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Abstract

This study aims to develop a Turkish reading anxiety scale (TRAS) for secondary school students whose mother tongue is not Turkish. In addition, since the subject of our study is people who do not receive education in their mother tongue, but receive education in a second language, it aims to develop a measurement tool to determine the effect of this difference on second language learning anxiety. The data of the study were applied to 432 8th grade secondary school students whose mother tongue was Kurdish and who learned Turkish afterwards. As a result of the exploratory factor analysis (EFA), it was seen that the items in the scale were collected in three factors and consisted of 19 items. These three factors are: “Fear”, “Anxiety” and “Preference”. It is seen that the three-factor structure obtained as a result of EFA was confirmed as a result of CFA. It is seen that the three-factor structure obtained as a result of EFA contributed 46.280% to the total variance. It is seen that the factor load values of the items ranged from 0.487 to 0.789. As a result of the item analysis, it is seen that the items in the scale are distinctive. As a result of the ANOVA analysis, it was concluded that students’ Turkish reading anxiety differed significantly according to gender, mother's knowledge of Turkish, and the language that parents wanted to be spoken at home. However, it was concluded that there was no significant difference between the father's knowledge of Turkish and the language spoken at home preference. The Cronbach's alpha reliability coefficients of the three-factor structure obtained from the TRAS were calculated as .81, .75 and .70, respectively, and the alpha coefficient for all items of the scale was calculated as 0.87. As a result, considering the validity and reliability analyzes, it was concluded that the TRAS is a reliable and valid measurement tool.

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Research Article

Development of Turkish Reading Anxiety Scale*

Süleyman KASAP [1], **Mahmut AYAZ** [2], **Mehmet Sena ATAŞ** [3]

Abstract

This study aims to develop a Turkish reading anxiety scale (TRAS) for secondary school students whose mother tongue is not Turkish. In addition, since the subject of our study is people who do not receive education in their mother tongue, but receive education in a second language, it aims to develop a measurement tool to determine the effect of this difference on second language learning anxiety. The data of the study were applied to 432 8th grade secondary school students whose mother tongue was Kurdish and who learned Turkish afterwards. As a result of the exploratory factor analysis (EFA), it was seen that the items in the scale were collected in three factors and consisted of 19 items. These three factors are: "Fear", "Anxiety" and "Preference". It is seen that the three-factor structure obtained as a result of EFA was confirmed as a result of CFA. It is seen that the three-factor structure obtained as a result of EFA contributed 46.280% to the total variance. It is seen that the factor load values of the items ranged from 0.487 to 0.789. As a result of the item analysis, it is seen that the items in the scale are distinctive. As a result of the ANOVA analysis, it was concluded that students' Turkish reading anxiety differed significantly according to gender, mother's knowledge of Turkish, and the language that parents wanted to be spoken at home. However, it was concluded that there was no significant difference between the father's knowledge of Turkish and the language spoken at home preference. The Cronbach's alpha reliability coefficients of the three-factor structure obtained from the TRAS were calculated as .81, .75 and .70, respectively, and the alpha coefficient for all items of the scale was calculated as 0.87. As a result, considering the validity and reliability analyzes, it was concluded that the TRAS is a reliable and valid measurement tool.

Keywords: Second language acquisition, reading anxiety, bilingualism, language development

1. INTRODUCTION

Bilingualism can have both positive and negative effects on second language anxiety. On the one hand, individuals who are already bilingual may have an advantage in learning a second language, as they have already developed the language learning skills and cognitive flexibility required for language acquisition. According to Horwitz, Horwitz, and Cope (1986), anxiety plays a key role in determining a language learner's success or failure in second language acquisition. Bilinguals may also feel more comfortable in multicultural and multilingual settings, which can help reduce anxiety. On the other hand, bilingualism can also create anxiety if the learner feels pressure to maintain both languages or experiences negative feedback about their language abilities. For example, some bilingual individuals may feel that they are not proficient enough in either language, leading to self-doubt and anxiety. Additionally, the relationship between the two languages can also play a role in second language anxiety. If the two languages are similar, learners may experience interference or confusion, leading to frustration and anxiety. If the two languages are very different, learners may struggle to differentiate between them, leading to similar feelings of anxiety and confusion.

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Second language anxiety is a complex phenomenon that can impact language learning progress. According to Horwitz, et al. (1986), second language anxiety is "*a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning*" (p. 128). It can manifest in a variety of ways, including fear of speaking, anxiety about making mistakes, and concern about not being able to understand others or express oneself adequately. Research has shown that second language anxiety can have a negative impact on language learning outcomes. Studies by MacIntyre and Gardner (1989) and Young (1991) found that high levels of anxiety were associated with decreased motivation and avoidance behaviors, which in turn led to slower language acquisition and lower proficiency levels. One potential factor contributing to second language anxiety is the learning environment. As noted by Bailey, Onwuegbuzie, and Daley (2000), "*the nature of the classroom and the teaching practices of the instructor can greatly impact the level of anxiety experienced by language learners*" (p. 359). Learners who feel unsupported or judged in their language classes may be more prone to anxiety. However, there are strategies that language learners can use to manage second language anxiety. Horwitz et al. (1986) suggest that building a supportive learning environment and developing relaxation techniques can help reduce anxiety. Exposure therapy, in which learners gradually expose themselves to anxiety-provoking situations in a controlled setting, can also be effective in reducing anxiety (Kasap, 2021). Overall, second language anxiety is a complex phenomenon that can impact language learning progress. It is important for language learners to recognize the sources of their anxiety and seek support to overcome it. By understanding and managing second language anxiety, learners can improve their language proficiency and achieve their language learning goals.

