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Research Article

Psychometric properties of the Turkish version of the Fraboni Scale of Ageism

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Abstract In this study, the reliability, validity, and psychometric properties of the Turkish version of the Fraboni Scale of Ageism were assessed. The psychometric properties of the scale were studied through a descriptive and correlational design. The study sample consisted of 231 healthy people living in the Marmara region of Turkey. In order to obtain three sets of data, a questionnaire was designed containing demographic questions and the Scale. The content validity index for the full scale was 0.98. The α coefficient for 25 items was 0.84, and the split-half reliability of the Fraboni Scale of Ageism was 0.81. The three factors represented 38.31% of the variance. In this study, we concluded that the Turkish version of the Fraboni Scale of Ageism is a suitable instrument for measuring ageism in the Turkish population.

Key words ageism, discrimination, elderly, Fraboni Scale of Ageism, prejudice, Turkey.

INTRODUCTION

The elderly population is increasing in many countries throughout the world, and there has been a gradual increase in the number of elderly people in industrialized countries. However, in developing areas, such as East Asia, South–East Asia, and Latin America, the demographic change in the aging population is occurring more rapidly (WHO, 2004). It is predicted that the elderly population will rise from 606 million in 2000 to almost two billion in 2050, globally. The number of people aged 60 or over in 2006 was 687,923,000, with 54.5% of them living in Asia (Cheung Mink *et al*., 2007).

According to the Turkish census, (TUIK, 2011) the percentage of people aged 65 and over increased by 5.7% in 2000, which is more than the predicted number for 2000 in the 1935 census (3.9%). There are approximately 5.5 million people (7.2%) who are 65 or over (Turkish Statistical Institute (TUIK), 2011). Ageism (discrimination against the elderly) has resulted from this significant increase in the elderly population.

Robert Butler coined the term "ageism" in 1969 (Butler, 1969). Ageism is widely defined as a process of systematic stereotyping and discrimination against people because they are old. (Butler, 2006, p. 41).

Ageism includes both prejudices (beliefs and attitudes) and discriminations (actions), and might have either a positive or negative effect on the elderly. Thus, there are four basic types of ageism: negative prejudice, negative discrimination, positive prejudice, and positive discrimination (Palmore, 1999).

Research has indicated that although ageism is currently quite prevalent, it is difficult to detect (Palmore, 2001; Levy & Banaji, 2002), More than 100 articles and books focusing on ageism have been published worldwide since 1990. The majority of US (72%) and Canadian elders (68%) have reported experiences of personal and/or institutional discrimination (Palmore, 2004). Compared to other countries, the number of studies regarding discrimination against the elderly is comparatively low in Turkey (Ozdemir, 2009; Vefikuluçay & Terzioğlu, 2010).

Ageism is inextricably linked to cultural influences (Cuddy *et al*., 2005). North Americans generally value individualism, and emphasize the rights of an individual to act free of the constraints of others, and to concentrate on his or her individual self-interest and self-expression (Wang & Mallinkrodt, 2006). In contrast, Eastern cultures, such as Chinese, (Markus & Kitayama, 1991), Arabs, (Boggatz & Dassen, 2005), and Israeli (Oyserman *et al*., 2002), adopt more collectivist values. These Eastern cultures place a stronger emphasis on interdependence and connectedness among individuals, and especially on the natural bonds of affection between all family members, on meeting one's social obligation, and on the willingness to sacrifice personal goals for social goals (Bodner & Lazar, 2008).

Turkey also tends to adopt a collectivist orientation. The social structure is based on close-knit family relationships. Respecting the elderly, by demonstrating obedience and

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tending to their needs, is seen as the traditional norm (Mc Conatha *et al*., 2004). Despite recent social changes and an increase in urbanization, children continue to respect their parents and assume responsibility in taking care of them (Imamoglu & Imamoglu, 1992; Akdemir *et al*., 2007). However, the number of elderly people is increasing rapidly, just like the rest of the world, and people are moving away from traditional family structures and adopting a nuclear family orientation, which might cause changes in attitudes toward the elderly. For this reason, it is of great importance to know about attitudes toward the elderly to prevent problems that this situation can cause and to take necessary precautions.

