income (range: 1–4, with a higher score, indicating better subjective income), and subjective health (range: 1–5, with a higher score, indicating better subjective health) were gathered based on self-report *at the individual level*.

At the country level, the Gini coefficient in 2008 was used as a measure of inequality. It was retrieved primarily from the Eurostat http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di12. For a few countries, data were retrieved from the World Fact Book. The Gini coefficient ranges between 0 and 100, with a higher score indicating greater inequality.

Criterion

Two questions were selected to assess the perceived status of younger and older adults in society: I'm interested in how most people in (country) view the status of people in their 20s and people over 70. Range 0 = extremely low status; 10 = extremely high status.

Analysis

Determining a latent profile solution

Latent profile analysis is used to identify subtypes or profiles of related cases within a heterogeneous population. The method detects profiles of respondents based on similar response patterns on a set of variables. The notion that guides latent profile analysis is that unobserved variability in the sample explains variability among observed variables (Lubke & Muthén, 2005). The advantages of latent profile analysis stem from the fact that it takes into account measurement error, uses a probability based-approach, and provides a statistical test for the number of profiles.

In the present study, perceived realistic and symbolic threats to society by younger and older adults were entered as dependent variables into the mixture modeling procedure in Mplus (Muthén & Muthén, 1998–2011). Mixture modeling provides a flexible approach to detect the number of potential profiles that can be inferred from the data and to model observed variables within profiles (Lubke & Muthén, 2005).

The overall goal is to achieve an adequate model fit with the lowest number of profiles, as this represents the most parsimonious solution (Lubke & Muthén, 2005). I started with a single-profile solution and increased the number of profiles until no further improvement in model fit was achieved. To determine the appropriate number of classifications, the Akaiake Information Criteria (AIC) and the Bayesian Information Criteria (BIC) were examined. Lower values indicate better fitting models. Using the Lo-Mendell-Rubin adjusted likelihood ratio test, difference tests were obtained in order to determine whether an additional profile improves the fit of the model (Lo, Mendell, & Rubin, 2001). A significant p value suggests that the model provides

a better fit to the data compared with a model with one less profile. In addition, entropy scores were examined. The closer the entropy score is to 1, the better the prediction is. The outcome of the analysis is the assignment of each individual to a profile. A good fitting model is expected to result in high probability of classification of a case to only one of the classifications.

Finally, the size of the profile also was used to determine the overall number of profiles, as small profiles tend to represent spurious results. To ensure the stability of the models, different sets of starting values based on the local maximum in the iteration process were specified (McCutcheon, 2002). To determine the latent structure of all European countries together, analysis was weighted for poststratification and population weights to reduce sampling error and nonresponse bias. To determine the distribution of the four indicators across profiles, four one-way analyses of variance (ANOVA) were conducted, with p less than .0125 as a significance criterion in order to adjust for multiple comparisons.

Correlates of the profile solution

After determining a suitable profile-solution, profile probability was examined as a potential correlate of national-level indicators. This correlational analysis was computed with data aggregated at the national level. Poststratification and population weights were used for this analysis. In addition, latent profile group membership was used as a between-subject variable to examine its correlates. This analysis was conducted using ANOVAs to examine the distribution of continuous variables across profile-group membership. Chi-square analysis was conducted in the case of gender (i.e., a categorical variable).

An additional analysis examined predictors of the profile solution using multilevel multinomial regression analysis, with individual-level (e.g., age, gender, education, subjective income, subjective health) and country-level (e.g., Gini coefficient) predictors. The two criteria variables (e.g., the status of young and old people in society) were also examined using multilevel regression analyses. Profile membership served as an independent variable and individual (e.g., age, gender, education, subjective income, subjective health) and country-level (e.g., Gini coefficient) variables served as covariates.

Results

Determining a Latent Profile Solution

Supplementary Table 2 presents the fit indices of different latent profile solutions. As can be seen, both the AIC and the BIC continue to decline with the addition of profiles. In addition, the Lo-Mendell-Rubin adjusted likelihood ratio test remains significant even when a six-profile solution is examined. These fit indices suggest that a six-profile solution is superior to a five-profile solution and even a

seven-profile solution might be desirable. However, starting from a three-profile solution onwards, some of the profiles are smaller than 5%, suggesting that profiles might represent spurious results (see Supplementary Table 3). The three-profile solution is a reasonable fit to the data, though entropy score is only moderate (.69), suggesting that the distinction between the three profiles is not perfect. However, taking all fit indices into account, this profile solution appears most parsimonious.