Second language anxiety can stem from a variety of factors, including (Aydın & Zengin, 2008):

1) Fear of making mistakes: One of the most common reasons for second language anxiety is the fear of making mistakes. Learners may worry about being corrected or judged by others, which can lead to feelings of embarrassment or shame.
2) Lack of confidence: Some learners may feel insecure about their language skills, which can result in a lack of confidence when using the language.
3) Cultural differences: Learning a new language often involves exposure to a different culture, which can be overwhelming for some learners. This can lead to feelings of confusion, frustration, and even homesickness.
4) Pressure to perform: Learners may feel pressure to perform well in a second language, whether it be for academic, professional, or personal reasons. This pressure can create stress and anxiety, which can impede language learning progress.
5) Past negative experiences: Learners who have had negative experiences with language learning in the past, such as being ridiculed or bullied, may be more prone to second language anxiety.
6) Learning environment: The learning environment can also play a role in second language anxiety. For example, learners who feel unsupported or isolated in their language classes may experience more anxiety than those who feel part of a supportive community.

Overall, second language anxiety is a complex phenomenon that can arise from a range of factors. It is important for language learners to recognize the sources of their anxiety and seek support to overcome it. The relationship between mother tongue and second language anxiety is complex and can vary from individual to individual. In general, research suggests (Liu & Jackson, 2008) that individuals who are more proficient in their mother tongue may experience less second language anxiety, while those who struggle with their mother tongue may be more prone to anxiety when learning a second language. This is because individuals who are more proficient in their mother tongue are likely to have stronger language learning skills, such as phonological awareness, syntax

knowledge, and vocabulary acquisition. These skills can be transferable to the learning of a second language, making the process less challenging and less anxiety-inducing.

Conversely, individuals who struggle with their mother tongue may find the learning process of a second language more difficult and stressful (Kasap & Power, 2019). They may lack the necessary language learning skills or struggle with language processing, which can lead to frustration and anxiety. However, it is important to note that this relationship is not always straightforward, and there are many exceptions to this general trend. For example, some individuals may have strong language learning skills but still experience second language anxiety due to cultural or social factors. Ultimately, the relationship between mother tongue and second language anxiety is complex and multifaceted. It is important for language learners to recognize their individual strengths and weaknesses and seek support to overcome any challenges they may encounter in their language learning journey.

1.1. Purpose of the Study

Measuring reading anxiety is important to understand a person's level of anxiety. This can help educators identify how an individual's reading skills can be improved. Reducing reading anxiety can help students improve their reading skills. Students with high reading anxiety should be able to make the reading process less stressful and more enjoyable. Knowing the level of reading anxiety can help adjust the curriculum accordingly. This scale can be used to develop teaching strategies to reduce students' reading anxiety. Measuring reading anxiety is important for understanding how to improve students' reading skills. Teachers can help students increase their self-confidence and achieve better reading results. Measuring reading anxiety contributes to educational psychology and learning research. Such a scale can contribute to research on the causes, consequences and effects of reading anxiety. In conclusion, the importance of creating a reading anxiety scale in Turkish has several benefits such as improving students' reading skills and confidence, improving educational programs, contributing to research, and improving student support services. Such a scale can help to understand and manage reading anxiety.

2. METHOD

2.1. Research Pattern

It was patterned using the survey method. The screening model aims to reveal characteristics such as opinions, interests, abilities and attitudes from the participants about an event or a subject. Therefore, a larger sample is required compared to other research methods. This research aims to make a description by taking a picture of the existing situation (Fraenkel, Wallen & Hyun, 2012).

2.2 Study Group

The study group of the research consists of 432 8th grade secondary school students studying in Ağrı, one of the eastern provinces of Turkey, in the 2022-2023 academic year. Of the students participating in the study, 60.6% (n=262) were male and 39.4% (n=170) were female. The descriptive information of the secondary school students participating in the research is given in Table 1.

Table 1. Descriptive information about the participants of the study

Variable	Category	N	%
Gender	Male	262	60.6
	Female	170	39.4
Does the mother speak Turkish?	Yes	303	70.1
	No	129	29.9
Does the father speak Turkish?	Yes	421	97.5
	No	11	2.5
Language spoken at home	Turkish	84	19.4
	Kurdish	348	80.6
Your mother and father at home for you language does he want you to speak	Turkish	199	46.1
	Kurdish	233	53.9
Total		432	100

2.3. Preparation of Data Collection Tool

The Turkish reading anxiety scale was conducted to determine the Turkish reading anxiety levels of secondary school students whose mother tongue is not Turkish, who did not receive any education in their mother tongue, and who later learned Turkish. First of all, an item pool of scale items was created by scanning the literature. The item pool consists of 40 items, and the resulting item pool was transformed into a draft form. It was submitted to the opinion of experts (n=5) who are experts in their fields (Assessment and Evaluation, English, psychological counseling and guidance, classroom education and science education) in order to determine whether the items in this form will measure the Turkish reading anxiety levels of secondary school students and to determine their understanding as a language. Necessary corrections were made in line with the suggestions of the experts, and a form consisting of 32 items was created. The prepared form consists of "Never" (1), "Rarely" (2), "Sometimes" (3), "Often" (4), "Always" (5) categories. Accordingly, the high score obtained from the scale indicates that Turkish reading anxiety is high.