There are numerous self-report instruments for measuring ageism. The earliest instruments were developed to assess 1-D constructs involving commonly-held opinions about the elderly (Tuckman & Lorge, 1953). In 1959, Golde and Kogan developed a 20-item instrument to measure general attitudes toward older individuals, and developed the Attitudes toward Old People Scale in 1961 (Kogan, 1961). The Facts on Aging Quiz includes 25 true–false items that measure knowledge about the aging process. Despite not being a direct measure of ageism, this scale has been a useful research tool (Palmore, 1977). The Aging Semantic Differential scale has been primarily used in gerontological research (Rosencranz & Mc Nevin, 1969). In addition to these scales, stereotypes toward the Older People Scale (Chumbler, 1994) and the Comprehensive Scale of Ageism (Tipton, 2005) were also used. There is, however, currently only one scale to determine discrimination against the elderly in Turkey (Vefikuluçay & Terzioğlu, 2010). Among several instruments used to measure attitudes toward the elderly worldwide, only the Fraboni Scale of Ageism (FSA) (Fraboni *et al*., 1990) serves as a multidimensional construct. Fraboni *et al*. (1990) argued that earlier scales of ageism were limited to assessing only cognitive components of ageism. The FSA was developed to measure antagonistic and discriminatory attitudes toward the elderly and the tendency toward avoidance of the elderly in order to gain a more comprehensive measurement of ageism.

The FSA has been validated across Western populations (Fraboni *et al*., 1990; Rupp *et al*., 2005; Boudjemad & Gana, 2009; Donizetti, 2010) and in Israel (Bodner & Lazar, 2008). However, the psychometric properties of the FSA among the Turkish population are unknown. The validation of a Turkish version of the FSA is critical in order to assess ageism against the elderly in Turkey.

Study aim

The aim of the current study was to assess the reliability, validity, and psychometric properties of the Turkish version of the FSA, and to determine attitudes toward the elderly in Turkish society. Group differences in ageism were also explored. Specifically, correlations between FSA scores and age, time spent with the elderly, and differences between FSA scores and sex, marital status, and education were explored. The research questions were: (i) what are the psychometric properties of FSA in Turkish society?; (ii) what are the attitudes toward the elderly in Turkish society?; (iii) is there any correlation between attitudes toward the elderly and demographic characteristics?

METHODS

Study design

Psychometric properties of the FSA were studied through a descriptive and correlational design.

Participants

The study sample consisted of healthy people living in the Marmara region of Turkey, which is located between Europe and Asia. The Marmara region is the smallest, but most densely populated of the seven geographic regions in Turkey, and there are many people who have come from various parts of Turkey with the aim of finding a job or education. It was found that the sample size should be at least 145, so there would be at least five people for each item (Gorsuch, 1983). The sample size was based on convenience sampling. Approval was obtained from institutions. Three hundred questionnaires were distributed to the students in these schools and their family members, and 231 participants (77%) responded. Individuals with no hearing impairments and with no absence of perception, older than 18 years, and who agreed to participate were included in the study.

The mean participant age was 33.21 ± 13.41 years (18–86 years), and 45.5% ($n = 105$) were between 18 and 28 years of age, 72.3% ($n = 167$) were female, 48.9% ($n = 113$) were married, and 61.9% ($n = 143$) were university graduates. Of the sample, 16.9% ($n = 39$) lived with an elderly person, and the mean duration of time living with the elderly person was 12.63 ± 9.71 (range = 1–38 years) years.

Measures

A questionnaire was designed to obtain three sets of measures from demographic data and the FSA.

Demographic data were collected through a set of questions regarding the individual's background (age, sex, marital status, education, and the duration of time living with the elderly person).

