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Original Article

The Psychometric Features of the Turkish Version of the Ageism Survey and the Frequency of Ageism☆

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SUMMARY

Background: This study was conducted to adapt the ageism survey to the Turkish language and culture and to determine the frequency of occurrence of ageism.
Methods: The study population consisted of 236 individuals aged 50–95 years. The cultural adaptation of the ageism survey was carried out through the method of translation/back-translation and the validity of the instrument was tested for content and construct validity; its reliability was tested by internal consistency analysis.
Results: The mean age of the respondents was 64.44 ± 9.57. The content validity index for the ageism survey was found to be 0.89 and Cronbach α value was 0.86. Item-total correlation values for all of the items were over 0.31. Of the participants, 82.5% reported being confronted with some kind of discriminatory behavior at least once.
Conclusion: It was established that the ageism survey is appropriate to the Turkish language and culture and that it is a valid and reliable instrument.
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1. Introduction

Ageism is described as discriminating, stereotyping, and setting up actions and theories against people only because they are old[1,2]. The term *ageism* was used for the first time in 1969 by Dr Robert Butler[3] of the United States National Institute on Aging, Bethesda, MD, USA. As a gerontologist, Butler described ageism as a type of ideology used against older people that could be turned into action just like forms of discrimination, racism, and sexism. Research on ageism has shown that more than half of the older population are exposed to some form of discrimination[4–6].

Research on ageism in Turkey is made up of studies on the attitudes of young people and health professionals towards the elderly[7–10]. No study has been encountered in the Turkish literature on any kind of query into discriminatory behavior and attitudes perceived and reported by older individuals.

The purpose of this research was to test the validity and reliability of the Turkish language version of the ageism survey and discover the frequency of ageism.

2. Materials and methods

2.1. Participants, design, and procedure

The research is methodological in its dimension of conducting a study of validity and reliability regarding the Turkish adaptation of the ageism survey; it is of descriptive design in its dimension of demonstrating ageism frequency.

The study was conducted over the period June–September 2013 with individuals, aged 50 years and older, who were registered at a Family Health Center in the district of Maltepe, on the Asian side of Istanbul. This particular district is a location that has attracted migrants from other regions of Turkey and is generally populated by socioeconomically disadvantaged families. No sample selection was made. The criteria for inclusion in the research were voluntary participation and the absence of a mental impediment. All of the respondents were informed about the study prior to the collection of data. The data were collected during visits made to the homes of

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willing and consenting individuals using the face-to-face interviewing technique in spring 2013. The study was carried out with 236 individuals, aged 50–95 years, who matched the inclusion criteria.

The literature asserts that validity and reliability studies should be based on a sample of a number that is at least five to 10 times the number of items in the measuring instrument[11]. Since the ageism questionnaire comprised 20 items, the sample of 236 individuals was appropriate to the recommended sample size.

The developer of the original ageism survey was contacted by e-mail and permission was obtained for adapting the survey to the Turkish language. This study was approved by the Ethics Committee of Non-Clinical Research of Istanbul Medipol University (Istanbul, Turkey; 2013-553).

2.2. Instruments

The data for the research were collected using an identification form that queried the sociodemographic characteristics of the participants, and the ageism survey developed by Palmore[4] in 2001.

2.2.1. Sociodemographic questionnaire

This included three questions on age, sex, and educational status.

2.2.2. Ageism survey

The survey comprises 20 items that relate only to the negative aspects of ageism. The respondents were asked to indicate on each item how often they had experienced the event mentioned; responses were scored as *Never* = 0, *Once* = 1, and *More than once* - = 2. Internal consistency for the original survey was at a good level (Cronbach $\alpha = 0.81$). Palmore[4] reported in his initial study that the survey instrument appeared to have one main factor with an Eigenvalue of 4.74.

