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**THE ADAPTATION OF SCHOOL REFUSAL ASSESSMENT SCALE
INTO TURKISH: RELIABILITY AND VALIDITY STUDIES***

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ABSTRACT

The purpose of this study is to do the study of adaptation of the School Refusal Assessment Scale developed to analyze the attitudes of secondary school and high school students towards school refusal and analyze the psychometric features of the scale in Turkish culture. The study is a scale adaptation study. In each phase of the adaptation study of the scale into Turkish, different workgroups were created from the secondary and high school students. Experts' opinions were asked for the language validity of the scale. Confirmatory factor analysis, criterion-related validity and reliability analyses were done to analyze the model fit of the factor structure of the scale in Turkish culture. As a result of the study, it was found that the model fit, criterion-related validity and reliability analysis of School Refusal Assessment Scale are in good level.

KEYWORDS

School refusal; reliability; validity; scale adaptation.

1. INTRODUCTION

Going to school is a new experience and a source of happiness for many pupils while for others it can become a really challenging and depressing situation beyond expected. This happens because pupils get separated from the people or places they trust or experience common emotional disorders such as anxiety and depression, which is defined as school refusal (Kearney and Silverman, 1996; Bahalı and Tahiroğlu, 2010; Haight, Kearney, Hendron and Schafer, 2011). Elliott (1999) and King and Bernstein (2001) define school refusal as a reaction that the pupil does because he becomes distanced to the people or places he trusts and as a result refuses to go to school. However, the behaviors of the pupils such as being uninterested to school or refusing adult authority, which are quite similar to those of school refusal, and the pupils who meet the criteria of behavior disorder should not be considered within this scope. "Truancy" is generally used to define these pupils and adolescents in this group (Berg, 1992; King and Bernstein, 2001). Kearney and Silverman (1996), Carroll (2010)

* This study was presented at the 1st International Eurasian Educational Research Congress in Istanbul, Turkey, 24-26 April 2014

and Ünal (2012), summarized the common characteristics of the pupils who have school refusal as long-term school absence as having trouble to attend the school, feeling extensive fear and having burst of rage when asked to attend the school, unhappiness, physical complaints thought to be somatic, and medium or high academic success in general. The case is different in the truant pupils. Hersov, (1990) and Berg, (1992) suggested that truant pupils show have some prominent symptoms such as having low academic success in general, not having anxiety or feeling fear about attending the school, being uninterested in school, concealing their absenteeism from their parents, showing anti-social behaviors and behavior disorders. It is suggested that many factors play an important role in the occurrence of school refusal. Among these are particularly traffic accidents, serious diseases he or his parents have had, domestic violence and interparental conflict, divorce and being exposed to violence, changing classroom or the school, passing to a upper grade, having problems with the other pupils in the school, the attitudes of parents and teachers, and having educational and social expectations way above from the pupil's capacity (Hersov, 1990; Holzerve Halfon, 2006; Yolcu, 2013).

Studies dealing with the extensity of the pupils who have school refusal show that extensity of this problem is almost 1 or 5 % (Last, Strauss, 1990 and Bahalı and Tahiroğlu, 2010). Also, the studies dealing with the relation between the school refusal and gender show that school refusal is equal among boys and girls (Granell, Vivas, Gelfand and Feldman, 1984; Heyne, King, Tonge and Cooper, 2001). In Turkey, the number of the studies dealing with school refusal is limited and it can be said that it has become popular recently (Özcan et al. 2006; Bahalı and Tahiroğlu, 2010). In the current Turkish literature, it seen that instruments which determine school phobia and separation anxiety are preferred to be used to analyze the school refusal and related variables (Büküşoğlu, Aysan and Eremiş, 2001; Özcan et al. 2006; Bahalı et al. 2009). The main motivation source of this study is that the researcher has not found any instrument to be used to analyze the school refusal and its related variables in Turkey. In this direction, the purpose of this study is to adapt the School Refusal Assessment Scale into Turkish and analyze the psychometric features of the scale. It is thought that with the adaptation of this scale into Turkish, a substantial gap will be filled and the researchers who want to analyze the school refusal and its related variables will have the opportunity to use a reliable and valid scale to do so.

2. RESEARCH DESIGN AND METHOD

2.1 Sample

In the process of the adaptation of the scale, different samples from the secondary and high school students getting in Erzurum were created with appropriate sampling method to do the reliability and validity studies of the scale. In this direction, in the pilot scheme was done on 75 students (45 girls and 30 boys) and item analysis was done with 105 students (60 girls and 50 boys), factor analysis was done with 480 (248 girls and 232 boys), similar scale validity was done with 105 students (65 girls and 40 boys), internal consistency and split-half reliability analyses were done with 90 students (51 girls and 39 boys), and test-retest reliability analyses were done with 48 students (25 girls and 23 boys).

2.2 Data Collection Tools

2.2.1 School Refusal Assessment Scale

School Refusal Assessment Scale is a likert-type instrument which was developed by Haight et al. (2011) and consists of 22 items and four sub-dimensions to analyze the school refusal and its related concepts in children and adolescents. The sub-dimensions of the scale are; *avoidance of the negative situations related to school, having difficulty in engaging socially, resisting to leave parents, and being interested in out of school activities*. Confirmatory factor analysis was done to analyze the factor structure of the scale and it was found that the model fit of the four-factor structure was in good level. The CFA model fit indexes are as following: REMSEA: .066, CFI: .90, SRMR: .060. The internal consistency scores of the scale for the sub-dimensions were found to be .83, .82, .79 and .73, respectively.