The FSA (Fraboni *et al*., 1990) assesses ageism in a multidimensional manner. The original scale consists of 29 items designed to assess both cognitive and affective components of ageism. Participants responded to the items using a Likert-type, scale ranging from 1 (strongly disagree) to 4 (strongly agree). Item numbers 8, 14, and 21–24 are positive statements, and scores are reversed when calculating the total scale score. Total score ranges from 29 to 116. Higher scores mean higher levels of ageism. The Cronbach's α coefficient of the FSA is 0.86 (Fraboni *et al*., 1990). The FSA was designed to measure three levels prejudices from Allport's (1958) five levels related to ageism: antilocution (e.g. "Many elderly people just live in the past"), avoidance (e.g. "It is best that elderly people live where they won't bother anyone"), and

discrimination (e.g. "Elderly people should find friends their own age"). A preliminary exploratory principal component analysis supported these factors, accounting for 23.3% (antilocution), 7.2% (avoidance), and 7% (discrimination) of the variance. Cronbach's α reliabilities of the antilocution, avoidance, and discrimination subscales were 0.76, 0.77, and 0.65, respectively (Fraboni *et al.*, 1990).

Procedure and data collection

The study was conducted in four phases between June and December 2010.

Translation of the FSA

The standard forward–backward procedure was applied in the translation of the FSA from English to Turkish (Gjersing *et al.*, 2010). The first phase was the forward translation, in which three bilingual translators independently translated the FSA into Turkish. The second phase consisted of backward translation (from Turkish to English), which was carried out by a professional bilingual translator. The principal investigators then compared the translated Turkish questionnaire and the original FSA, and made minor revisions with the help of a language expert. All translation procedures were reviewed by the original FSA developer, Dr Maryann Fraboni.

Content validity of the FSA

Item relevance and content validity of the translated version of the FSA was tested by an expert panel (Grant & Davis, 1997). The panel analyzed the applicability of the content to the local Turkish culture and the linguistic clarity of the phrasing (Erefe, 2002). The expert panel consisted of 12 nurse academicians, including a psychiatric nurse. Davis's (1992) technique was used to evaluate the content validity index (CVI). The experts were asked to rate each scale item on a four-point Likert scale, ranging from 1 (not relevant) to 4 (very relevant). The CVI was obtained by dividing the number of experts who chose options 3 and 4 into the total number of the experts. The accepted rate scale is 0.80. A low CVI indicates that certain items should be eliminated or revised in order to establish sufficient content validity (Polit & Beck, 2006). Final form was attained in line with expert views. The second item ("There should be special clubs set aside within sports facilities so that elderly people can compete at their own level") was modified based on the panel's opinion. The CVI was found to be 0.98.

Pilot study

A pilot study was carried out with 30 participants. The α coefficient for the Turkish version of the FSA was 0.74 for the pilot study. No changes were made on the FSA after the pilot study.

Main study

The psychometric characteristics of the FSA were determined. After completing the demographic information, each participant was asked to complete the FSA. The time taken to complete the questionnaire ranged from 30 to 35 min. During this process, the principal investigators were available for assistance.

Data analysis

Descriptive statistics

Frequency and percentages are used to describe the demographic characteristics of the sample. The scale score results are expressed by means and ranges. Pearson's correlation analyses were used to examine the correlation between participants' age and the mean duration of time living with the elderly person with the FSA score. *T*-tests and ANOVA were conducted to examine differences between individual characteristics.

Reliability

Reliability of the FSA was measured by internal consistency and split-half reliability using Cronbach's α coefficient and Pearson's correlation analysis (Burns & Grove, 2009).

Content and construct validity of the FSA were measured. Content validity was determined by the panel's opinions, and construct validity was determined by factor analysis (Burns & Grove, 2009).

Data analyses were carried out using the SPSS 11.5 pocket program (SPSS, Chicago, IL, USA).

Ethical considerations

Maryann Fraboni, the original designer of the FSA, gave her consent for use of the scale. Study methods were approved by the Istanbul University, Cerrahpasa Medical Faculty Ethical Committee, Istanbul. The purpose and benefits of the research were explained; written and verbal consent was obtained from all participants. Participant anonymity was guaranteed.