2.3. Instrument adaptation and validity

The adaptation of the survey into the Turkish language was carried out using the method of translation/back-translation. Two independent linguists first translated the survey into Turkish. Later, both linguists agreed upon the Turkish form of the survey, which was back-translated into English by another linguist. The Turkish and the English forms of the instruments were sent out to an expert panel consisting of seven university faculty members including two public health physicians and public health nurses with backgrounds similar to those of the translators. The experts were asked to evaluate the items in the instruments on the basis of the content validity index (CVI), such that (1 = unsatisfactory, 4 = very satisfactory). For the content to be 80% satisfactory in terms of validity, the experts had to give each item of the instruments a 3- or 4-point score[12]. The experts suggested that Item 2, *I was given a birthday card that makes fun of old people* be changed to *My birthday was not celebrated because I'm old* to make it more compatible with customary Turkish cultural habits.

Lastly, the Turkish version of the ageism survey was administered to a group of five older individuals to test and assess the comprehensibility of the items.

2.4. Factor structure

The construct validity of the survey was examined with factor analysis. The analysis results showed a Kaiser–Meyer–Olkin value of 0.85, indicating good sampling adequacy. Bartlett's test of sphericity was found to be statistically significant ($p < 0.001$). Factor analysis for the survey was carried out using principal components analysis and varimax rotation. It was seen in the analysis that the survey could be collected under five factors that explained 61.29% of total variance.

2.5. Reliability

The Cronbach α coefficients and item-total correlations of the Turkish ageism survey were examined in the reliability analysis. The values of ≥ 0.70 for the Cronbach α coefficients and > 0.25 for the item-total correlations were determined to be acceptable levels for the instrument[13].

2.6. Assessment of the data

In terms of content validity, Kendal *W* analysis was used to determine whether there were differences between the expert opinions. In the reliability analysis, the items of the ageism survey were examined for internal consistency in terms of item-total correlations and Cronbach α coefficients.

Frequencies of ageism were compared by age, sex, and educational status. Statistical significance was determined as $p < 0.05$.

3. Results

The mean age of the respondents was 64.44 years (standard deviation = 9.57 years; range, 50–95 years); 69.1% were women and 30.9% were men; 70.8% were married and 94.1% had at least one child; 46.6% were elementary school graduates and 7.2% were high school graduates or higher.

3.1. Language adaptation of the ageism survey

At the end of the language adaptation procedure carried out for the survey, it was decided that the back-translated survey was the equivalent of the original scale. The original and Turkish versions of the items can be seen in Table 1.

3.2. Content validity

The validity analysis showed that the second item in the survey, *I was given a birthday card that makes fun of old people* had an item-total correlation of 0.04. The new item that was recommended in place of the second item, *My birthday was not celebrated because I'm old* was found to have an item-total correlation of 0.31. The item-level CVI for the Turkish version of the ageism survey ranged from 0.85 to 1.00, and the scale-level CVI was 0.98.

The factor analysis performed to determine factor structure indicated that the survey could be collected under five dimensions. However, because the items in the subdimensions did not constitute a meaningful whole, it was decided that the survey would be assessed under a single dimension.

3.3. Reliability

Cronbach α for the Turkish ageism survey showed good internal consistency at 0.86. The item-total correlation results indicated that the correlation values for all of the items in the survey were ≥ 0.31.

3.4. Prevalence of ageism

Of the participants in the research, 82.5% reported experiencing ageism at least once but 17.5% reported not experiencing it at all. Each item in the survey was reported as having been experienced by one or more persons. The most frequent type of ageism, reported by 49%, was Item 17. Other discriminatory instances that were

Table 1
English–Turkish instrument.

