



www.ijpes.com

International Journal of Psychology and Educational  
Studies

ISSN: 2148-9378



# Adaptation of Xenophobia Scale to Turkish: A Validity and Reliability Study

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## ARTICLE INFO

### Article History

Received 08.11.2021

Received in revised form

02.01.2022

Accepted 09.01.2022

Article Type: Research

Article

## ABSTRACT

In this research, we aimed to adapt the Xenophobia Scale developed by Olonisakin and Adebayo (2021) into Turkish. We conducted research on two separate study groups comprising 563 teacher candidates. Before starting the adaptation process of the scale, we obtained necessary permissions from the authors, who developed the original form. When developing the translation form, we removed two of the scale items from the instrument because they were not suitable for the Turkish culture. Afterwards, we performed an item analysis and found that the item correlations of two of the items in the scale remained less than the threshold value of .30. We removed the two items in question, thereby leaving 20 items in the scale. In the applied EFA and CFA, we obtained a two-dimensional structure that overlaps with the original form of the scale. In the reliability analysis, we determined that the internal consistency coefficients exceeded .70 criterion values for both subscales. In conclusion, the results we acquired from psychometric analyses indicate that the Turkish form of the Xenophobia Scale yielded valid and reliable measurements.

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Keywords:

Xenophobia scale, scale adaptation, validity, reliability.

## 1. Introduction

The concept of xenophobia derives from the Greek word “xenos,” which means stranger/guest and “phobos” meaning fear or escape (Lee, 2020; Rzepnikowska, 2018). It can also mean contempt and dislike and a type of perspective that looks down on outsiders (Canetti-Nisim ve Pedahzur 2003). Therefore, xenophobia is defined as the fear of strangers, and it feeds on hatred, antipathy, intolerance, hostility, and prejudice (Lesetedi & Modie-Moroka, 2007; Psychology Dictionary, 2015; Tafira, 2011). According to Yakushko (2009), xenophobia is a form of affective and behavioral prejudice toward immigrants and others considered “foreigners.” Alternatively, Nyamnjoh (2006) defines xenophobia as intense dislike, fear or hatred toward the “others,” whereas the United Nations (2013) describes it as hostility, dislike or hatred toward persons/groups who are positioned as “other” because of their origin, gender, religion, or sexual orientation. Similarly, Ullah and Huque (2014) identified this concept as malicious discrimination based on differences in ethnic, religious, and sexual orientation.

Based on the aforementioned definitions, xenophobia is generally characterized as a pathological discomfort toward individuals who belong to different cultures, nations, ethnic groups, regions, or neighborhoods. Underlying xenophobia may lead to an individual to regard the “other” as unreliable and a threat to their own group (van der Veer et al., 2013). The feeling of discomfort arising from the effects of foreigners (refugees) on the cultural, economic, and social capital of the host community is another crucial component of xenophobia

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**Citation:** Gezer, M., & İlhan, M. (2022). Adaptation of xenophobia scale to Turkish: A validity and reliability study. *International Journal of Psychology and Educational Studies*, 9(1), 230–243. <https://dx.doi.org/10.52380/ijpes.2022.9.1.744>

(Esses et al., 2001). This element is further included in Levada's (1994) description of the term. Levada (1994) states that xenophobia can be explained by two factors: fear of losing resources and one's identity. Moreover, Levada's definition later became a conceptual framework for the operationalization of xenophobia (Barry, 2019).

Indeed, various factors can fuel xenophobia. Omoluabi (2008) lists economic parameters, regional migration movements, perceived threat to culture, political instability, religious doctrines, and terrorism among the causes that exacerbate xenophobia. The rise of xenophobia generally coincides with times of economic and political instability because economic disparity can force people to migrate to countries where they can earn more and experience a better quality of life; ample evidence suggests that political, economic, and cultural tensions are responsible for driving people away from their homeland (Marsella & Ring, 2003). However, when people seeking a better life finally manage to cross the borders, they often experience the hostility of the local communities, who worry that the incoming foreigners will bring unemployment and poverty into their society. Such concerns lead to fear and insecurity regarding the future, thereby resulting in xenophobia in the long run (Akillioğlu, 1997), so much so that in times of economic turbulence, foreigners are generally scapegoated and xenophobia can turn violent and lead people to attack those who they perceive as responsible for their misfortunes (Nell, 2009). Evidently, in addition to economic elements, cultural factors can further cause xenophobia. Inhabitants who come face to face with foreigners may feel that their own culture is under threat, and therefore, they may develop hostile feelings/behaviors toward the newcomers (Esses et al., 2001).