RESULTS

Psychometric properties

Reliability

Reliability was determined by internal consistency and split-half reliability. The α coefficient for the Turkish version of the FSA (29 items) was 0.74 for the pilot study and 0.80 for the main study, indicating a high degree of internal consistency. Four items (2, 8, 22, and 24) of the original FSA were excluded due to low total correlation of the items These items also affected total Cronbach's α-value of the scale. Therefore, 25 items were included in the final scale (Table 1). The α coefficient for these 25 items was 0.84. The split-half reliability was 0.81.

Validity

The CVI was low for the second item (0.45), but it was lower than 0.80 for the remaining items. A modification was made

Table 1. Item total statistics of the Fraboni Scale of Ageism

Items	Corrected item – total correlation	Cronbach's α if item deleted
1. Teenage suicide is more tragic than suicide among the elderly	0.35	0.79
2. There should be special clubs set aside within sports facilities so that the elderly can compete at their own level	–0.05	0.81
3. Many elderly people are stingy and hoard their money and possessions	0.47	0.79
4. Many elderly people are not interested in making new friends, preferring instead the circle of friends they have had for years	0.51	0.79
5. Many elderly people just live in the past	0.45	0.79
6. I sometimes avoid eye contact with elderly people when I see them	0.21	0.80
7. I don't like it when elderly people try to make conversation with me	0.18	0.80
8. Elderly people deserve the same rights and freedoms as other members of our society	0.04	0.81
9. Complex and interesting conversation cannot be expected from most elderly people	0.44	0.79
10. Feeling depressed when around elderly people is probably a common feeling	0.50	0.79
11. Elderly people should find friends their own age	0.44	0.79
12. Elderly people should feel welcome at social gatherings of young people	–0.15	0.81
13. I would prefer not to go to an open house at a seniors club if invited	0.33	0.80
14. Elderly people can be very creative	0.19	0.80
15. I personally would not want to spend much time with an elderly person	0.38	0.79
16. Most elderly people should not be allowed to renew their drivers licenses	0.30	0.80
17. Elderly people don't really need to use our community sports facilities	0.33	0.80
18. Most elderly people should not be trusted to take care of infants	0.43	0.79
19. Many elderly people are happiest when they are with people their own age	0.50	0.79
20. It best that elderly people live where they won't bother anyone	0.47	0.79
21. The company of most elderly people is quite enjoyable	0.23	0.80
22. It is sad to hear about the plight of the elderly in our society these days	–0.02	0.81
23. Elderly people should be encouraged to speak out politically	0.26	0.80
24. Most elderly people are interesting, individualistic people	0.13	0.80
25. Most elderly people would be considered to have poor personal hygiene	0.39	0.79
26. I would prefer not to live with an elderly person	0.31	0.80
27. Most elderly people can be irritating because they tell the same stories over and over again	0.49	0.79
28. Elderly people complain more than other people	0.56	0.79
29. Elderly people do not need much money to meet their needs	0.35	0.79

on the second item, in line with the panel's opinions. The CVI for the full scale was 0.98, indicating satisfactory agreement among the experts on the Turkish version of the FSA.

The construct validity of the FSA was tested using a principal component factor analysis (for 25 items). The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy (KMO = 0.80) and Bartlett's test of sphericity (χ^2-test = 1.510, d.f. = 300, $P < 0.001$) reached statistical significance, supporting factorability of the correlation matrix. The first exploratory factor analysis found eight factors with eigenvalues above 1, which explained up to 61.77% of the cumulative variance. The scree plot revealed a break between the second and third factors (Fig. 1). We, therefore, chose to use the three factors originally provided in the FSA. The analysis was repeated, and the number of factors to be extracted was limited to three. Three factors represented 38.31% of the variance, with factors 1, 2, and 3 contributing 21.93%, 9.97%, and 6.41%, respectively. Varimax rotation was used to interpret the factors. The results of the factor analysis are presented in Table 2. Factor 1 was similar to the original scale and consisted of 11 items that describe beliefs about the elderly. Factor 1, which was similar to the antilocution factor of the original scale, was labeled as "Geleneksel İnançlar" (translated as "stereotypes") in the present study. Factors 2 and 3 consisted of factors that were somewhat different from the original scale. Factor 2, which was comparable to the avoidance factor in the original scale (Fraboni