English		Turkish
Please put a number in the blank that shows how often you have experienced that event: Never = 0; Once = 1; More than once = 2		Aşağıdaki olayları yaşadıysanız ne sıklıkta yaşadığınızı lütfen boşluğa rakam yazarak belirtiniz. Asla = 0; Bir kez = 1; İki kez ve daha fazla = 2
Item No	Events	Olaylar
1	I was told a joke that pokes fun at old people.	Yaşlılar ile dalga geçen bir şaka yapıldı.
2	I was sent a birthday card that pokes fun at old people.	Yaşlı olduğum için doğum günüm kutlanmadı.
3	I was ignored or not taken seriously because of my age.	Yaşlı olduğum için beni ciddiye almadılar, görmezden geldiler.
4	I was called an insulting name related to my age.	Yaşımla ilgili küçük düşürücü bir ad takıldı/isimle hitap edildi.
5	I was patronized or *talked down to* because of my age.	Yaşlı olduğum için hor görüldüm, benimle *aşağılayıcı* bir şekilde konuşuldu.
6	I was refused rental housing because of my age.	Yaşlı olduğum için ev kiralama talebim geri çevrildi.
7	I had difficulty getting a loan because of my age.	Yaşlı olduğum için bankadan kredi çekmekte zorlandım.
8	I was denied a position of leadership because of my age.	Yaşlı olduğum için yönetici pozisyonunda bir işe uygun görülmedim.
9	I was rejected as unattractive because of my age.	Yaşımdan dolayı ilgi çekici olmadığım gerekçesiyle reddedildim.
10	I was treated with less dignity and respect because of my age.	Yaşlı olduğum için daha az itibar ve saygı gördüm.
11	A waiter or waitress ignored me because of my age.	Yaşlı olduğum için bir garson beni görmezden geldi.
12	A doctor or nurse assumed my ailments were caused by my age.	Yaşlı olduğum için bir doktor/hemşire hastalığımı ciddiye almadı.
13	I was denied medical treatment because of my age.	Yaşlı olduğum için tıbbi tedavi isteğim geri çevrildi.
14	I was denied employment because of my age.	Yaşlı olduğum için işe alınmadım.
15	I was denied promotion because of my age.	Yaşlı olduğum için terfi ettirilmedim.
16	Someone assumed I could not hear because of my age.	Yaşlı olduğum için iyi işitemediğimi zanneden insanlar oldu.
17	Someone assumed I could not understand because of my age.	Yaşlı olduğum için söylenenleri anlamadığımı zanneden insanlar oldu.
18	Someone told me, *You're too old for that*.	Bana, *bunu yapmak için çok yaşlısın* diyen insanlar oldu.
19	My house was vandalized because of my age.	Yaşlı olduğum için evimi değiştirmek zorunda kaldım.
20	I was victimized by a criminal because of my age.	Yaşlı olduğum için bir suçlu tarafından (saldırıya uğradım) soyuldum.

frequently experienced were Item 2 (45%), Item 16 (44%), Item 18 (43%), and Item 1 (39%).

When the percentages of experiencing ageism were compared by sex, it was seen that the percentage of frequency of men's experiences was statistically more significant than the women's ($p < 0.05$), as in Item 7 (15.1%), Item 8 (26.0%), Item 9 (15.1%), and Item 14 (17.8%). When ageism percentages were compared according to age groups, as in Item 7, the percentage of individuals experiencing this in the age group 65 years and older (13.8%) was significantly higher than the group of 50–64 year-olds (5.0%; $p < 0.05$). A comparison by educational status showed first that in all the items, the elderly with a lower level of education reported more instances of ageism and that in those with an elementary education or less, as seen in Item 2 (50.6%), Item 3 (41.9%), and Item 12 (29.7%), the percentage of individuals experiencing ageism was significantly higher than those with an education in the levels above elementary school (31.3%, 20.3%, and 14.1%, respectively; $p < 0.05$; Table 2).

4. Discussion

In this study, it was seen that the ageism survey was a valid and reliable measurement instrument appropriate to Turkish culture and that the percentage of older people experiencing ageism was markedly high.

4.1. Validity

Lynn[12] has proposed that a CVI of at least 83% is required for an acceptable level of content validity. In this study, the overall CVI was 98%, which signified that the ageism survey has good content validity.