Table 1 demonstrates how the four indicators of threat are distributed across the three-profile solution. Based on ANOVAs, the distributions of all four indicators across the three-profile solution were statistically significant; using a Bonferroni adjusted α level of .0125. Whereas the effect sizes of perceived realistic and symbolic threats to society by younger adults are high, the effect sizes of perceived threats to society by older adults are considered low. This suggests that most of the variability in the three-profile solution can be attributed to perceived threats to society by younger adults.

The first profile represents 12% of the population. This profile is characterized by a relatively high perceived realistic threat to society by older adults, low perceived symbolic and realistic threats to society by younger adults and a low perceived symbolic threat to society by older adults. The second profile accounts for 9% of the population. This profile is characterized by a high sense of threat to society by both younger and older adults, with the exception of perceived symbolic threat to society by older adults, which is low. Finally, the third profile consists of 79% of the population. This profile is characterized by medium levels of perceived threats to society by younger adults and medium to high levels of perceived realistic threats to society by older adults, but low levels of perceived symbolic threats to society by older adults (see Figure 1).

Bivariate Correlates of the Three-Profile Solution

Table 2 outlines the distribution of individual-level characteristics across the three profiles. There are significant differences in terms of age, education, subjective income, subjective health, and the perceived status of younger and

older adults in society across the three profiles. Profile 1 is composed of the youngest population and profile 2 of the oldest population. In terms of level of education, profile 2 is characterized by the least educated population and profile 3 is characterized by the most educated population. Profile 2 is characterized by the lowest levels of subjective income and subjective health. The perceived status of both younger and older people in society is highest in profile 1 and lowest in profile 2. It is important to note, however, that although significant, the effect sizes of these differences are only minimal, with the exception of the status of younger adults, which shows moderate variability across the three profiles.

We also examined the relationship between the probability of profile membership at the country level and the country-level indicator, the Gini coefficient. In countries that are characterized by greater inequality (e.g., higher levels of Gini coefficient), the probability of profile 1 is higher ($r = .56, p < .001$) and the probability of profile 3 is lower ($r = -.44, p < .001$). There was no correlation between the probability of profile 2 and the Gini coefficient ($r = -.01, n.s.$).

Multilevel Analyses of the Three-Profile Solution as an Outcome and as a Predictor

A multilevel analysis examined the simultaneous associations of the various individual- and country-level predictors with profile membership. The probability of being classified into profile 1 rather than profile 3 is higher as

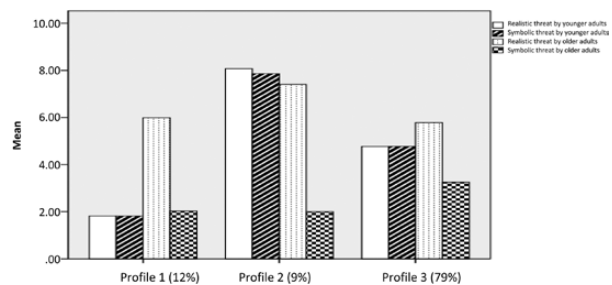


Figure 1. The mean values of the four threat indicators across the three profiles

Table 1. The Distribution of the Threat Indicators across the Three-Profile Solution (N = 56,170)

	Total	Profile 1	Profile 2	Profile 3	F	η^2	p
Symbolic threat associated with younger adults	4.7 (2.0)	1.8 (1.2)	7.9 (1.4)	4.8 (1.5)	26,258 (54,716.2)	.49	<.001
Realistic threat associated with younger adults	4.7 (2.2)	1.8 (1.3)	8.1 (1.4)	4.8 (1.7)	21,708 (56,610.2)	.43	<.001
Symbolic threat associated with older adults	3.0 (2.0)	2.0 ^a (2.0)	2.0 ^a (2.0)	3.2 (1.9)	1,906 (55,294.2)	.06	<.001
Realistic threat associated with older adults	6.1 (2.4)	6.1 (2.8)	7.6 (2.4)	5.9 (2.3)	1,166 (56,460.2)	.04	<.001

Note: One-way analyses of variance (ANOVAs) were conducted to test differences across the three profiles. Bonferroni correction was applied for post-hoc comparisons.