2.4. Process of Preparing Data for Analysis

Assumptions of the data obtained by using the data collection tool prepared for the study. In this direction, it was examined whether it would be suitable for factor analysis. These; sample size, missing data, normality, linearity, outliers, and factorability of R. First of all, sample size adequacy for factor analysis was checked. According to the researchers, it can be said that there is no consensus on the sample size for factor analysis (İlhan & Çetin, 2014). However, according to some researchers, 200 participants were suitable for factor analysis, it was very good to apply to 500 participants, and it was stated that the number of items in the scale should be applied to 3 to 6 participants (Cattell, 1978). The factor structure becomes more evident with the increase in the number of participants, but it is acceptable if 5 times the total number of items is reached (Gorsuch, 1983; Stevens, 2002). 432 secondary school students participated in this study and when the data set obtained from the data collected from secondary school students was examined, no missing data was found. In order to test the normality and linearity of the data set, it was checked whether the total scores were normally distributed. Skewness and kurtosis coefficients were evaluated and normality tests were performed. By examining the Z scores, it was determined whether there were outliers in the data set. It was observed that the z scores of the variables were in the range of ±3.00.

Then, distance values of all variables were examined in order to determine the extreme values in multiple variables. It was determined that there were no outliers in the analyzed data set. To control the factorability of R, the KMO (Kaiser-Meyer-Olkin) value and Bartlett Test results were examined. The KMO value was found to be .84, and the result of the Bartlett test testing multivariate normality (x^2=886.382, $p<0.01$) was also found to be significant. According to this result, it can be said that the data are suitable for factor analysis.

2.5. Analysis of Data

In order to determine the content validity of the scale, interviews were conducted with 5 different experts in the field and content validity rates and indices were calculated accordingly. Afterwards, statistical analysis was performed to determine the characteristics of the measurements made after the TRAS was applied to the participant group. Both EFA and CFA were applied to examine the construct validity of the developed TRAS and to reveal the factor structure of the scale. While applying EFA and CFA during the test development phase, different versions are applied, but when the sample size is sufficient, it is recommended to apply EFA to half of the data and DFA to the other half, and this approach is generally used in the test development phase (Henson & Roberts, 2006). In this study, assuming that the sample size was sufficient, it was decided to apply EFA to half of the data and to apply CFA to the remaining half. In this study, a 32-item scale was applied to 432 participants. While doing EFA, direct the Oblimin rotation technique was used. The sub-dimensions of the scale correlations were found to be low. Therefore, it was seen that the sub-dimensions were

independent of each other. In factor analysis, it is recommended to use the varimax method for less related and independent sub-dimensions (Tabachnick & Fidell, 2007). For this reason, “principal components analysis” was used as factorization method and "varimax" method, which is one of the vertical rotation methods, was used as the factor rotation method while performing EFA. To ensure the reliability of the scale and for each sub-dimension, Cronbach's alpha internal consistency and score-total correlation were calculated. In addition, within the scope of the criterion validity of the scale, the difference between the scores of the upper group, which constitutes 27% of the scale, and the lower group, which constitutes 27%, was examined with the t-test for independent groups. In order to determine the Turkish reading anxiety of secondary school students, the total scores they got from the measurement tool were gender. Whether the mother knew Turkish, whether the father could speak Turkish and the language is spoken at home. It was examined whether it differed according to the desired language to be spoken at home. When the data were analyzed, it was seen that the total scores showed a normal distribution (p>.05). For this reason, the significance of the difference between the total scores of the participants according to the mentioned variables was tested using ANOVA, one of the parametric methods used for unrelated measurements. In addition, the analysis of the data was collected in writing with the help of the data collection tool; it was made with the help of SPSS 23 package program and LISREL 8.7 program.

3. RESULTS

In this section, validity and reliability information about the “Turkish reading anxiety scale” is given.

3.1. Scope Validity

The Turkish reading anxiety scale was evaluated by experts from 5 different fields who provided their opinions on the items of the scale. If more than half of the experts deemed an item “Suitable”, CVR>0, while if less than half did, CVR<0, and if exactly half did, CVR=0 (Yurdugül, 2005). To meet the minimum coverage accuracy criterion for 5 extensions, set at 0.99 by Veneziano and Hooper (1997), the content validity index (CGI) was obtained by averaging the significant CVR values at the $\propto$ =.05 level. Based on expert recommendations, 10 out of 40 items were deemed insufficient for measuring Turkish reading anxiety in secondary school students, and 2 of those were modified based on content validity rates. The remaining 8 items were excluded, and the CGI was recalculated and found to be sufficient. A small group of students tested the clarity of the final version of the scale, providing opinions and agreement levels for each item. The scale was then administered face-to-face to voluntary students after being reproduced in written form. A preliminary application study was conducted, followed by a pilot application.