In line with the recommendations of the experts consulted with regard to the content validity of the ageism survey, the second item in the survey (*I was given a birthday card that makes fun of old people*) was changed to *My birthday wasn't celebrated because I'm old* so that it would be more appropriate to Turkish cultural customs. It is not a general custom in the Turkish culture to send birthday cards and it is true that the elderly are neglected when it comes to celebrating birthdays.

The factor analysis performed for the content validity of the ageism survey indicated that the items could be grouped in five dimensions but the items in the subgroups did not constitute a meaningful whole. Palmore[4] and McGuire et al[14] did not examine the factor structure of the ageism survey in their studies. Anderson and Yon[6] indicated associations between items on a correlation matrix. Some of the items for which Anderson and Yon[6] had indicated an association remained within the same factor in the present study, but at the same time they were also included in the subdimensions of different items. For this reason, the decision was made to use the survey under a single factor.

4.2. Reliability

Cronbach α value for the survey scores was found to be 0.85, higher than reported by Palmore[4] ($\alpha = 0.81$) and Anderson and Yon[6] ($\alpha = 0.79$) in their studies. The item-total correlation values for all of the items in the survey were within acceptable limits of reliability.

4.3. Prevalence

It was found that 82.5% of the individuals in this study reported experiencing discriminatory behavior against them at least once or even more. Four studies were found in the literature that worked with this survey. These studies were found that 64–91% of elderly individuals reported experiencing ageism once or more[4,5,14,15].

These findings indicate that ageism is a frequently encountered issue in different cultures, showing small differences according to country. Prejudices toward the elderly in society that define them as *sick*, *ugly*, *weak*, *senile*, or *deaf* have a negative impact on the mental health and social relations of seniors. The older generation find themselves having to cope with negative attitudes and biases

Table 2
Prevalence of ageism (at least once) by sex, age groups, and education level (%).

Event	Sex		Age (y)		Years of education	
	Male ($n = 73$)	Female ($n = 163$)	50–64 ($n = 120$)	≥ 65 ($n = 116$)	≤ 5 ($n = 172$)	≥ 6 ($n = 64$)
1. Told a joke that pokes fun	37.0	39.3	42.5	34.5	41.9	29.7
2. Birthday was not celebrated	39.7	47.9	43.3	47.4	50.6*	31.3
3. Ignored or not taken seriously	31.5	38.0	35.8	36.2	41.9*	20.3
4. Called an insulting name	21.9	19.0	22.5	17.2	19.8	20.3
5. Patronized or *talked down to*	13.7	19.6	17.5	18.1	17.4	18.8
6. Refused rental housing	4.1	4.3	5.0	3.4	5.2	1.6
7. Difficulty getting a loan	15.1*	6.17	5.0	13.8*	9.3	9.4
8. Denied a position of leadership	26.0*	8.0	11.7	15.5	11.6	18.8
9. Rejected as unattractive	15.1*	6.1	8.3	9.5	8.1	10.9
10. Treated with less dignity and respect	26.0	24.5	25.0	25.0	26.7	20.3
11. Waiter or waitress ignored	13.7	8.6	12.5	7.8	9.9	10.9
12. Doctor or nurse assumed ailments caused by age	23.3	26.4	26.7	24.1	29.7*	14.1
13. Denied medical treatment	17.8	13.5	12.5	17.2	16.3	10.9
14. Denied employment	17.8*	6.7	11.7	8.6	9.9	10.9
15. Denied promotion	9.6	4.3	5.8	6.0	6.4	4.7
16. Assumed I could not hear well	50.7	41.1	41.7	46.6	49.4	29.7
17. Assumed I could not understand	52.1	47.9	45.0	53.4	55.2	32.8
18. Told me, *You're too old for that*	41.1	43.6	42.5	43.1	47.7	29.7
19. House vandalized	12.3	6.7	6.7	10.3	8.7	7.8
20. Victimized by a criminal	13.7	7.4	11.7	6.9	8.7	10.9

*$p < 0.05$, Chi-square.

in every aspect of society—at work, among friends and family, and in the healthcare system[1,6].