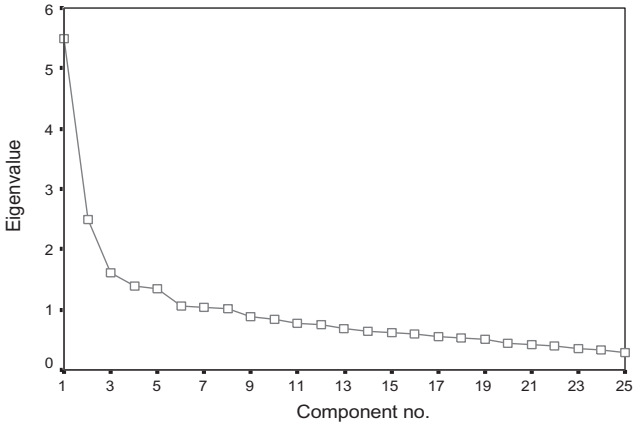

Figure 1. Scree plot of the Fraboni Scale of Ageism.

Table 2. Item loadings for principal component factor analysis ($n = 231$): a comparison with item–factor associations from previous research

Item no.	Stereotypes	Avoidance	Discrimination	Fraboni *et al.* (Canada)	Rupp *et al.* (USA)	Bodner & Lazar (Israel)	Boudjemad & Gana (France)	Donizetti (Italy)
18	**0.72**	0.09	–0.15	Discrimination	Stereotypes	Avoidance	Excluded	Separation
19	**0.66**	–0.04	0.24	Avoidance	Stereotypes	Contribution	Excluded	Discrimination
28	**0.65**	0.17	0.14	Antilocution	Stereotypes	Excluded	Excluded	Excluded
5	**0.62**	–0.04	0.19	Antilocution	Stereotypes	Stereotype	Separation	Stereotypes
4	**0.61**	–0.00	0.29	Antilocution	Stereotypes	Contribution	Stereotypes	Stereotypes
3	**0.59**	0.18	0.05	Antilocution	Stereotypes	Stereotype	Excluded	Stereotypes
29	**0.55**	–0.15	0.15	Antilocution	Excluded	Avoidance	Excluded	Excluded
16	**0.53**	0.03	–0.04	Antilocution	Excluded	Excluded	Separation	Discrimination
27	**0.51**	**0.45**	0.00	Antilocution	Stereotypes	Contribution	Excluded	Discrimination
25	**0.40**	0.15	0.22	Antilocution	Stereotypes	Avoidance	Excluded	Excluded
1	**0.39**	0.05	0.25	Antilocution	Stereotypes	Stereotype	Excluded	Stereotypes
26	0.24	**0.65**	–0.17	Avoidance	Excluded	Excluded	Excluded	Excluded
15	0.16	**0.57**	0.18	Avoidance	Affective att.	Avoidance	Excluded	Excluded
21	0.06	**0.54**	–0.01	Discrimination	Affective att.	Contribution	Stereotypes	Discrimination
17	–0.01	**0.51**	**0.36**	Discrimination	Separation	Excluded	Affective att.	Separation
13	0.23	**0.50**	–0.01	Avoidance	Stereotypes	Contribution	Excluded	Separation
14	–0.02	**0.48**	0.13	Avoidance	Excluded	Avoidance	Stereotypes	Separation
24	–0.07	**0.46**	–0.01	Discrimination	Affective att.	Excluded	Excluded	Excluded
6	–0.07	**0.44**	0.28	Avoidance	Separation	Excluded	Separation	Stereotypes
7	–0.16	**0.41**	**0.39**	Avoidance	Separation	Stereotype	Excluded	Stereotypes
10	0.29	0.08	**0.63**	Avoidance	Separation	Avoidance	Excluded	Excluded
11	**0.35**	–0.05	**0.60**	Avoidance	Separation	Avoidance	Excluded	Separation
23	–0.01	0.14	**0.54**	Discrimination	Affective att.	Avoidance	Stereotypes	Excluded
9	**0.39**	–0.04	**0.53**	Antilocution	Separation	Excluded	Separation	Excluded
20	**0.31**	0.17	**0.50**	Discrimination	Separation	Excluded	Affective att.	Excluded