^aIndicates nonsignificant differences. All other post-hoc comparisons were significant. η^2 represents the effect size of the ANOVA tests. A higher score on the indicators indicates a higher threat.

Table 2. Individual-Level Characteristics Across the Three-Profile Solution ($N = 56,170$)

	Total	Profile 1	Profile 2	Profile 3	F/χ^2	η^2/V	p
Age	44.9 (18.4)	40.5 (18.5)	49.9 (17.5)	45.0 (18.4)	392.7 (58,023.2)	.01	<.001
Gender (women)	30,583 (54.5%)	3,569 (54.6%)	2,989 (53.3%)	24,025 (54.6%)	3.3 (2)	.01	.19
Education (years)	11.9 (4.1)	11.6 (4.1)	11.3 (4.0)	12.0 (4.1)	88.6 (57,765.2)	.01	<.001
Income (1–4)	2.7 (0.9)	2.7 (0.9)	2.4 (0.9)	2.8 (0.9)	453.2 (57,463.2)	.02	<.001
Health (1–5)	3.6 (0.9)	3.8 (0.9)	3.3 (1.0)	3.6 (0.9)	413.1 (58,080.2)	.01	<.001
Status of people in their 20s (0–10)	5.2 (2.2)	6.6 (2.3)	3.7 (2.4)	5.1 (2.0)	2,370.9 (57,542.2)	.09	<.001
Status of people in their 70s (0–10)	4.7 (2.4)	4.8 (2.8)	3.5 (2.8)	4.5 (2.4)	662.6 (57,469.2)	.02	<.001

age decreases, level of education decreases and subjective health status increases. In addition, in countries with a higher Gini coefficient (greater inequality), people are more likely to be classified into profile 1. Men, older individuals, individuals of lower subjective income and lower subjective health are more likely to be classified into profile 2 than 3 (see Table 3).

Finally, two multilevel regression analyses were conducted in order to examine the criterion validity of the profile-solution, controlling for both individual- and country-level variables. Compared with profile 3, those classified as belonging to profile 1 are more likely to endorse a higher status of young and old people in society, whereas those classified as belonging to profile 2 are less likely to do so (see Table 4).

Discussion

The present study capitalizes on the threat theory to characterize younger and older adults as targets of perceived age-based realistic and symbolic threats to society. The uniqueness of the present study stems from the simultaneous assessment of both younger and older adults as targets of perceived age-based threats to society and from the reliance on a large cross-national sample, which allows for the assessment of national variability as well as individual-level differences in the typology identified. Contrary to past research, which has mainly focused on perceived age-based threats or discrimination toward older adults, this study evaluates attitudes toward two of the most vulnerable groups in society. The creation of a typology is likely to improve the theoretical understanding of perceived age-based threats to society. Such an understanding goes beyond the mere study of older adults as a threat to society, which has received the most research attention thus far (North & Fiske, 2012; North & Fiske, 2013a).

A three-profile solution was determined as adequate to characterize the data. A common feature of the profiles identified was the perception of older adults as a relatively low symbolic threat to society. This goes in line with claims

Table 3. Multilevel Multinomial Logistic Regression to Identify Individual- and Country-level Predictors of Profile Membership ($N = 54,922$)

	Profile 1	Profile 2
Intercept	-1.98***(.09)	-2.31***(.16)
<i>Individual-level predictors</i>		
Age	-.01***(.00)	.01***(.00)
Gender (women)	.02(.05)	.25***(.04)
Education (years)	-.02**(.01)	.01(.01)
Income (1–4)	.08(.05)	-.20***(.03)
Health (1–5)	.22***(.03)	-.12***(.03)
<i>Country-level predictors</i>		
Gini coefficient	.06***(.01)	.02(.02)
AIC	35,501.09	
BIC	35,516.17	

Note: For continuous variables, one way analyses of variance (ANOVAs) were conducted to test differences across the three profiles. Bonferroni correction was applied for post-hoc comparisons. All post-hoc comparisons were significant. For categorical variables, chi-square analysis was conducted. η^2 represents the effect size of the ANOVA tests. V represents the effect size of the chi-square test. AIC = Akaike Information Criteria; BIC = Bayesian Information Criteria.

