The Adaptation and Validation of the Turkish Version of the Personal Report of Public Speaking Anxiety[1] (PRPSA)

Adaptación y validación de la versión turca del Informe Personal de Ansiedad al Hablar en Público

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Abstract

The purpose of this study is to adapt the Personal Report of Public Speaking Anxiety (PRPSA) scale into Turkish and study its validity and reliability. The original form of the scale has a single-factor structure and consists of 34 items. The study sample was composed of a total of 322 candidate teachers studying in the School of Education. Three items with fit values below 0.30 from the corrected item-total correlation were excluded from the scale and the analyses were conducted on the remaining 31 items. The construct validity of the scale was confirmed as a single factor through the Mplus software. Cronbach's alpha for the scale was 0.94, indicating that the scale also has a high level of reliability in the Turkish form. No significant differences were detected between male and female participants' speaking anxiety scores.

Keywords: Public speaking, anxiety, rating scales.

Resumen

El propósito de este estudio fue adaptar la escala "Informe Personal de Ansiedad al Hablar en Público" (PRPSA, por sus siglas en inglés) al turco y hacer estudios de validez-confiabilidad del mismo. La escala original se estructura en un solo factor y consta de 34 ítems. La muestra estuvo conformada por 322 profesores candidatos que estudian en la facultad de Educación. Tres ítems con valores de ajuste por

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debajo de 0.30 de la correlación total de ítems corregidos se excluyeron de la escala y se analizaron los 31 ítems restantes. La validez de la escala ha sido confirmada como un factor único por el software Mplus. El alfa de Cronbach presenta una confiabilidad de 0.94, lo que indica que la escala turca tiene también un alto grado de confiabilidad. Con respecto a la variable género no se detectaron diferencias significativas entre los puntajes de ansiedad de habla de los participantes.

Palabras clave: Habilidades comunicativas, ansiedad, escalas de medición.

I. Introduction

Many factors affect the essence and quality of education. Teacher competence is a crucial factor that directly affects educational quality. Teachers should have certain competencies to offer a high quality education. It is possible to enhance the quality of education by identifying the competencies that teachers, who play a key role in this process, should possess, and by offering these competencies to teachers through pre-service or in-service training programs (Konokman & Yelken 2013). Effective communication and speaking skills are an attribute every qualified teacher should have.

One of the most basic functions of today's teachers is to guide students during class, and by making them active in class, bring their students' behavior in line with the school's target. From this perspective, teachers should be trained to meet current requirements. As many scholars have stated, the quality of teachers and teaching is undoubtedly among the most important factors shaping students' learning (Ingersoll, 2004, p. 1; Shieh & Demirkol, 2014; Ozkan, Albayrak, & Berber, 2005; Hosgorur & Apikoglu, 2013). At this point, the importance of teacher training programs has become clear; however, as Morgan (1989) stated, one of the most neglected aspects of teacher training is preparation in the various communication skills needed by good teachers in today's schools. Hargreaves (1995) denounced this situation as it overlooks the emotional nature of teaching.

One important factor in increasing the impact on students is being able to communicate effectively in class. Many studies have reported that teachers with effective communication skills are very successful in establishing positive relationships with students and making them love the lesson (Hamre & Pianta, 1999; Sen & Erisen, 2002; Guskey & Huberman, 1995). Therefore, Andrzejewski (2008, 171) argues that this should constitute the sole focus of teacher preparation programs. Some of the basic skills that teachers will inevitably use in class such as planning, instruction, classroom management, communication, reflection, and assessment can be improved through practice. Communication and speaking are key teaching skills that can be improved through practice in university training programs.