### 1.1. Xenophobia and Racism

To better understand xenophobia, we must clarify the difference between xenophobia and racism (Özmete et al., 2018). Essentially, these two concepts are highly interrelated and mutually supportive forms of oppression. Although they may overlap, they differ in their origins, goals, and typical expressions (NGO Committee on Migration, 2001; Yakushko, 2009). Racism refers to the belief that one's race is superior in terms of physical properties (e.g., skin color, hair type, and face), cultural characteristics, and economic wealth. This belief may lead to discrimination and prejudice against people from other races in favor of their own race. Xenophobia, on the other hand, covers the negative feelings and behaviors felt toward non-natives or people perceived as others/foreigners in a particular community. In numerous cases, differentiating between racism and xenophobia is difficult because diversities in physical properties are believed to distinguish the "other" from a shared identity. However, if discrimination and prejudice occur between people of the same color, this behavior is generally deemed as xenophobia rather than racism. Nevertheless, xenophobia turns into one of the social exclusionary forms of racism with its elements of distrust, fear, and hatred toward the "foreigner" or "other" defined outside of common physical characteristics and cultural identities (NGO Committee on Migration, 2001). Racism is considered the most extreme level of xenophobia (NGO Committee on Migration, 2001).

### 1.2. Xenophobia in the 21<sup>st</sup> Century

Xenophobic attitudes are not new and are unlikely to disappear in the near future. In the early 21<sup>st</sup> century, xenophobic and racist attitudes are still common (Hjerm, 2001). A notable example of this can be found in the report presented by the European Monitoring Centre on Racism and Xenophobia (2001). According to this report, the percentage of citizens in the European Union who claim to be disturbed in their daily life by the presence of people from other races and nationalities and from other religions were 15% and 14%, respectively (Thalhammer et al., 2001). Data in South African Migration Project survey conducted in 2001 revealed a similar xenophobic pattern. According to this report, by international standards South Africans have a highly restrictive perspective toward immigration. In the related report, 21% of the respondents desired a complete ban on the entry of foreigners and 64% of them wanted strict limits on the number of people allowed entry (Solomon & Kosaka, 2013). The situation of xenophobia in the 21<sup>st</sup> century is no different in the United States. Lee (2020) in her book entitled *America for Americans: A history of xenophobia in the United States* notes that by the 21<sup>st</sup> century, American xenophobia had reached beyond the defense of "America for Americans," far beyond the actual boundaries of the United States.

Xenophobia has become a highly debated topic in Turkey, particularly in the past 10 years because the country has received intense immigration from neighboring states and is a transit area for immigrants (Ünal, 2014). A study conducted in Turkey revealed that the local community felt uncomfortable with the Syrian refugees. In

the aforementioned research, the local people stated that the Syrian refugees crowd the emergency services and thus cause problems in the health services. Moreover, local people primarily associate refugees with theft, prostitution, extortion, and damage to public property. Furthermore, participants in the research emphasized that the Turkish economy was damaged because of Syrian refugees as Syrians took their jobs. The participants further expressed worry that Syrians would harm them and their families. Therefore, they stated that they do not wish to have Syrian people as neighbors (Erdoğan, 2014). The listed findings are behaviors and attitudes that may be the result of xenophobia. Ünal (2014) further stated in a recent study that immigrants coming to Turkey may have to cope with problems, such as social exclusion, discrimination, xenophobia, and poverty.

### 1.3. Measuring Xenophobia

Xenophobia is a multidimensional concept covering numerous disciplines, such as sociology, social psychology, psychopathology, anthropology, race and racism, nationalism, human geography, history, international relations, law, and economics. Each of these disciplines has its own perspective on xenophobia (Omoluabi, 2008). Nonetheless, the literature reveals that this multidimensional nature of xenophobia is neglected in some of the existing scales that attempt to measure this concept. In a significant part of the existing instruments, the conceptual framework of xenophobia is generally associated with immigrants (Yakushko, 2009) and is thus focused on attitudes toward foreigners. Table 1 presents the summary of the scales on xenophobia in the international literature.

**Table 1.** Scales in the International Literature Related to Xenophobia

Research tag	The scale name
Ommundsen and Larsen (1997)	Scale of attitudes toward illegal aliens
van der Veer et al. (2008)	Scale of attitudes toward unauthorized migration
van der Veer et al. (2011)	Fear-based Xenophobia Scale
Symeonaki and Kazani (2012)	Xenophobia Scale
van der Veer et al. (2013)	Fear-based Xenophobia Scale
Haque (2015)	Xenophobia Scale
Olonisakin and Adebayo (2021)	Xenophobia Scale