Table 4. The Three-Profile Solution as a Predictor of the Status of Younger and Older Adults in Society, Controlling for Individual- and Country-level Predictors ($N = 52,962$)

	Status of people in their 20s	Status of people over 70
Profile 1 vs 3	1.30***(.09)	.59***(.08)
Profile 2 vs 3	-1.11***(.09)	-.52***(.06)
AIC	222,012.62	234,744.73
BIC	222,110.19	234,842.38

Note: Two separate multilevel regression analyses were conducted with the status of people in their 20s and the status of people over 70 as outcome variables. Individual-level covariates included: age, gender, education, income, and health. Country-level covariate included the Gini-coefficient. A higher score indicates a higher perceived status. AIC = Akaike Information Criteria; BIC = Bayesian Information Criteria.

about traditional societies, in which positive views of older adults, as contributing to society through the passage of knowledge and values, are prevalent (Cowgill, 1974). The present study as well as other research (Gordon & Jordan, 2017), shows that positive views of older adults as contributing to the customs and ways of life in society are not limited to traditional societies, but are also present in modern societies.

The relatively low perceived symbolic threat to society imposed by older adults is contrasted with the medium to high perceived realistic threat to society by older adults across all three profiles. This is consistent with past research which has stressed realistic threat as a source of intergenerational tension, as older adults are expected to step backward and allow the new generations to take over (North & Fiske, 2013a, 2016). It also corresponds with the proliferation of research on older adults as a threat to the workforce, the health care system and the pension system (Binstock, 2010; Persad et al., 2009; Pinho, 2014). The use of terms such as “dependency ratio” or “aging Tsunami” clearly reflects the sentiment that older adults are a burden to society. Hence, although their cultural contribution might be appreciated, older adults are seen as posing a substantial financial threat.

The most common profile identified (profile 3) was characterized by medium levels of perceived realistic and symbolic threats to society by younger adults, a slightly higher realistic threat to society by older adults and a lower perceived symbolic threat to society by older adults. This suggests that most people tend to report both younger and older adults as a source of moderate levels of threat to society, with one exception, namely symbolic threat to society by older adults, which tends to be lower. The moderate rather than high levels of perceived threat are expected given the fact that responses to questions about ageism are socially undesirable (Cherry et al., 2015). Hence, individuals might tend to report primarily moderate levels as these are seen as more socially acceptable.

Nonetheless, these results suggest that moderate levels of age-based threats are directed toward both younger and older adults. These findings are supported by past research, which has shown that age-based discrimination is the most common type of discrimination, and is more prevalent than racism or sexism (Ayalon, 2014). The findings suggest that among those individuals who are prone to report age-based threats, the exact target age-group is of lesser importance. Hence, attention should be given to both young and old people in society as both groups likely serve as the target of a heightened sense of threat. Given the size of this profile, interventions should address age-based threats, unrelated to the specific target age group and move away from focusing solely on negative attitudes toward older adults.

The two remaining profiles are substantially smaller. The first profile is characterized by reports of relatively high realistic threat to society by older adults, low symbolic and realistic threats to society by younger adults and

a low symbolic threat to society by older adults. The second profile is characterized by reports of a high sense of threat to society by both younger and older adults, with the exception of symbolic threat to society by older adults, which was low. Hence, these two smaller profiles differ on the reports of younger adults as a threat to society. Whereas realistic and symbolic threats to society by younger adults largely differed across the three-profile solution, older adults as the source of realistic and symbolic threats to society showed only minimal variability. Hence, there is a greater consensus with regard to age-based threats toward older adults across the three-profile solution and most of the variability is attributed to age-based threats attributed to younger adults.

Although perceived threats to society by younger adults have received substantially lesser attention compared with perceived threats to society by older adults (North & Fiske, 2012), the present study demonstrates that about nine percent of the population is characterized by high levels of perceived threats to society by older adults (realistic threat), as well as by younger adults. The relative disregard to negative attitudes toward younger adults by past research could stem from the fact that certain characteristics associated with young age, such as a youthful appearance for instance, are idealized in society (Bessenoff & Del Priore, 2007). This might blur the fact that negative views associated with young age also prevail. Moreover, because ageism has been examined primarily as discrimination against older adults (Ayalon & Tesch-Römer, 2017), the divide between the age groups is being perpetuated also in research (Hagestad & Uhlenberg, 2005) as the two types of threats are seen as conceptually different from one another and are rarely examined simultaneously. Hence, the study calls for research on ageism to go beyond the focus on older adults toward a more balanced approach which evaluates both younger and older adults as the targets of age-based threats.