Table 3. Fraboni Scale of Ageism (FSA) means

	N	Range	Mean ± standard deviation
Stereotypes	231	12–40	26.88 ± 5.11
Avoidance	231	5–21	10.77 ± 2.31
Discrimination	231	13–34	22.00 ± 3.63
FSA	231	31–87	59.66 ± 9.40

Table 4. Correlation between the Fraboni Scale of Ageism (FBA) with age and the duration of time living with the elderly person ($n = 231$)

	Age	Duration of time living with the elderly person
FSA total	0.22†	–0.39‡

†Correlation is significant at the 0.01 level. ‡Correlation is significant at the 0.05 level.

et al., 1990), consisted of nine items, whose contents represent the tendency to avoid contact with elderly people directly and indirectly, and was labeled "Kaçınma" (translated as "avoidance"). Factor 3, which is comparable to the discrimination factor in the original scale, consisted of five items, and was labeled "Ayrımcılık" (translated as "discrimination").

Relationship of the FSA total scores and subscales with individual participant characteristics

The mean FSA score was 59.66 ± 9.40 (range = 31–87) and was medium level. The distribution of the FSA scores is shown in Table 3. A statistically-significant, positive correlation ($r = 0.22$; $P < 0.01$) was found between the FSA scores and age, while a statistically-significant, negative correlation was found between the FSA scores and the duration of living with the elderly person ($r = –0.39$; $P < 0.05$) (Table 4). There was also a statistically-significant difference between the FSA scores and education ($F = 11.45$; $P < 0.001$), and the FSA scores and marital status ($F = 9.36$; $P < 0.001$). While there was a tendency for males to score higher than females on the FSA, there was no statistically-significant difference between FSA scores and sex ($t = 1.01$; $P > 0.05$) (Table 5).

DISCUSSION

The current study found good reliability and validity for the Turkish version of the FSA. The forward–backward translation was conducted successfully. In a literature review, it was found that adaptation studies of the FSA were conducted in three languages (English, French, and Italian) other than Turkish (Rupp *et al.*, 2005; Bodner & Lazar, 2008; Boudjemad & Gana, 2009; Donizetti, 2010). The few conceptual

Table 5. Comparison of Fraboni Scale of Ageism with sex, marital status, and education ($n = 231$)

	n	Mean ± standard deviation	t	*P*-value	Mean ± standard deviation	F	*P*-value
Sex							
Female		59.27 ± 10.03	1.01	$P > 0.05$			
Male		60.67 ± 7.48					
Marital status							
Single	110				56.96 ± 8.41	9.36	$P < 0.001$
Married	113				62.02 ± 9.79		
Divorced	8				63.37 ± 6.86		
Education							
Elementary	35				64.80 ± 7.26	11.45	$P < 0.001$
Secondary	13				64.84 ± 7.44		
High school	40				62.87 ± 8.39		
University	143				57.03 ± 9.36		

differences were related primarily to differences between the healthcare systems and cultures.

As a result of the reliability test, four items (2, 8, 22, and 24) were removed from the original FSA scale, leading to an increase in the reliability of the final scale. Item 2 was related to sports activities ("There should be special clubs set aside within sports facilities so that elderly people can compete at their own level"), which are not regularly practiced in Turkish society. Item 8 was related to "rights" and "liberties" ("Elderly people deserve the same rights and freedoms as other members of our society"), which are concepts expressed regularly in the context of sex and ethnicity, but not in the context of the elderly. Likewise, statements used in items 22 and 24 ("It is sad to hear about the plight of the elderly in our society these days" and "Most of elderly people are interesting, individualistic people") were in conflict with Turkish participants, as it is the norm for elderly people to live with their children and grandchildren in Turkey. The split-half reliability coefficient index indicated that the scale was highly reliable.

The CVI of the Turkish version of the FSA was 0.98, indicating good content validity.