Table 1 reveals that the content of the first scale is limited to attitudes toward illegal aliens. However, xenophobia is a substantially broader construct and is not restricted to illegal immigrants alone. An individual may show xenophobia toward anyone they perceives as the "other." The same is true for the second scale, which comprises 19 items divided in three categories (improving life, courage to live, and right to immigrate), and where xenophobia has been operationalized to only include attitudes toward unauthorized immigrants. Another instrument is the Fear-based Xenophobia Scale, which has a unidimensional structure and two different versions: comprising 14 and 5 items. In both versions, all of the items are related to immigrants. In summary, the people who are positioned as foreigners on the Fear-based Xenophobia Scale are limited to this specific group. The focus of the Xenophobia Scale developed by Symeonaki and Kazani (2012) in the sample of Northern Greece/Macedonia included foreigners coming from other countries. This tool includes 18 items under four major categories termed rights, impacts, general issues, and actions. The Likert scale developed by Hague (2015) consists of six items (cited in Bozdağ & Kocatürk, 2017). The scale developed by Olonisakin and Adebayo (2021), on the other hand, does not confine the groups in which the individual may display xenophobia to immigrants, aliens or foreigners from other countries; handles the concept of xenophobia from a much broader perspective taking into account religion, ethnic grouping and other cultural elements in a society.

When we examined the Turkish literature, we found three scales designed to measure xenophobia. The first one is the Xenophobia Scale developed by Bozdağ and Kocatürk (2017). In this scale, hate and humiliation dimensions are included in addition to the fear dimension in the Fear-based Xenophobia Scale developed by van der Veer et al. (2013). In summary, the scale has a three-dimensional structure: fear, hate, and humiliation. The scale has 18 items in total, and all of which are intended to measure the attitude toward immigrants. The second xenophobia instrument found in the Turkish literature is the Fear-based Xenophobia Scale developed by van der Veer et al. (2011), which is adapted into Turkish by Özmete et al. (2018). This scale has a 14- and 5-item version; the adaptation study was conducted on the 14-item scale version. In the adaptation study, three items from the original scale were eliminated because their factor loadings were not sufficient, and the

remaining 11 items were grouped under a single factor. More recently, Özer and Akbasli (2020) conducted an adaptation study on the 5-item version of the aforementioned scale.

When we analyzed the Turkish scales, we noticed that, once again, they only focused on immigrants. Therefore, we deemed them insufficient in measuring the multidimensional structure of xenophobia. We considered that introducing an instrument that can measure the multidimensional structure of xenophobia into the Turkish literature is crucial. From this perspective, we aimed to adapt the Xenophobia Scale developed by Olonisakin and Adebayo (2021) into Turkish culture. This scale includes items that measure the fear of ethnic, religious, economic, and political groups. It further captures perceived superiority among diverse clusters and the dread of the erosion of sacred cultural norms, which may be explained in a wish for ethnic naivete or an aversion for inter-ethnic contact and an antipathy toward out-group members (Olonisakin & Adebayo, 2021). If there is an existing instrument with sufficient psychometric properties that measures the desired attributes, it is faster and more economical to adapt it to the target culture instead of developing a new one from scratch (Hambleton & Kanjee, 1995; Hambleton & Patsula, 1999). Therefore, we decided to adapt the scale developed by Olonisakin and Adebayo (2021) to the Turkish culture for the present research.

## 2. Methodology

### 2.1. Research Sample

We performed convenience sampling to select the research group. In this sampling technique, the researcher selects the group to be studied based on how easy they are to reach. Within this framework, we performed our study on teacher candidates. The inclusion of university undergraduates in the group, where the original form of the scale was developed, was another factor that influenced our selection of teacher candidates for the sample. We conducted the research on two separate study groups comprising a total of 563 teacher candidates studying at Dicle University. The first study group comprised 275 teacher candidates aged 17–40 years ( $\bar{X}$  = 21.38). We collected data from this group in the spring semester of the 2020–2021 academic year and conducted an exploratory factor analysis (EFA) on the obtained data. The second study group comprises 288 teacher candidates aged 17–36 years ( $\bar{X}$  = 21.71). We collected the data of the second study group in the fall semester of the 2021–2022 academic year and performed a confirmatory factor analysis (CFA) on the data of this group. For the both study groups, we have presented the distribution of teacher candidates on their gender and the department enrolled in Table 2.

**Table 2.** *Distribution of the Participants According to Their Gender and the Department They Enrolled in*

Demographic variables		Frequency (Percentage)	
		Dataset for EFA	Dataset for CFA
Gender	Female	206 (74.90%)	208 (72.20%)
	Male	69 (25.10%)	80 (27.80%)
Department	Classroom teaching	64 (23.30%)	69 (24%)
	Elementary mathematics teaching	39 (14.20%)	46 (16%)
	English language teaching	18 (6.5%)	18 (6.30%)
	Pre-school teaching	40 (14.50%)	41 (14.20%)
	Science teaching	13 (4.70%)	12 (4.20%)
	Secondary school mathematics teaching	23 (8.40%)	20 (6.90%)
	Social studies teaching	63 (22.90%)	65 (22.60%)
	Other	15 (5.50%)	17 (5.90%)

### 2.2. Instrument

We collected our data through the Xenophobia Scale developed by Olonisakin and Adebayo (2021). The original form of this scale was developed on a participant group comprising undergraduates and civil servants in Nigeria. The scale has a five-point Likert-type rating (strongly disagree, disagree, neutral, agree, and strongly agree) with 24 items. Olonisakin and Adebayo (2021) applied EFA and CFA, calculated internal consistency coefficients, checked item correlations, and examined evidence for convergent validity while investigating the psychometric properties of the Xenophobia Scale.