3.2. Construct Validity

EFA and CFA were conducted to determine the construct validity of the Turkish reading anxiety scale (TRAS).

3.2.1. Exploratory factor analysis (EFA)

The construct validity of the Turkish reading anxiety scale (TRAS) was determined through EFA and CFA. EFA was used to determine the item factor loads and construct validity of the TRAS. The Kaiser-Meyer-Olkin (KMO) coefficient and Barlett were used to test the suitability of the data for analysis before conducting EFA. The EFA results showed that the items with an eigenvalue greater than 1 were collected in 8 factors, which explained 59.044% of the scale .In line with the recommendation of the literature research, items with a factor load of 0.30 and below were not included in the analysis (Floyd & Widaman, 1995; Tabachnick & Fidell, 2007). Therefore, six items with a factor load of .30 or less were excluded from the analysis .The EFA also revealed that four items were overlapping, and three items were not included in the analysis because the item-total

correlation was less than 0.30. The items obtained from the EFA were collected in three factors, as decided by the researchers. Table 2 presents the characteristics of the items related to the repeated EFA results, and the eigenvalues obtained from the EFA analysis and the percentages of total variance explained are given in Table 2.Additionally, Figure 1 shows the scree line graph result .

Table 2. Explanatory factor analysis and disclosed eigenvalue results

	EFA Eigenvalue Results	Variance Explained
Factor 1	5.487	18,430
Factor 2	1,963	16,213
Factor 3	1,343	11,637

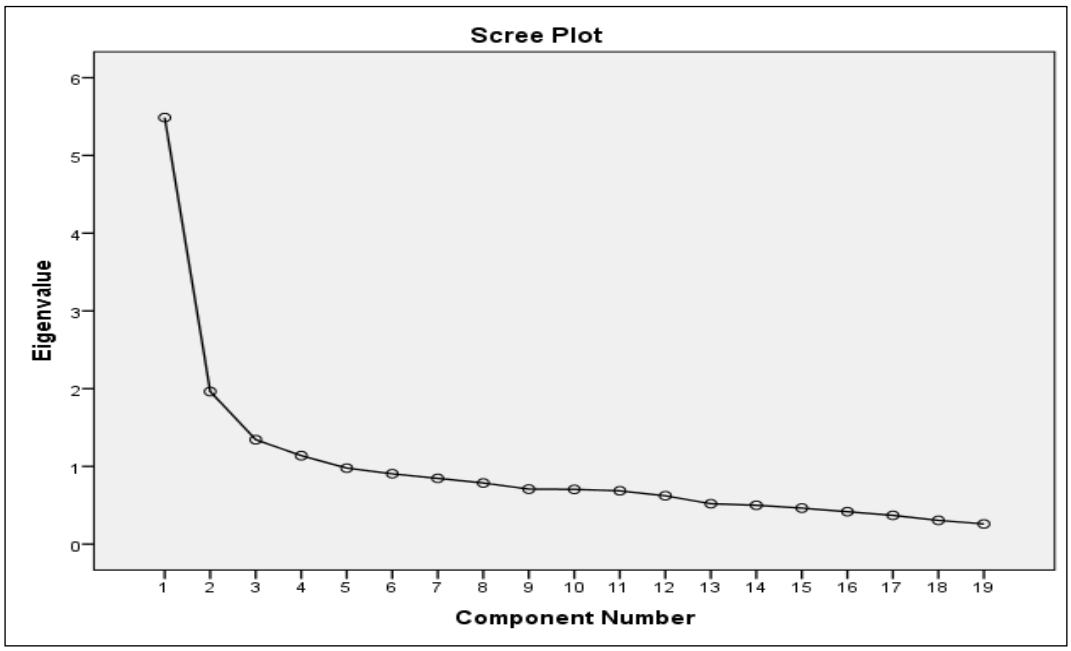

Figure 1. Line chart

Table 2 According to the results obtained from the EFA analysis, it was seen that the items were collected in three factors. Considering all dimensions of the scale, it was seen that the items explained 46.280% of the total variance. It was concluded that the items in the first dimension of the scale explained 18,43% of the total variance, the items in the second dimension of the scale explained 16,213% of the total variance, and the items in the third dimension of the scale explained 11.637% of the total variance. It would be good if the total variance of the variables included in the analysis is 66%. However, it is difficult to achieve this value in social sciences. Therefore, 30% may be considered sufficient in single-factor structures. In multi-factor structures, this value is expected to be slightly higher (Büyüköztürk, 2017). Thus, as a result of the EFA analysis, it was decided that the scale should have a three-dimensional structure. Items and factor loadings are given in Table 3.