Studies carried out in Turkey on the subject of ageism are evaluations of the attitudes of young people and healthcare professionals toward the elderly[7–10]. These studies have generally concluded that young people exhibit a positive attitude toward the elderly[7–9]. This conclusion is supported by a study in geriatrics[10]. The fact that previous studies have found that young people exhibit positive attitudes toward senior citizens whereas most of the older people in our research stated that they had been exposed to discrimination is interesting to note. This might be explained in two ways: young people are not aware that some of their attitudes may fall into the scope of ageism; or older people have the tendency to be easily offended.

In the four studies conducted using the ageism survey, Item 1: *I was told a joke that makes fun of old people,* Item 2: *I was given a birthday card that pokes fun at old people*, and Item 5: *I was patronized and "talked down to" because of my age* were among the five most frequently reported ageism items common to all[4,5,14,15]. In this study too, among the first five most frequently reported cases of ageism were Items 1, 2,16,17, and 18. This result shows that both Item 1 and Item 2 are perceived as ageism in different cultures and that they are frequently experienced.

The most frequently experienced incidence of ageism reported by the elderly in the present study was Item 17: *Someone assumed I could not understand because of my age.* This result indicates that Turkey's youthful population gives the elderly the message that *they wouldn't understand* and that the elderly are most uncomfortable by being thought of as incapable of knowing something or understanding. This situation has the potential of adversely affecting the psychological health and self-confidence of older individuals and the younger generations must be made aware of this[16].

The item that was reported as being the second most frequently experienced instance of ageism was Item 2: *My birthday was not celebrated because I'm old.* In the original article, Item 2 was worded, *I received a birthday card that pokes fun at old people* and this was the second most frequently encountered experience in Palmore's[5] study of 2004. Although the two items have different meanings, the fact that both items that are the most frequently experienced are each related to older people celebrating their birthdays suggests that birthdays are something that the elderly also value. By contrast, since in Turkey, and particularly in segments of the population that have a lower level of education, there is no settled tradition of celebrating birthdays, whether or not this item can be regarded as evidence of prejudice is debatable.

The item that was reported as the third most frequently experienced instance of ageism was Item 16: *Someone assumed I could not hear because of my age.* This item was fourth in frequency in Palmore's[4] study and sixth in the study of Anderson and Yon[6]. This indicates that as chronological age advances, it is believed that all older individuals develop hearing loss and that this belief is something that bothers the older generation in Turkey.

When ageism was reviewed by identifying characteristics, it was seen that men encounter more instances of ageism than women. Items 7, 8, 9, and 14 were the aspects of ageism that were significantly more frequently experienced by men rather than women. This result is likely to have stemmed from the fact that there are more men working in the labor force in Turkey than women and that their work-related issues would therefore be more prominent than their female counterparts.

Another factor that had an effect on ageism in the present study was level of education. In all the items, although it was found that the frequency of reported ageism was higher in older individuals at a lower education level, statistically significant differences were seen in Items 2, 3, and 12. In Palmore's[4] study, level of education is among the factors affecting ageism. This result underscores the already known positive impact of education.

4.4. Limitations and recommendations

Although the research population ($n = 236$) was of sufficient size to adapt the survey into Turkish, the generalizability of the instrument in terms of ageist discrimination frequency is limited. Another limitation is that the sample did not include older people living in nursing homes.

It is recommended that the survey be tested for frequency of ageism in different and larger sample groups. Educational

programs on ageism may be useful in developing an approach that will be effective in combating ageism over generations. Bringing the young and the old together, creating an environment of mutual respect and understanding will contribute to establishing mutually beneficial relationships.

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