Olonisakin and Adebayo (2021) conducted the EFA on 36 items and excluded 12 items from the scale because their factor loadings were lower than their criterion value of .35. Furthermore, they grouped the remaining 24 items under two factors. The emerging dimensions were labeled as In-group Centredness and In-group Exclusivity. The In-group Centeredness dimension comprises 17 items that reflect an egocentric perspective of the prosperity of one's group. This dimension further reveals a conviction in the superiority of the in-group over the out-group and the perception that the in-group has priority over the out-group in the use of available resources. On the other hand, in-group exclusivity includes 7 items that express tolerance toward intergroup relations. For the scale's total score, all of the items in the In-group Exclusivity dimension must be scored in reverse.

Olonisakin and Adebayo (2021) conducted CFA on another sample and tested the two-dimensional structure they reached in EFA and concluded that the structure in question was confirmed ( $\chi^2/df=3.15$ , CFI=.92, RMSEA=.05, SRMR=.05). According to the CFA results, the factor loadings of the items in the dimension of In-group Centeredness ranged from .36 to .56, and the factor loadings of the items in the In-group Exclusivity dimension varied between .39 and .59. Within the scope of the reliability analysis, Cronbach's alpha coefficients were calculated, and reliability values were estimated as .82 and .67 for In-group Centeredness and In-group Exclusivity dimensions, respectively. The result of the item analysis revealed that the corrected item-total correlations of the items in the In-group Centeredness dimension ranged between .29 and .51. For the In-group Exclusivity dimension, item correlations were between .31 and .48.

To provide evidence for convergent validity, Olonisakin and Adebayo (2021) examined the correlations between the scores of the participants on the Xenophobia Scale and the scores of the same participants on other variables related to xenophobia, such as social dominance orientation, cultural intelligence, intergroup contact, adherence to the in-group, and need for closure. The correlation analysis results were generally as anticipated and thus supported the validity of the Xenophobia Scale.

### **2.3. Translation of the Scale to Turkish**

Prior to starting the adaptation process of the scale, we obtained the necessary permissions from the authors, who developed the original instrument. To this end, we contacted Tosin Tunrayo Olonisakin through e-mail on February 6, 2021. Following the authors approval, the items were translated from the source language (English) to the target language (Turkish). Translations were performed by three experts, each from the field of measurement and evaluation, social studies education, and English language education. In the second step, we endeavored to determine the most appropriate Turkish expression for each item by comparing three translated versions of the scale. Meanwhile, we decided that items 16 (*For ethnic survival in this country, some people must be willing to become martyrs*) and 17 (*The idea of unity in diversity cannot work in Nigeria*) in the original form of the scale were not suitable for Turkish culture. Therefore, with the permission of the researchers who developed the scale, these two items were excluded from the Turkish version of the Xenophobia Scale. In the following step, we obtained the opinion of another expert from the field of English language education to evaluate the linguistic equivalence of the original scale and the new Turkish version. The expert stated that the two forms were linguistically equivalent. Therefore, we applied for ethical approval by utilizing a rating similar to the scale's original form. After being informed that the study was in compliance with scientific ethical standards, we moved on to the data collection phase.

### **2.4. Data Collection and Analysis**

Some of the data were collected face to face and some online. We presumed that a hybrid data collection process would not impact the research results considering that the research group was familiar with digital devices. Moreover, because the instrument did not have a protocol related to the use of technology, we predicted that collecting data either face to face or online would not make a significant difference in the research results. Thus, we sent the online scale form to the teacher candidates through the platform they used to take lessons during the Covid-19 pandemic. When we switched to face-to-face training in October 2021, we also started to use the scale in the paper-pencil format. In face-to-face administrations, we applied the scale to the teacher candidates in their actual classroom environment. We ended the data collection process on October 15, 2021 and initiated the data analysis.

For the data analysis, we initially reviewed the data set for outliers and examined standardized Z-scores to identify them. The Z-score of one participant in the EFA dataset and three participants from the DFA dataset scored outside the  $\pm 3$  range boundaries. Therefore, we classified these participants as outliers. After eliminating the outliers from the dataset, we tested data distribution by calculating the skewness and kurtosis coefficients. Table 3 presents the obtained skewness and kurtosis values.