Table 3. Factors and factor loads resulting from EFA

Factor 1 (Fear) Cronbach Alpha = 0.819; Explained variance = 18,430%			
	Factor Load		
	1	**2**	**3**
1. I am afraid to read a Turkish text.	.499		
12. Novels, stories etc. written in Turkish. Reading posts like this makes me anxious.	.674		
26. The idea of reading Turkish worries me	.493		
29. When I read Turkish texts, when there are idioms that I do not understand, my desire to read the text disappears.	.571		
30. I hesitate to read a Turkish text because my friends will laugh at me.	.775		
31. I don't want to read reading passages in class because I don't read Turkish well.	.768		
32. I am very afraid that the teacher will give me a reading task in class	.789		
Factor 2 (Anxiety) Cronbach Alpha = 0.756; Explained variance = 16.213%			
	Factor Load		
	1	**2**	**3**
2. Reading Turkish texts slowly bothers me.		.554	
4. When I read any Turkish text, the words I don't understand bother me.		.695	
5. Not being able to pronounce some Turkish sounds makes me nervous.		.622	
17. I cannot pronounce some words while reading Turkish.		.487	
18. Misreading some words in Turkish bothers me.		.684	
19. When I read in public, I worry that someone will make fun of me.		.661	
27. Reading a Turkish text excites me.		.497	
Factor 3 (Preference) Cronbach Alpha = 0.70; Variance Explained = 11.637%			
	Factor Load		
	1	**2**	**3**
10. I prefer to read in my mother tongue rather than Turkish.			.698
11. I don't prefer to read Turkish except in compulsory situations.			.510
22. I prefer speaking Turkish rather than reading it.			.615
25. I think that the Turkish spoken in the environment I live in and the Turkish in the book texts are not the same.			.586
28. When I read Turkish, I feel relieved when I see words similar to my mother tongue.			.540
Total Disclosed Variance = 46,280%			

The first factor “Fear”, the second factor as “Anxiety” and the third factor as “Preference”, considering the content and theoretical structures of the items resulting from the EFA analysis. The total variance in the first factor It is seen that it explains 18,430% of it and there are 7 items. It was concluded that the factor loads of the items in this factor ranged from .493 to .789. In the second factor, the total variance It is seen that it explains 16.213% of it and there are 7 items. It is seen that the factor loads of the items in this factor ranged from .487 to .695. In the third factor, the total variance It is seen that it explains 11.637% of it and there are 5 items. It is seen that the factor loadings of the items in this factor ranged from .510 to .698. In this study, items with factor load values of 0.30 and above were evaluated (Büyüköztürk, 2017). When these three dimensions are taken into account, it is seen that the items explain 46.280% of the total variance.

Correlation analysis was performed between the sub-dimensions of the scale. As a result, it was concluded that there was a low correlation. As a result of the correlation between dimensions, it was seen that the correlation between the first dimension and the second dimension factors was 0.29. The correlation between the first dimension and the third dimension factors was found to be 0.27. The correlation between the second dimension and the third dimension factors was found to be 0.29.

According to this correlation result, it was concluded that the relationship between the sub-dimensions was low. Therefore, it was concluded that the sub-dimensions were independent from each other.

Therefore, it was concluded that it is appropriate to apply the vertical rotation method in factor analysis. Varimax, one of the vertical rotation methods, was applied. The correlation coefficients between the scale sub-dimensions are presented in Table 4.

Table 4. Correlation coefficients between factors

Factors	Anxiety	Unwillingness	Insufficiency
Anxiety	1.00	0.299	0.271
Reluctance		1.00	0.292
Insufficiency			1.00

3.2.2. Confirmatory factor analysis (CFA)

CFA was conducted to assess the construct validity of the TRAS using the 19 items obtained from the EFA analysis. The fit indices of the TRAS are presented in Table 4. The chi-square, chi-square/degree of freedom, and goodness-of-fit indices were calculated to evaluate the fit of the model, and the results are shown in Table 5. The criteria for evaluating the indices were based on the recommendations of Schermelleh-Engel, Moosbrugger, and Müller (2003).

Table 5. DFA results of the three-dimensional implicit structure established with CFA

Model	÷²	÷²/ sd	NNFI	NFI	CFI	RMSEA
Three-Factor Structure	276.10	1.89	0.96	0.95	0.97	0.058
Criteria		3.0	≥0.95	≥0.95	≥0.95	≤0,08

When Table 5 was examined, it was seen that the three-dimensional structure obtained as a result of EFA was confirmed by CFA. The t-test values of the three-factor structure confirmed as a result of CFA are given in Table 6.

Table 6. t-test values obtained from CFA for EPTS

Item No.	t	Item No.	t	Item No.	t
M1	10.16*	M17	9.81*	M28	6.14*
M2	7.52*	M18	12.49*	M29	12.28*
M4	10.27*	M19	9.87*	M30	12.00*
M5	11.44*	M22	6.05*	M31	12.51*
M10	7.69*	M25	10.29*	M32	12.07*
M11	8.32*	M26	11.89*		
M12	11.42*	M27	3.15*		

*p<.01

Construct validity was examined through both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) for the Turkish reading anxiety scale (TRAS). EFA was conducted to determine the item factor loads and construct validity of the scale (section 3.3). The Kaiser-Meyer-Olkin (KMO) coefficient and Bartlett's test were used to test the suitability of the data for analysis, and the items with a factor load of 0.30 or below were excluded from the analysis. Ultimately, the items were collected into three factors, and the model was confirmed through CFA (section 3.2). CFA was applied to test the accuracy of the construct forming the 19 items collected in three factors as a result of EFA (section 3.2). The fit index values of TRAS were presented in Table 4, and the square, chi-square/degree of freedom, and goodness-of-fit indices calculated were presented in Table 5. The t-test values of each dimension were significant at the .01 level, indicating the sufficiency of the number of participants and the accuracy of the items included in the model.