As for individual-level predictors of the three-profile solution, the probability of being classified into profile 1 rather than profile 3 is higher as age decreases, whereas the probability of being classified into profile 2 is higher as age increases. This shows that age-based threats manifest somewhat differently by age; older adults are more likely to be classified as reporting younger adults as a threat to society, in addition to older adults as a realistic threat to society, whereas younger adults are more likely to be classified into a profile of high perceived realistic threats to society by older adults, but lower perceived threats to society by younger adults. The social identity theory (Tajfel & Turner, 1979) predicts that people devalue outgroup members and value in-group members. Hence, one would expect older adults to have a lower likelihood of being classified into a profile of high perceived threat to society by older adults as this represents one's own age group. However, the study shows that older adults also appear to be threatened by their own age group, and not only by younger age groups.

This paradox could be explained by the stereotype embodiment theory (Levy, 2009), which suggests that negative views of old age are already well-internalized across the life span, and, thus, carry an impact on older adults' perceptions. The term identical intergroup bias describes situations in which low social status groups, such as older adults, identify with younger age groups and devalue their own age group (Bodner, 2009). Younger adults in contrast, potentially belong to a higher status group and as such, report perceived threats mainly with regard to older adults (Bodner, 2009).

As subjective health status increases, individuals are more likely to be classified into profile 1 rather than 3. With the exception of realistic threat to society by older adults, profile 1 is characterized by the lowest levels of perceived threats. In contrast, individuals of lower subjective income and lower subjective health are more likely to be classified into profile 2 rather than 3, with profile 2 representing the highest levels of perceived threat to society by both younger and older adults. Hence, these findings largely support the notion of scarce resources as precipitators of a sense of threat (Stephan & Mealy, 2011). Those individuals who have fewer personal resources (e.g., income and health) are more likely to report perceived threat. Finally, men are more likely to be classified into profile 2 than profile 3. Past research has shown that gender is an inconsistent predictor of ageism, which varies based on life domains (Kornadt et al., 2013). Given the minimal size of the effect and the absence of significant bivariate associations between gender and profile-membership in the present study, the significant association found is likely spurious.

As for country-level predictors of the three-profile solution, in countries of a higher Gini coefficient (greater inequality), people are more likely to be classified into profile 1. Profile 1 can be seen as representing the least balanced views of older versus younger adults, as this profile is characterized by a high perceived realistic threat to society by older adults, but low perceived threats to society by younger adults and a low perceived symbolic threat to society by older adults. Hence, profile 1 represents the greatest level of inequality with regard to age-based threats. This is consistent with higher levels of inequality at the country-level, as reflected by the Gini coefficient.

Finally, the three-profile solution was examined as a predictor of two potential criteria, namely the perceived status of younger and older adults in society. The first profile is associated with the highest levels of perceived status of both younger and older adults, whereas the second profile is associated with the lowest levels of perceived status of both younger and older adults. This suggests that to some degree, the distinction between the profiles is likely based on an overall response style (e.g., high vs low overall perceived threat), rather than on the specific threat or target group. Hence, this study provides a further call for an

integrative study of perceived age-based threats to society, which addresses both younger and older adults as sources of threat, as potentially the exact age group which is the target of perceived threat is of lesser importance than the degree of threat reported.

The paper should be examined in light of its limitations. The most prominent weakness of the present study is the failure to obtain unequivocal statistical support for a profile solution. Although a larger number of profiles were indicated statistically, the low prevalence of some of the profiles precluded their consideration. Another limitation concerns the fact that the threat indicators were limited in scope and addressed two very specific age groups. Specifying other age groups as targets of perceived threat could have resulted in different findings. In addition, the threat indicators were quite implicit. A more explicit inquiry about perceived threat might have resulted in different responses. The reliance on a cross-sectional study does not allow for conclusions about cause and effect.

Nevertheless, the present study provides a fresh look on ageism in the context of the intergroup threat theory. It does so by stressing the fact that both younger and older adults can be the targets of age-based threats. Potentially, there are more similarities than differences in perceived threats to society, unrelated to the particular age group, suggesting that the simultaneous assessment of both age groups as the targets of perceived age-based threats is desired. The study expands the concept of ageism beyond attitudes toward older adults to also include attitudes toward younger adults. It also stresses the role of individual- and country-level variables in determining age-based threats.

Conflict of Interest

None reported.

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