**Table 3.** *Skewness and Kurtosis Coefficients of the Data*

	Dimension	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Dataset for EFA	In-group Centredness	.154	.147	-.443	.293
	In-group Exclusivity	-.064	.147	-.679	.293
Dataset for CFA	In-group Centredness	.031	.144	-.630	.288
	In-group Exclusivity	-.163	.144	-.671	.288

According to Büyüköztürk et al. (2011), the skewness and kurtosis coefficients within the interval of  $[-1, +1]$  indicates that the data does not display a significant deviation from the normal distribution. The values in Table 3 reveal that the skewness and kurtosis coefficients remain within this range. Therefore, it can be concluded that the data has a normal distribution. After purifying the data set from outliers and ensuring the necessary checks for the distribution properties, we examined the psychometric properties of the Turkish version of the Xenophobia Scale.

To test the psychometric properties of the Turkish version of the Xenophobia Scale, we first assessed item discrimination. In this context, we calculated corrected item-total correlations consistent with the dimensions revealed in the original form of the scale. We took the value of .30 as benchmark for the item-total correlation (Field, 2009) and eliminated the items lower than this criterion from the scale. Following the item analysis, we conducted factor analyses to ascertain the validity of the interpretations based on the scale scores. While we performed EFA on the data of the first study group, we performed CFA on the data collected from the second study group.

In EFA, we primarily tested the assumptions. To this end, the Kaiser Meyer Olkin (KMO) value and the result of Bartlett's test were evaluated. We found the KMO coefficient as .87 and determined the Bartlett's test to be statistically significant ( $\chi^2 = 1563.22$ ,  $df = 190$ ,  $p < .001$ ). Because the KMO value was higher than .60 and the Bartlett's test result was significant (Büyüköztürk, 2010), we concluded that the sample was adequate and data suitable for factor analysis. Subsequently, we conducted EFA and decided that the number of factors to be extracted in the EFA be determined according to the parallel analysis. Moreover, we selected the minimum residuals as the estimation method and applied promax rotation, which is one of the oblique rotation methods.

Afterwards, CFA was performed on the second study group data to obtain additional evidence for the factor structure of the scale's Turkish form. Because the data were normally distributed, we selected the maximum likelihood method for the estimation in CFA. To evaluate the model-data fit, we assessed the fit indices  $\chi^2/df$ , RMSEA and SRMR. We interpreted that  $\chi^2/df$  being lower than 3, and RMSEA and SRMR lower than .10 as an indication of acceptable fit (Schermele-Engel et al., 2003). Furthermore, we referenced Tabachnick ve Fidell's (2007) suggested value of .32 when interpreting factor loadings in both EFA and CFA.

Finally, we analyzed the internal consistency reliability of the measurements by calculating the Cronbach's alpha and McDonald's  $\omega$  coefficients. We adhered to the .70 criterion while interpreting the reliability coefficients (Pallant, 2005). We conducted all the analyses we implemented in the study in JASP 0.15.

## 2.5. Ethical

Before starting the data collection process, we applied for the ethical approval to Dicle University. To this end, we submitted our research permission petition to Dicle University Social and Human Sciences Ethics Committee Presidency on February 22, 2021. With the letter of consent dated March 1, 2021, and numbered 32841, we were informed that the study was in compliance with scientific ethical standards.

### 3. Findings

This section comprises analysis outputs related to the psychometric properties of the Turkish version of the Xenophobia Scale. At first, we examined the item correlations ( $r_{ix}$ ). Table 4 shows the item analysis results.

**Table 4.** Item Correlations for the Turkish Version of the Xenophobia Scale\*

Dimension	Item Number	Dataset for EFA		Dataset for CFA	
		$r_{ix}$ for initial analysis	$r_{ix}$ after excluded items	$r_{ix}$ for initial analysis	$r_{ix}$ after excluded items
In-group Centredness	I-1	.47	.49	.54	.57
	I-2	.52	.53	.45	.47
	I-3	.44	.46	.34	.36
	I-4	.25	–	.12	–
	I-5	.61	.62	.56	.59
	I-6	.33	.35	.31	.30
	I-7	.64	.63	.53	.54
	I-8	.37	.36	.32	.32
	I-9	.50	.51	.48	.46
	I-10	.48	.48	.38	.41
	I-11	.50	.49	.55	.55
	I-12	.42	.44	.43	.45
	I-13	.00	–	–.18	–
	I-14	.48	.53	.47	.49
	I-15	.56	.57	.49	.51
In-group Exclusivity	I-18	.34		.35	
	I-19	.47	Since no item was	.52	Since no item was
	I-20	.50	excluded in this	.48	excluded in this
	I-21	.32	dimension, we did	.36	dimension, we did not
	I-22	.51	not perform a second	.50	perform a second item
	I-23	.40	item analysis.	.37	analysis.
	I-24	.53		.50	

\* Since items 16 and 17 were not suitable for Turkish culture, we removed them from the scale. Nevertheless, we did not change the item numbers after we removed the items just mentioned to ensure that our results could be compared with the original scale.