It was concluded that the three-factor structure formed as a result of EFA was confirmed as a result of CFA (section 3.2). As a result of the literature review, it was seen that the structure created was statistically confirmed, and the model created as a result of DFA is given in Figure 2 (section 3.2).

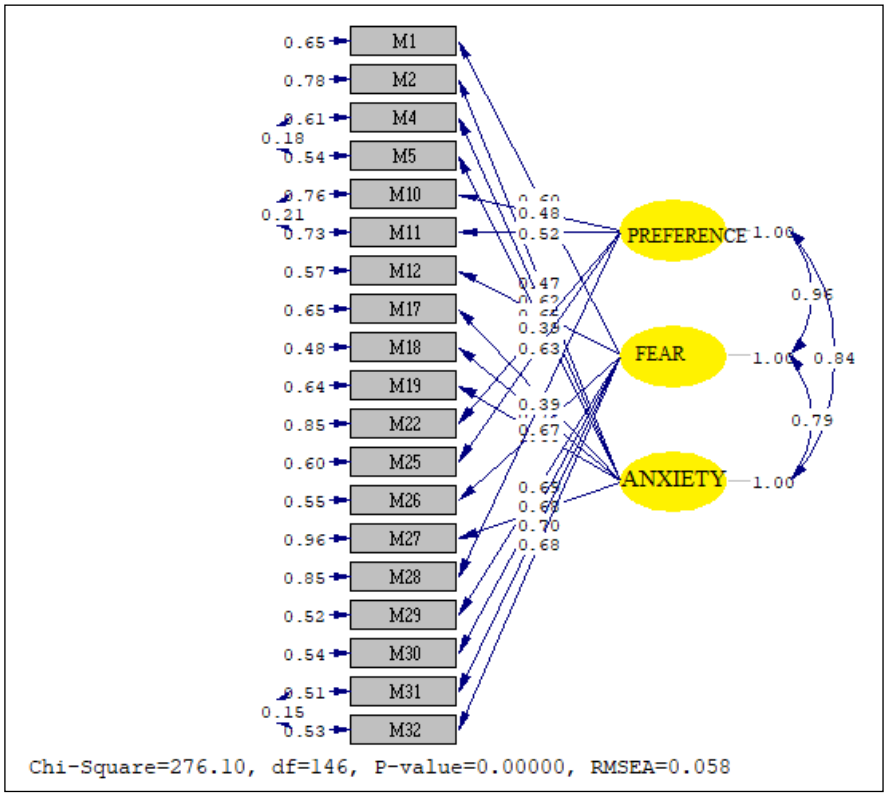

Figure 2. Measurement Model for TRAS

3.4. Reliability

This study factor loads of substances equal not (congeneric measuring) and of the scale only dimensional is not then seen sub-dimensions of the scale and of the scale all for McDonalds reliability coefficient calculated (Lucke, 2005). With this coefficient DFA get has been Turkish read anxiety McDonald's ω coefficient of sub-dimensions in the scale ("congeneric as "credibility" known) .81, .75 and .70, respectively of the scale all substances McDonald's ω coefficient for .87. In scale get McDonald's ω value consideration when taken reliability coefficient of high is can be said. These findings according to the scale Trustworthy One measuring the middleman to the conclusion that has been reached.

3.4.1. Item analysis

The adjusted total correlation was calculated to determine item discrimination and predictive power of the total score. In addition, 27% lower-upper groups were compared. The findings that emerged as a result of the item analysis are given in Table 7.

Table 7. TRAS item analysis results

Item No.	When Substance Is Removed Scale Alpha	Item Total Correlation	Average	Standard Deviation	Distortion
M1	.872	.528	1.52	1.113	2.149
M12	.872	.546	1.75	1,237	1,357
M26	.870	.598	1.88	1,237	1,227
M29	.896	.623	1.99	1,302	1,064
M30	.870	.583	1.82	1,258	1,415

M31	.871	.569	1.76	1,225	1,347
M32	.871	.574	1.78	1.264	1,477
M2	.876	.413	2.34	1.405	.725
M4	.872	.535	2.30	1,359	.667
M5	.870	.586	2.08	1,277	.944
M17	.872	.520	2.17	1,268	.881
M18	.870	.577	2.31	1,383	.763
M19	.874	.471	2.23	1.431	.762
M27	.884	.215	2.86	1,547	.192
M10	.875	.436	2.21	1,476	.824
M11	.874	.466	2.03	1,342	1,046
M22	.880	.336	2.41	1,521	.577
M25	.871	.557	2.11	1,233	.856
M28	.877	.396	2.59	1,514	.442

*p<.005

Table 7 presents the item-total correlation results for the three factors, which range from .546 to .623 for the first factor, from .215 to .586 for the second factor, and from .336 to .557 for the third factor. The accepted threshold for a sufficient total item correlation is .30 or higher for items used to distinguish the features being measured (Büyüköztürk, 2017; Erkuş, 2012; Kasap, 2021). It is observed that this value is met for all items except for M27. However, the t-test values obtained from the lower-upper group comparisons of 27% are significant for M27. According to Erkuş (2012), if the t value is significant in the comparison of 27% lower-upper groups, the item can be considered distinctive. Therefore, it was concluded that the M27 item is distinctive. In light of the item analysis results, it is determined that all items in the scale are distinctive.