When the construct validity of the FSA was tested, three factors represented 38.31% of the variance, with factors 1, 2, and 3 contributing 21.93%, 9.97% and 6.41%, respectively. Most items were clearly loaded with a high loading of one factor (>0.38) and low loadings on the other two factors (<0.30). Eight factors were determined in the first factor analysis, and the explained variance was found to be 61.77%. The number of factors at a high level increased the explained variance. However, the number of items for certain factors was two, and there was difficulty in naming them and making them meaningful. Therefore, the factor analysis concentrated on three factors, as in the original scale. Results from the present study revealed a factor structure that was somewhat different from the one suggested by Fraboni *et al.* (1990) and other previous researchers. Factor associations from previous research are also included in Table 2 for the purposes of comparison (Fraboni *et al.*, 1990; Rupp *et al.*, 2005; Bodner & Lazar, 2008; Boudjemad & Gana, 2009; Donizetti, 2010). The fact that there are differences in some degree in factor structure can be related to the number of items in scales, because the items that are omitted from the scale differ depending on the society. This situation was thought to be related to social structures and languages of the societies. Also, the factor structure showed only moderate-to good fit. Consequently, further research on the FSA is suggested. Specifically, developing additional items can prove useful.

The FSA score of participants in the current study was at medium level and showed similarity to the original scale. (Fraboni *et al.*, 1990). Also, attitudes of the young people, single people, and university graduates toward the elderly were found to be positive. Prior meta-analytic studies have indicated that younger people possess more ageist attitudes than older people (Gordon & Arvey, 2004; Kite & Wagner, 2004). Kalavar (2001) found a significant negative correlation (–0.19) between age and ageism scores in the USA (Kalavar, 2001). Likewise, Rupp *et al.*, 2005) found that younger individuals had significantly higher ageism scores than older individuals on the FSA in southeastern USA (Rupp *et al.*, 2005). In contrast, and in agreement with the current results, Hellbusch *et al.* (1994) found that older people are more biased toward their own age group than younger people in the USA (Hellbusch *et al.* (1994)). These findings suggest that there might be cultural differences in discrimination against the elderly. Future research should focus on comparisons of cultures regarding attitudes toward the elderly. This finding could be associated with the care of elderly in the household, and the active role of young people in looking after the elderly in the Turkish culture.

While prior research has found that women are less ageist than men, the current study did not find a significant difference in the FSA scores between the sexes (Fraboni *et al.*, 1990; Kalavar, 2001; Rupp *et al.*, 2005). The majority of the participants were women, and thus, future research should include a larger sample group with equal distribution across sexes.

As a country faced with the concept of ageism, as with the rest of the world, it is necessary to develop policies that can help us respond to the physical, psychological, and social needs of the elderly and minimize the negative effects of this process. Therefore, it should be a government policy to

develop strategies toward the problems related to elderly people. It is also important to change traditional thinking about ageism through the use of effective ageism models.

Limitations of the study

The current study investigated only five variables (age, the duration of time living with the elderly person, sex, marital status, and education) in association with ageism. Future research should investigate a number of other variables, including economic status, job, and culture. It can be suggested that the study is applied in different regions with larger sample groups. Another issue is that the current study was based on convenience sampling. This situation can lead to bias. Therefore, alternative sampling methods should be used in order to allow for the generalizability of the findings.

Conclusions

In the present study, we found that the Turkish version of the FSA is a suitable instrument in measuring ageism in the Turkish population. Interestingly, the FSA scores increased as age increased, while there was no significant difference in terms of sex. Ageism is currently an important concept, especially with a rapidly-increasing elderly population. It is critical to understand the attitudes of the culture toward the elderly, and to develop programs to improve living standards for them. Additionally, the current study found differences in ageism among the Turkish population compared to other cultures. Future cross-cultural studies are recommended in order to reveal other cultural differences in attitudes toward the elderly.

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CONTRIBUTIONS

Study Design: YK, LK, UYF.
Data Collection and Analysis: YK, LK, UYF.
Manuscript Writing: YK, LK.

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