Table 4 shows that the correlations of items 4 and 13 in both data sets were lower than the .30 threshold value. Therefore, we repeated the item analysis by removing the two items in question for the In-group Centredness dimension. After this process, item correlations exceeded the .30 cut-off value in all items in the scale; 20 items remained in the scale. We applied EFA and CFA on these 20 items. Table 5 presents the results of EFA.

**Table 5.** EFA Results for the Turkish Version of the Xenophobia Scale

Factor 1		Factor 2	
Item Number	Factor Loadings	Item Number	Factor Loadings
I-1	.53	I-18	.38
I-2	.56	I-19	.59
I-3	.48	I-20	.62
I-5	.72	I-21	.37
I-6	.39	I-22	.63
I-7	.73	I-23	.44
I-8	.42	I-24	.64
I-9	.57		
I-10	.54		
I-11	.53		
I-12	.46		
I-14	.56		
I-15	.61		
Variance Explained = 19.20%		Variance Explained = 12.20 %	
Total Variance Explained = 31.40 %, $\chi^2/df = 2.24$ ( $\chi^2=338.204$ , $df=151$ ), RMSEA=.067 [90% CI (.058, .077)]			

Table 5 illustrates that there is a two-factor structure in the Turkish version of the Xenophobia Scale, just like the original form. The distribution of the items to the factors also overlaps to the original form of the scale. The first factor comprises 13 items and explains 19.20% of the total variance. The factor loadings of the items in this dimension range from .39 to .73. Considering the contents of the items and the naming in the original scale, we labeled this dimension as Group-Centrism in the Turkish version. The second factor, on the other hand, includes 7 items and contributes 12.20% to the explained variance. The factor loadings of the items in this dimension varied between .37 and .64. Based on the items' content, we named this dimension as Tolerance to Other Groups in the Turkish form. When we performed the EFA using JASP software, we also obtained the Chi-square Test and RMSEA value for the fit of the factor structure. The  $\chi^2/df$  and RMSEA values in Table 5 show that the Turkish version of the Xenophobia Scale has sufficient fit for the two-factor structure. After EFA, we performed CFA, and the results revealed that the two-factor model had an acceptable fit [ $\chi^2/df = 2.47$  ( $\chi^2 = 416.876$ ,  $df = 169$ ), RMSEA = .073 (90% CI = .064–.081) and SRMR = .067]. Table 6 presents the other results obtained in CFA.

**Table 6.** CFA Results for the Turkish Version of the Xenophobia Scale

Factor	Item Number	Estimate	Std. Error	z-value	95% Confidence Interval		Std. Est.**	R <sup>2</sup>	Std. Residual
					Lower	Upper			
Group-centrism	I-1	.51	.05	11.17*	.42	.60	.64	.41	.59
	I-2	.46	.05	8.71*	.36	.57	.52	.27	.73
	I-3	.31	.05	6.97*	.23	.40	.43	.18	.82
	I-5	.58	.05	12.43*	.49	.67	.69	.48	.52
	I-6	.41	.08	4.97*	.25	.58	.31	.10	.90
	I-7	.55	.05	10.26*	.45	.66	.60	.36	.64
	I-8	.30	.06	5.07*	.18	.41	.32	.10	.90
	I-9	.50	.06	8.01*	.38	.62	.48	.23	.77
	I-10	.51	.07	7.52*	.38	.64	.46	.21	.79
	I-11	.68	.06	10.64*	.55	.80	.62	.38	.62
	I-12	.60	.07	8.23*	.46	.75	.50	.25	.75
	I-14	.39	.04	9.32*	.30	.47	.55	.30	.70
	I-15	.47	.05	10.19*	.38	.56	.59	.35	.65
Tolerance to other groups	I-18	.32	.05	6.39*	.22	.41	.41	.17	.83
	I-19	.55	.05	10.76*	.45	.65	.65	.42	.58
	I-20	.56	.06	10.16*	.45	.66	.62	.38	.62
	I-21	.37	.06	5.79*	.25	.50	.38	.14	.86
	I-22	.37	.04	8.74*	.29	.46	.54	.30	.71
	I-23	.56	.07	7.99*	.43	.70	.50	.25	.75
	I-24	.39	.04	10.06*	.32	.47	.61	.37	.63

\*  $p < .001$ , \*\* The "Std. Estimate" column represents the factor loadings.