To assess the construct validity of the upper and lower groups' scores, an Independent Samples t-test was conducted. The purpose of this analysis was to determine the difference between the total scores of the 27% lower and upper groups of the 432 8th-grade students who participated in the study. Table 8 presents the group statistics of each item and the t-test results based on the scores of each group from the scale.

Table 8. Item analysis results based on 27% sub-top groups of TRAS

Article	Group	$\bar{X}$	t	p	Article	Group	$\bar{X}$	t	p
1	Top	2.44	10,871	.00	22	Top	3.22	9,798	.00
	Lower	1.00				Lower	1.58		
2	Top	3.11	11,015	.00	25	Top	3.11	16,700	.00
	Lower	1:50				Lower	1.21		
4	Top	3.29	13,522	.00	26	Top	3.02	16,971	.00
	Lower	1.41				Lower	1.03		
5	Top	3.10	14,803	.00	27	Top	3.32	7.801	.00
	Lower	1.22				Lower	1.98		
10	Top	3.32	11,952	.00	28	Top	3.26	13,066	.00
	Lower	1.47				Lower	1.56		
11	Top	3.03	12,754	.00	29	Top	3.26	16,514	.00
	Lower	1.24				Lower	1.16		
12	Top	2.78	12,889	.00	30	Top	2.93	15,220	.00
	Lower	1.15				Lower	1.05		
17	Top	3.13	14,266	.00	31	Top	2.93	13,462	.00
	Lower	1.29				Lower	1.15		
18	Top	3.41	17,064	.00	32	Top	2.96	14,095	.00
	Lower	1.19				Lower	1.03		
19	Top	3.20	14,502	.00					
	Lower	1.19							

When Table 8 is examined, it is seen that there is a significant difference between the upper group and the lower group (p<.05). When the averages of the items in the upper-lower group of 27% are compared, it can be said that the averages of the students in the upper group are higher. For this reason, it was concluded that there was a difference between the items in the upper group and the lower group, and therefore the items were distinctive.

In order to determine the construct validity level of the scale, the scale was applied to 8th grade students. One-factor analysis of variance (One-Way) in an unrelated sample was used to determine whether the items differ according to the gender of the students, whether the mother speaks Turkish, whether the father speaks Turkish, the language is spoken at home and the language desired to be spoken at home. ANOVA results are given in Table 9.

Table 9. ANOVA results of secondary school 8th grade students' total scores from TRAS according to gender, whether the mother speaks Turkish, whether the father speaks Turkish, the language spoken at home and the language desired to be spoken at home

Variables	Groups	N	$\bar{X}$	SS	F	p
Gender	Male	262	42.46	15.17	18,457	.000
	Girl	170	36.55	11.91		
Father in Turkish. Does he know?	Yes	421	40.11	14.21	.060	.807
	No	11th	41.18	16.81		
Speaking at Home Desired Language	Turkish	84	36.54	15.03	6.706	.010
	Kurdish	348	41.00	13.95		
Your mother's Turkish Does he know?	Yes	303	39.24	14.33	4,071	.044
	No	129	42.25	13.93		
Spoken at Home Language	Turkish	199	38.86	14.23	2,947	.087
	Kurdish	233	41.22	14.22		

When Table 9 is examined, it is seen that there is a significant difference between the Turkish reading anxiety of 8th grade students and their gender, $F_{(1, 430)} = 18,457$, p<.05. In other words, it can be said that 8th grade students have higher Turkish reading anxiety levels for boys ($\bar{X} = 42.46$) and girls ($\bar{X} = 36.55$). It is seen that there is no significant difference between the Turkish reading anxiety of 8th grade students and whether their fathers know Turkish or not, $F_{(1, 430)}=0.060$, p>.05. It can be said that there is no difference between 8th grade students' Turkish reading anxiety whether their fathers know Turkish or not. It is seen that there is a significant difference between the Turkish reading anxiety scores of the 8th grade students and the language preferences they want to be spoken at home, $F_{(1, 430)}= 6.706$, p<.05. In other words, it can be said that the language preference of 8th grade students to be spoken in Kurdish at home ($\bar{X} = 41.00$) is higher than their Turkish reading anxiety ($\bar{X} = 36.54$). It is seen that there is a significant difference between the Turkish reading anxiety of 8th grade students whether their mothers know Turkish or not, $F_{(1, 430)} = 4.071$, p<.05. In other words, it can be said that the mothers of 8th grade students have higher Turkish speaking anxiety of those who do not speak Turkish. It is seen that there is no significant difference in eighth grade students' Turkish reading anxiety in terms of the language spoken at home, $F_{(1, 430)} = 2.947$, p>.05. In other words, it can be said that there is no difference between the 8th grade students' Turkish reading anxieties and the language preference spoken at home. It is recommended to use the eta -square (η 2) correlation coefficient to determine the effect size (Büyüköztürk, 2017). The effect size takes a value between 0-1. Between 0.00 and 0.06 is interpreted as a small effect, between 0.06 and 0.14 as a medium effect, and values greater than 0.14 are interpreted as a large effect (Büyüköztürk, 2017; Cohen, 1988). In this study, the effect size of 8th grade students according to their gender was found to be 0.04 for their Turkish reading anxiety, 0.009 for their mother' knowledge of Turkish, and 0.01 for the Language Preferences You Want to speak at home. In this case, it can be said that the effect size obtained in this study has a low level of effect.