The main purpose of this research is to adapt and validate the Turkish version of the Personal Report of Public Speaking Anxiety (PRPSA) for teacher candidates. The validation process involves accumulating evidence to provide a sound scientific basis for the proposed score interpretations (AERA, APA, & NCME, 1999, as cited in Goodwin & Leech, 2003). PSA can be described as "a situation-specific social anxiety that arises from the real or anticipated enactment of an oral presentation" (Bodie, 2010, p. 72). Public speaking ability is an important skill for teachers, who should be trained in this area. As stressed by Vangelisti, Daly, & Friedrich (2013), constructing speeches with accuracy, order, and rigor is vital. Helping individuals to become capable, responsible speakers helps them to become capable, responsible thinkers. However, according to Furmark et al. (1999), about 77% of the general population fears public speaking. A fear of public speaking causes anxiety and a decrease in achievement and motivation. There can be various reasons for public speaking anxiety, which causes individuals to experience negative feelings such as confusion, trembling, anxiety, tachycardia, a fear of making mistakes, shaking knees, a quivering voice, nausea, low performance in speaking, and a failure to express themselves (American Psychiatric Association, 2000, as cited in Hunter, Westwick, & Haleta, 2014; Gaibani & Elmenfi, 2014). It can be said that adapting the public speaking anxiety scale into Turkish will be beneficial due to the high rate of public speaking anxiety and the resulting pressure experienced by individuals. Indeed, ascertaining teacher candidates' public speaking anxiety levels may help to solve the problems that novice teachers face during the first year of their professional career. The findings of this study may help to define teacher candidates' PSA levels and also evaluate the capacity of teacher training programs to provide teacher candidates with the speaking skills they will badly need when teaching. Considering that problems in teacher training are

universal and similar in most countries, the result of the study will enable educators to consider teacher training programs at university level in a broader framework.

II. Method

This section of the study will explain the basic characteristics of the participants, the data collection instrument, and the procedure followed by the researchers.

2.1 Study sample

The study sample was composed of 322 randomly-sampled teacher candidates from universities in the Elazig, Bartın and Kahramanmaras provinces of Turkey in the 2014-2015 academic year.

Table I. Demographic characteristics of teacher candidates

Branch	Frequency	%
Classroom teachers	20	6.2
Social science teachers	117	36.3
Science teachers	134	41.6
Others	51	15.8
Gender	Frequency	%
Male	122	37.9
Female	200	62.1
Age	Frequency	%
18-23	190	59.0
24-29	102	31.7
30+	30	9.3
Total	322	100.0

It is evident from Table I that the majority of the participants are science teachers. Teachers under "others" consist of physical training and sports teachers and arts and visual arts teachers. The number of female teacher candidates participating in the research is higher than the number of male teacher candidates. The fact that the teaching profession is generally preferred by women has led to an increase in the number of females in the field (Ingersoll, Merrill, & Stuckey, 2014; Ozoğlu, Gur, & Altinoglu, 2013). Table I also displays the age interval of the participants. It is clear that the majority of participants are aged between 18 and 23. Those over 30 years old might be second-career seekers who are not satisfied with their current jobs.

2.2 Data collection instrument

The researchers gathered data through the PRPSA developed by McCroskey (1970) and Richmond and McCroskey (1992). The questionnaire consists of 34 questions that measure feelings associated with giving a presentation and has been reported as unidimensional. Participants were asked to indicate the degree to which the statements apply to them by marking whether they strongly agree (1), agree (2), are undecided (3), disagree (4), or strongly disagree (5) with each statement (Kostić-Bobanović, 2007). According to Richmond and McCroskey (1992), normalized PRPSA scores are divided into five categories (numbers in parentheses are the percentages of a normalized population fitting each category): scores between 34-84 indicate low anxiety (5%); 85-92, moderately low anxiety (5%); 93-110, moderate anxiety (20%); 111-119, moderately high anxiety (30%); and 120-170, high anxiety (40%). Mean scores on the PRPSA have rarely been reported, as the instrument was designed and used primarily for identifying highly anxious students. While 22 of the 34 items in the scale express a negative opinion, 12 items have positive meanings and were reverse-coded. This was the case for items 4, 6, 7, 8, 11, 12, 15, 16, 17, 18, 24, and 26. Thus, the scores obtained from the scale were collected in a single direction.

2.3 Procedure and findings

In the first phase of the adaptation process, the original English forms were translated into Turkish by two expert faculty members from the School of Education and an English language expert from the School of Foreign Languages. Then, the Turkish forms were back-translated and the language consistency between the two forms was reviewed. After the relevant corrections, the translated forms were examined by two faculty members competent in the field of measurement and evaluation. Hambleton and Kanjee (1993) mention that translators who are familiar with the target group and their language, who understand the content of the instrument and have received some training in instrument development, are most capable of producing a first-rate translation.