Table 6 shows that the factor loadings of the items in the Group-Centrism dimension ranged from .31 to .69. The factor loadings of the items in the Tolerance to Other Groups dimension, on the other hand, varied between .38 and .65. The factor loadings of all items were higher than the criterion of .32. Moreover, the correlation between the two factors was .71 in CFA. Finally, we proceeded to evaluate the reliability of the measurements we obtained through the Turkish version of the Xenophobia Scale. In this context, we calculated the internal consistency coefficients. Table 7 shows the results of the reliability analysis and all estimates for the reliability exceeded the limit value of .70.

**Table 7.** Internal Consistency Coefficients for the Turkish Version of the Xenophobia Scale

Data set	Dimension	McDonald's $\omega$ (CIs)	Cronbach's alpha (CIs)
The dataset used in EFA	Factor 1: Group-centrism	.84 (.81–.87)	.84 (.81–.86)
	Factor 2: Tolerance to the other groups	.72 (.67–.77)	.72 (.67–.77)
The dataset used in CFA	Factor 1: Group-centrism	.81 (.78–.85)	.81 (.78–.84)
	Factor 2: Tolerance to the other groups	.72 (.67–.77)	.71 (.66–.76)

### **3.1. Interpretation of Scores from the Xenophobia Scale**

The Turkish version of the Xenophobia Scale include 20 items under two factors. In the scale, a score can be calculated on the basis of dimensions, or a total score can be obtained by reversing the items in the dimension of Tolerance to the Other Groups. If a total score is calculated, the possible points range from 20 to 100, where higher scores indicate higher xenophobia.

## **4. Conclusion and Discussion**

In this research we set out to adapt the Xenophobia Scale developed by Olonisakin and Adebayo (2021) to Turkish culture. After obtaining permission from the authors who developed the original instrument, we sent the scale to experts for translation into Turkish. Subsequently, the Turkish version of the scale was created by bringing together and comparing the forms translated by linguistic and field experts. In this process, two of the items in the original form of the scale were removed because they were not suitable for the Turkish culture. The remaining 22 items in the scale were subjected to a study adaptation. In the item analysis, we found that two of the items in the scale were not discriminating enough. Therefore, we removed them from the scale. A subsequent analysis was conducted on the remaining 20 items.

We performed EFA and CFA to ascertain the validity of the Turkish version of the Xenophobia Scale. In EFA, we reached a structure that was similar to the original scale and explained 31.40% of the total variance. In addition, we established that the factor loadings of the items varied between .37 and .73, and that  $\chi^2/df$  and RMSEA indexes did not exceed the upper limit. Correspondingly, the explained variance rate exceeded the 30% limit value (Bayram, 2009). The factor loading of all items in the scale were higher than the .32 criterion (Tabachnick & Fidell, 2007), and the fit indices were within the acceptable range. Therefore, we concluded that the EFA results support the validity of the Turkish version of the Xenophobia Scale. Upon the examination of the CFA results, we observed that all items had sufficient factor loadings and that the fit indices were satisfactory. Thus, the CFA results further corroborated the validity of the Turkish version of the Xenophobia Scale.

The results of the reliability analysis revealed that the internal consistency coefficients exceeded the acceptable lower limit of .70 in both dimensions of the scale. However, the internal consistency coefficients of the dimension of Tolerance to Other Groups were lower than the Group–Centrism dimension. We assumed that this finding was related to the number of items in the subscales. As mentioned by Urbina (2014), the internal consistency reliability tends to increase with the increasing number of items in the scale. Because the number of items in the Tolerance to Other Groups dimension is approximately half of the group–centrism dimension, it is unsurprising that the internal consistency coefficients calculated for this dimension were lower. In conclusion, the results obtained from the validity and reliability analysis indicate that the Turkish version of the Xenophobia Scale yielded valid and reliable measurements.

## **5. Recommendations**

Similar to any research, the present study had limitations. First, the psychometric properties of the Turkish version of the Xenophobia Scale were tested on university students. Future research could assess the validity and reliability of the scale on other groups. Furthermore, the evidences of validity presented in this study were limited to EFA and CFA, and the evidence of reliability is restricted to internal consistency coefficients. Further evidence of validity can be obtained by performing convergent and divergent validity studies in future investigations. Again, it may be proved the test–retest reliability in further studies to reveal the consistency of the scale over time. Finally, the current study used validity and reliability analyses within the framework of the classical test theory. Future research could explore the validity and reliability of the Turkish version of the Xenophobia Scale based on item response theory.