4. DISCUSSION AND CONCLUSION

In this study, it was aimed to develop a measurement tool to measure 8th grade students' Turkish reading anxiety in a valid and reliable way. While developing the TRAS, an item pool consisting of 40 items was created. The opinions of five experts were taken to ensure the scope and face validity of the scale. In line with the suggestions of the experts, a 32-item measurement tool was obtained. Items in the scale; It was applied to 8th grade students with a five-point Likert- type grading of Never (1) → Rarely (2)→ Sometimes (3)→ Often (4)→ Always (5). EFA and CFA were used to test the construct validity of the scale. As a result of EFA, it was obtained from a three-factor structure consisting of 19 items. It is seen that this structure explains 46.280% of the total variance. Considering the content and theoretical structures of the items that emerged as a result of the EFA analysis, the first sub-dimension of the scale was named as fear, the second as anxiety, and the third as preference. CFA was applied to test the accuracy of the three-factor structure obtained as a result of EFA. As a result of the CFA, it is seen that the fit indices of this three-factor structure of TRAS have taken appropriate values. The variance rate explained in the EFA was 30% and higher values were taken as a criterion. It is seen that the CFA fit indices are suitable for the value taken as a criterion. According to the results of EFA and CFA conducted for TRAS, it was concluded that construct validity was achieved. The internal consistency reliability of the results of the analyzes for TRAS was tested with the method (Cronbach's Alpha reliability coefficient) and the item-total correlations were examined. For the criterion validity of the data obtained from the scale, the difference between the total scale scores of the 27% upper-lower groups was analyzed using the independent sample t-test.

McDonald's ω coefficient was calculated as .81 for fear sub-dimension, .75 for the anxiety sub-dimension, 0.70 for preference sub-dimension, and .87 for the whole scale. Liu (2003) states that the internal consistency coefficients are .70 and above as proof that the scale can be qualified as reliable.

Item analysis was performed to reveal the predictive power of the items obtained from the scale and to determine the item discrimination levels. In the item analysis, 27% lower and upper groups were compared and the corrected item-total correlation was examined. The item analysis result and item-total correlation results were found to be between .546 and .623 in the first factor, between .215 and .586 in the second factor, and between .336 and .557 in the third factor. In addition, as a result of the t test performed between the 27% lower group and the upper group, it was seen that the t-value was significant for all items of the scale. As a result of the analyzes made, it is seen that all items in the scale are distinctive. According to the findings obtained in the research, it was concluded that TRAS would make valid and reliable measurements in determining the Turkish reading anxiety of 8th grade students.

This study was applied to 8th graders in secondary school. The fact that it consists only of students whose mother tongue is Kurdish and who later learned Turkish can be considered as a limitation. It is important to include participants from various groups such as different age groups, genders, education levels. As a sample, research can be conducted by selecting participants who live in Turkey as refugees and learn Turkish later. This study focused on reading anxiety. Different dimensions (writing anxiety, performance anxiety, etc.) can be looked at. Once the scale is developed, you can conduct comparative research among different groups to examine how reading anxiety is related to different factors (age groups, gender, education level).

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Due to the scope and method of the study, ethics committee permission was not required.

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Appendix. Turkish reading anxiety

Türkçe Okuma Kaygı Ölçeği	**Hiçbir Zaman**	**Nadiren**	**Bazen**	**Sıklıkla**	**Her Zaman**
1. Türkçe bir metni okumaktan korkuyorum.					
2. Türkçe metinleri yavaş okumak beni rahatsız ediyor.					
4. Herhangi bir Türkçe metni okurken anlamadığım kelimeler beni rahatsız ediyor.					
5. Bazı Türkçe sesleri telaffuz edememek beni geriyor.					
10. Türkçe okumaktansa anadilimde okumayı tercih ederim.					
11. Zorunlu durumlar dışında Türkçe okumayı tercih etmem.					
12. Türkçe yazılmış roman, hikâye vb. gibi yayınları okumak beni endişelendirir.					
17. Türkçe okuma yaparken bazı kelimeleri telaffuz edemiyorum.					
18. Türkçedeki bazı kelimeleri yanlış okumak beni rahatsız ediyor.					
19. Topluluk önünde okuma yaptığım zaman birilerinin dalga geçmesinden endişe duyarım.					
22. Türkçe okumaktansa konuşmayı tercih ederim.					
25. Yaşadığım çevrede konuşulan Türkçe ile kitap metinlerindeki Türkçenin aynı olmadığını düşünüyorum					
26. Türkçe okuma fikri beni kaygılandırıyor					
27. Türkçe bir metni okumak beni heyecanlandırıyor.					
28. Türkçe okurken kendi anadilime benzer kelimeler gördüğümde rahatlarım.					
29. Türkçe metinleri okurken anlamadığım deyimler olunca metni okuma isteğim kaybolur.					
30. Arkadaşlarım bana güler diye Türkçe bir metni okumaya çekinirim.					
31. Türkçe okumam iyi olmadığı için derste okuma parçalarını okumak istemiyorum.					
32. Öğretmenin derste bana okuma görevi vermesinden çok korkarım					