In the next phase, the latest form of the scale was used to collect data. For construct validity, a confirmatory factor analysis was conducted, before which the Kolmogorov-Smirnov test results were examined for each item in the PRPSA scale. According to the analysis results, normality was ensured for each item (P>0.05). The scale's internal consistency reliability, item analysis, and corrected item-total correlations were examined and the validity and reliability analysis was performed using SPSS 23.0 and Mplus. After the Item-Total Statistics analysis, 3 items were excluded from the form as the corrected item-total correlation loadings of these items were below .30. The item-total statistics analysis was repeated on 31 items.

Table II. Item-total descriptive statistics results

Item	Mean	Std. Deviation	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
1	2.93	1.301	94.3146	504.035	.614
2	2.71	1.263	94.5296	503.169	.650
3	2.70	1.181	94.5452	508.942	.587
4	3.19	1.215	94.0530	506.738	.610
5	2.59	1.227	94.6449	509.873	.546
6	3.20	1.181	94.0467	519.588	.383
7	3.12	1.226	94.1277	503.906	.658
8	2.87	1.275	94.3707	509.215	.535
9	2.91	1.195	94.3333	506.267	.631
10	2.44	1.227	94.8162	516.425	.428
11	3.17	1.218	94.0810	515.618	.443
12	3.48	1.192	93.7632	516.888	.430
13	2.62	1.079	94.6293	518.015	.457
14	2.61	1.002	94.6355	518.314	.489
15	2.38	1.007	94.8660	518.923	.472
16	2.69	1.206	94.5545	508.079	.590
17	2.91	1.294	94.3302	509.584	.520
18	3.41	1.233	93.8380	501.742	.694
19	3.04	1.232	94.2056	503.401	.664
20	2.96	1.221	94.2866	500.574	.723
21	3.17	1.211	94.0779	505.772	.631
22	2.49	1.033	94.7570	516.235	.518
23	3.37	1.098	93.8692	515.883	.493
24	2.69	1.228	94.5514	507.411	.591
25	2.87	1.226	94.3707	502.790	.681
26	2.84	1.186	94.4050	509.167	.580
27	2.37	1.178	94.8785	509.407	.581
28	2.63	1.350	94.6075	512.802	.442
29	3.25	1.272	93.9938	501.300	.682
30	3.10	1.272	94.1526	504.742	.616
31	3.01	1.318	94.2368	502.538	.632

Table II displays the values of the descriptive statistics and the impact on the reliability coefficient if items are excluded from the scale. The arithmetic mean, variance and corrected item-total correlation values can

be observed for each item. According to Table II, each item has an equal contribution to the scale. These results suggest that all items contribute to the overall score reliability of the scale.

The Kaiser-Meyer-Olkin value was examined before conducting the exploratory factor analysis and the KMO value was observed to be .945. The Bartlett's test result indicates that an exploratory factor analysis can be conducted (p=.00<.05). Therefore, an exploratory factor analysis was conducted on the data set based on the varimax principal component analysis method. The means of the explained variance and eigenvalues, according to the exploratory factor analysis, are given in Table III.

Table III. Eigenvalues and explained variance according to the results of the exploratory factor analysis

Components	Eigenvalues	% Variance
1	11.556	37.278
2	2.573	8.300
3	1.458	4.702
4	1.196	3.858

It can be concluded from Table III that there are four components with eigenvalues above 1. This suggests that the scale may be four-dimensional. However, when the eigenvalues of the factors and explained variance are examined, the eigenvalue of the first factor and explained variance are approximately five times greater than the other three. As the first factor explained most of the variance, the scale can be thought of as unidimensional. The original form of the scale was also designed as a single-factor scale. (Slocum-Gori & Zumbo, 2011; Kaya, 2005, as cited in Duru & Balkis, 2007; Kubiatko & Arik, 2014; Gorsuch, 2003, as cited in Slocom, 2005, p. 33; Yirci, Karaköse, Uygun, & Özdemir, 2016; Williams, Browns, & Onsman, 2012).