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## Appendix–1. The Items in the Original Form of the Xenophobia Scale

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- Ingroup centredness
1. Other religions are a threat to my religion.
  2. I believe in the idea of having schools where only people of the same religion are enrolled.
  3. I don't care if protecting the interests of my ethnic group results in violence and discomfort of other ethnic groups.
  4. The way politics is practised in this country, there is need for each ethnic group to try and acquire political power of its own.
  5. Other ethnic groups are a threat to my ethnic group.
  6. I do not believe I have to like people of other ethnic groups, religion or political parties.
  7. Having inter-ethnic relationship of an intimate nature will lead to the erosion of the cherished values of my ethnic group.
  8. All is fair and just in ethnic wars.
  9. For security reasons, when occupying a public office, one should surround the self with people of one's ethnic group.
  10. One of the reasons for ethnic clashes in this country is that people of different ethnic groups have refused to remain in their region.
  11. Interacting with people of other ethnic groups can sometimes be unpleasant.
  12. The religion of my ethnic group is superior to those of other ethnic groups.
  13. In this country, it should be every ethnic group for itself.
  14. Some ethnic groups and their religion(s) and traditions should be abolished in this country.
  15. I would consider it a betrayal if my child marries from another ethnic group.
  16. For ethnic survival in this country, some people must be willing to become martyrs.
  17. The idea of unity in diversity cannot work in Nigeria.
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- Ingroup exclusivity
18. Coexisting/living with people of other ethnic group(s) can be an interesting experience.
  19. It is always nice to interact with people of other ethnic group(s).
  20. I believe in inter-ethnic marriage.
  21. Nigeria can be peaceful; we only need to be tolerant of each other.
  22. It is possible to genuinely like people of other ethnic group.
  23. It is okay for political leadership of the country to rotate between the different ethnic groups.
  24. There are always ways for ethnic groups to live in peace with one another.
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## Appendix–2. The Items in the Turkish Form of the Xenophobia Scale

Grup–merkezçilik	<p>1. Diğer dinler benim dinim için tehdit oluşturur.</p> <p>2. Sadece aynı dine mensup kişilerin kayıtlı olduğu okulların olması gerektiğine inanıyorum.</p> <p>3. Ait olduğum etnik grubun çıkarlarının korunması söz konusu olduğunda diğer etnik grupların bundan rahatsızlık duymasını ve/veya şiddete maruz kalmasını önemsemem.</p> <p>4. <i>Madde ayırt ediciliği düşük olduğundan ölçeğin Türkçe formundan çıkarılmıştır.</i></p> <p>5. Diğer etnik gruplar benim etnik grubum için tehdit oluşturur.</p> <p>6. Diğer etnik gruplardan, dinden veya siyasi partilerden insanları sevmek zorunda olduğuma inanmıyorum.</p> <p>7. Etnik gruplar arası yakın/samimi ilişkiler kendi etnik grubumun önemli değerlerini erozyona uğratabilir.</p> <p>8. Etnik savaşlarda her şey adil ve haklıdır.</p> <p>9. Güvenlik nedeniyle, bir kamu kurumunda makam işgal ettiğinde kişi etrafını kendisiyle aynı etnik gruptan olan insanlarla çevrelemelidir.</p> <p>10. Bu ülkedeki etnik çatışmaların nedenlerinden biri farklı etnik gruplardaki insanların kendi bölgelerinde kalmayı reddetmesidir.</p> <p>11. Diğer etnik gruplardan insanlarla etkileşim kurmak bazen rahatsız edici olabilir.</p> <p>12. Ait olduğum etnik grubun dini, diğer etnik grupların inancından üstündür.</p> <p>13. <i>Madde ayırt ediciliği düşük olduğundan ölçeğin Türkçe formundan çıkarılmıştır.</i></p> <p>14. Bu ülkede, bazı etnik gruplar ile bu grupların dinleri ve gelenekleri yasaklanmalıdır.</p> <p>15. Çocuğum farklı etnik gruptan biriyle evlenirse bunu bir ihanet olarak algılayım.</p> <p>16. <i>Türk kültürüne uygun olmadığı için ölçeğin Türkçe formundan çıkarılmıştır.</i></p> <p>17. <i>Türk kültürüne uygun olmadığı için ölçeğin Türkçe formundan çıkarılmıştır.</i></p>
Diğer Gruplara Karşı Tolerans	<p>18. Diğer etnik grup(lar)dan insanlarla bir arada yaşamak ilginç bir deneyim olabilir.</p> <p>19. Diğer etnik grup(lar)dan insanlarla etkileşim kurmak her zaman güzeldir.</p> <p>20. Etnik gruplar arası evliliğe inanıyorum.</p> <p>21. Türkiye huzurlu bir yer olabilir; bunun için birbirimize karşı hoşgörülü olmamız yeterli.</p> <p>22. Diğer etnik gruplardan insanları sevmek gerçekten mümkündür.</p> <p>23. Ülkenin siyasi liderliğinin farklı etnik gruplar arasında dönüşümlü olması sorun değildir.</p> <p>24. Farklı etnik grupların birbirleriyle barış içinde yaşamalarının her zaman bir yolu vardır.</p>