In order to verify the scale's single-factor structure, a confirmatory factorial analysis was carried out using the Mplus software. The Mplus software helps users in tasks such as developing a structural equation model, operating the model and evaluating multiple-level data (Muthén & Muthén, 1998-2010; Byrne, 2013). In a confirmatory factor analysis, the proposed model is examined and evaluated according to several indices. Various model fit indices are used to evaluate how well the proposed model fits the data. Examining several statistical and practical indices in order to determine whether or not to reject a particular model is very important (Brown, 2006; Heck & Thomas, 2015, p. 51). The values of some goodness-of-fit indices are more or less standardized as a range of 0–1.0, where a value of 1.0 indicates the best fit (Kline, 2015). Here are some indices and their value ranges showing acceptable model fit: 0.05≤RMSEA≤0.08, 0.05≤SRMR≤0.10, 0.95≤CFI≤0.97, 0.90≤TLI ≤0.10, 0.94≤ NFI≤0.90 (Schermelleh-Engel, Moosbrugger & Müller, 2003; Kline, 2011; Hooper, Coughlan, & Mullen, 2008; Wang & Wang, 2012). The fit indices in this study suggest that the model has a good fit (x²=840.891, df=403, RMSEA=.008, NFI=.94, TLI=.88, SRMR=.059) (Hu & Bentler, 1999). The Cronbach's alpha coefficient for the scale is α=.94.

The path diagram for the exploratory factor analysis conducted with the Mplus software is shown in Figure 1. It can be observed that the single-factor model is valid and the factor loadings of the scale range between .39 and .92.
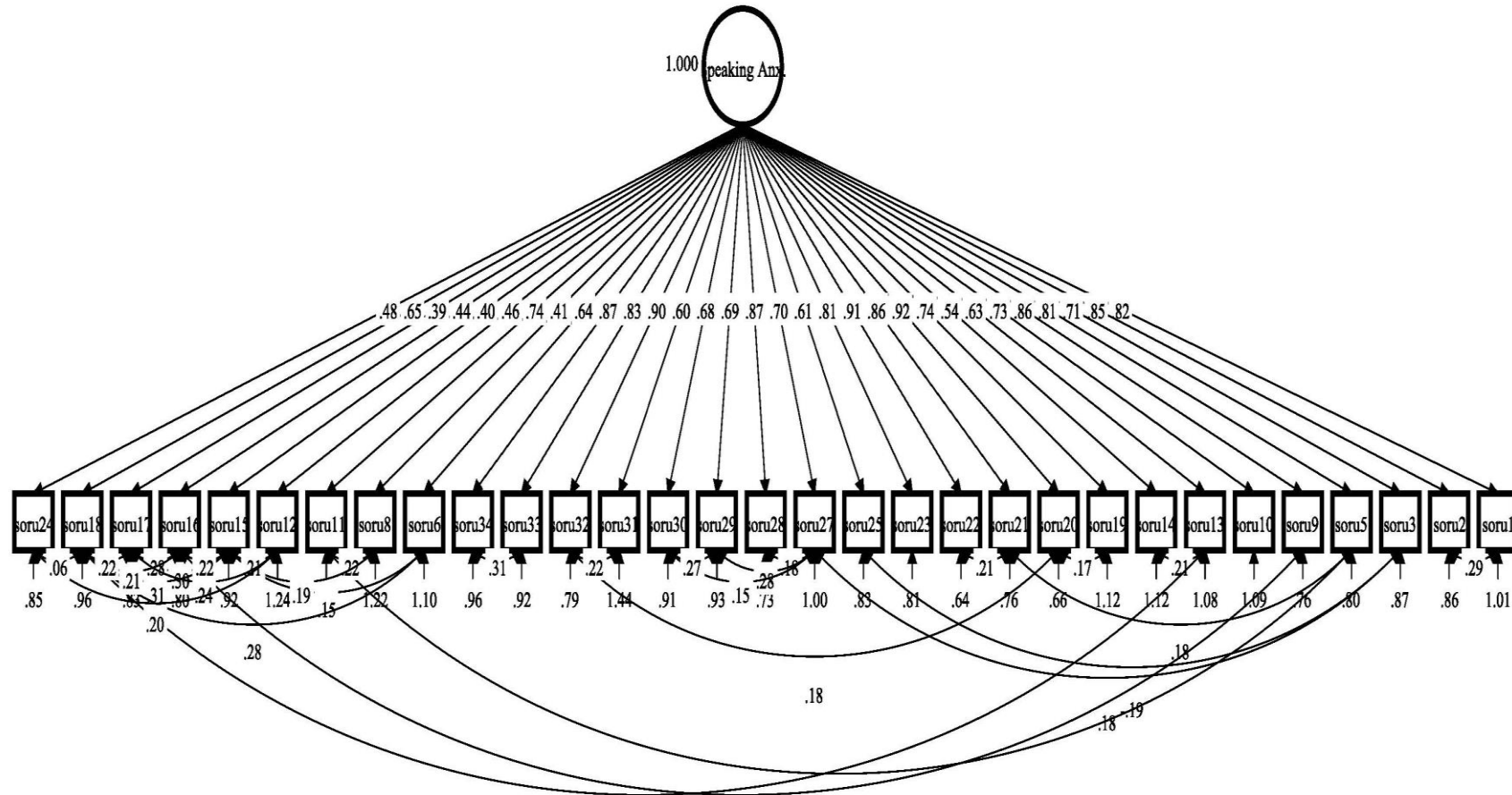
Fit indices: X²=840.891, df=403, RMSEA= .008, NFI=.94, TLI=.88, SRMR=.059

Figure 1. Path diagram for the unidimensional model of the PRPSA

The study also examined whether or not the gender variable differs significantly, with the aim of adapting the PRPSA scale into Turkish. The results of the independent sample t-test are given in Table IV.

Table IV. Public Speaking Anxiety Scale and results of the t-test on the gender variable

Gender	n	$\overline{\text{X}}$	SD	t	P	Levene's test	
						f	p
Male	122	2.70	.594	-3.281	.001	3.475	.063
Female	200	2.96	.717				

Table IV shows a significant difference between genders in the mean scores obtained from the Public Speaking Anxiety Scale. Female participants' mean scores ($\overline{\text{X}}$=2.96) were observed to be higher than those of males ($\overline{\text{X}}$=2.96), and this difference was statistically significant (p=0.001<0.05). This result indicates that female teacher candidates have a higher level of public speaking anxiety than male teacher candidates. There are various findings in this respect in the literature. For example, Matsuda and Gobel (2004) and Wang (2010) found that there was no significant difference in speaking anxiety according to gender. However, some studies, such as McCroskey, Gudykunst, and Nichida (1985), Mejias, Applebaum, Applebaum, and Trotter (1991), and Behnke and Sawyer (2001), have indeed shown a significant relationship between speaking anxiety and the gender variable, in that females have higher speaking anxiety levels than males.

During data collection, the participants were asked if they had received any lessons regarding communication or speaking skills in college. The results for this question can be seen in Table V.

Table V. Did you have a lesson on "communication" in college?

Student response	Frequency	%
Yes	116	36.0
No	206	64.0
Total	322	100.0

The results in Table V show that most teacher candidates in Turkey (64%) have not taken a lesson on communication, suggesting that curricula in teacher training departments in universities should be redesigned to include compulsory lessons on communication.

III. Conclusion

The main purpose of this research is to adapt and validate the Turkish version of the PRPSA for teacher candidates. In this respect, the effectiveness of equipping students with communication and speaking skills in current teacher training programs in universities is clear. The study sample was composed of 322 teacher candidates from Elazig, Bartın and Kahramanmaras. Data was collected through the PRPSA scale from students selected by random sampling. This data was then analyzed with the SPSS and Mplus software.

The coefficient for the Turkish version of the scale indicates that it has adequate reliability (Sipahi, Yurtkoru, & Çinko, 2008). The findings of the reliability and validity analysis show that the Turkish version of the PRPSA is ready for use in a Turkish context. The latest form of the Turkish version of the scale consists of 31 items and possible scores range from 31 to 155. The higher the score, the higher the participant's degree of public speaking anxiety. According to the analysis, Turkish teacher candidates show a moderately high level of public speaking anxiety. This suggests that traditional teacher training programs in Turkey are insufficient to equip teacher candidates with the necessary speaking skills. From this perspective, it seems necessary to adapt teacher training programs urgently.

The study also has a few limitations. Firstly, the study sample only included teacher candidates studying in college. Future studies could examine the public speaking anxiety levels of novice trainee teachers. According to the confirmatory factor analysis of the single-factor structure of the PRPSA scale, the scale has acceptable fit values. As a result, it could be used in future studies to research public speaking anxiety levels in university students studying in various other socially valued professional degree programs.

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