2.2.2 Educational Stress Scale:

Educational Stress Scale is a likert-type scale developed by Sun, Dunne, Hou and Xu (2011) and adapted into Turkish by Seçer, Veyis and Gökçen (2014). In the process of the adaptation of the scale, exploratory and confirmatory factor analyses were done for the construct validity. In EFA, a four-factor structure that explains the 62.32 % of the total variance was obtained and the model fit of this structure in CFA was determined to be in good level (RMSEA=.054, RMR= .013, CFI=.96, SRMR: .052). The internal consistency coefficient of the scale was found to be .86, and test-retest reliability coefficient was found to be .81.

2.2.3 School Burnout Inventory

School Burnout Inventory is a 5 likert-type scale developed by Salmela-Aro, Kiuru, Leskinen and Nurmi (2009) and adapted into Turkish by Seçer and at all (2013) and consists of 9 items and three sub-dimensions. It was found that the scale has a three-factor structure which explains the 66.85 % of the total variance and the model fit of this three-factor structure is well (REMSEA=.042, RMR=.012, CFI=.96, SRMR=.41). The internal consistency coefficient of the scale was found to be .87, test re-test reliability coefficient was found to be .88.

3. RESULT

3.1 Pre-Applications and Findings Related to the Parametric Nature of the Data Set

In each phase of adaptation process, the range values of skewness, kurtosis and mahalanobis were analyzed to determine the extreme values of the data set, and for the normality values Kolmogorov-Smirnov normality tests were done. Besides, linearity and multicollinearity analyses were done and it was determined that the data set has parametric compliance.

3.2 Construct Validity

3.2.1 Confirmatory Factor Analysis (CFA)

Model fit of School Refusal Assessment Scale in Turkish culture was done with simple CFA. Multiple fit indexes were used in CFA as in general. Marcoulides and Schumacher (2001) and Kline (2011) suggest that in factor analysis, model fit indexes for RFI, CFI, NFI, NNFI and IFI should be $\geq .90$ for an acceptable fit and $\geq .95$ for a perfect

fit, for GFI and AGFI they should be $\geq .85$ for an acceptable fit and $\geq .90$ for a perfect fit, and for RMR, REMSEA and SRMR they should be $\leq .08$ for an acceptable fit and $\leq .50$ for a perfect fit. As a result of simple confirmatory factor analysis done to determine the model fit of School Refusal Assessment Scale, it was found that the model fit indexes of the scale consisting of 20 items were not adequate (REMSEA: .084, RMR: .073, NFI: .87, NNFI: .89, CFI: .90, IFI: .90, RFI: .89, GFI: .86 ve AGFI: .82). In the 20-item-and-four-factor form of the school refusal assessment scale, it was determined that the factor load value of the 20th item was .19 and t value ($t= 1.02$, $p>.05$) was not significant, and this item was excluded from the scale and the analysis was redone. As a result of the redone analysis, it was determined that the fit of the 19-item-and-four-sub-dimension form of the scale was well, and the model fit and fit indexes of it were adequate. Hereunder, Chi-square value of school refusal assessment scale ($\chi^2=203.32$, $Sd=139$, $p=.00$; $\chi^2/sd=1.46$) was significant and χ^2/df relate to model fit was found as 1.46. Table 1 indicates the findings and model fit indexes related to simple confirmatory factor analysis done to analyze the model fit of the four-factor structure of the scale.

Table 1
Evaluation of the Confirmatory Factor Analysis

Model	X/df	RMSEA	RMR	NFI	CFI	GFI
Model A 20 Item 4 factor	3.6	.084	.073	.87	.90	.86
Model B 19 Madde 4 faktör	1.46	.048	.012	.92	.94	.91

As a result, it can be said that School Refusal Assessment Scale that consists of 19 items and four factors have well fit and the model is certified.

3.3 Criterion-Related Validity

Correlations between Educational Stress Scale–School Refusal Assessment Scale and School Burnout Inventory were analyzed to determine the criterion-related validity of the school refusal assessment scale. According to the findings the school refusal assessment scale has significant and positive-way relations between Educational Stress and School Burnout scales. This evidence can be considered as the school refusal assessment scale has criterion-related validity.

3.4 Reliability

Internal consistency, split-half and test-retest reliability analyses were done to determine the reliability of the school refusal assessment scale. According to the findings Cronbach Alpha internal consistency coefficient of the school refusal assessment scale was found as .86, Spearman Brown split-half reliability coefficient was found as .85, and test-retest reliability coefficient –which was done two weeks later- was found as .86.

4. CONCLUSION AND SUGGESTION

In the adaptation process of the scale into Turkish, linguistic equivalence was tried to be provided and experts' opinions were taken into consideration. Besides the experts' opinions, pilot schemes were done and internal consistency of the scale and item total correlations were analyzed, and internal consistency was found as .92 and item total correlations were found between .34 and .60. Confirmatory factor analysis was done to

analyze model fit of the four-factor structure of the original form of the scale in the Turkish culture. In CFA, it was determined that the 20-item form of the scale had inadequate model fit and fit indexes and the 20th item was incompatible with the whole scale ($t=1.04$, $p>.05$). This item was excluded from the scale and the analysis was redone. As a result of simple CFA, it was determined that the model fit and fit indexes of the four-factor structure of the scale was in adequate level. In the direction of the findings obtained through confirmatory factor analysis, it can be said that the four-factor structure in the original form of the scale is preserved on the Turkish sample. In criterion-related validity study, the relations between school refusal assessment scale-educational stress scale and school burnout inventory. The obtained evidence showed that the four sub-dimensions of the school refusal assessment scale had significant and positive-way relations with the scores of educational stress scale and school burnout inventory, so it can be said that the scale has criterion-related validity. Internal consistency, split-half reliability and test-retest reliability analyses were done to determine the reliability of the school refusal assessment scale. Also, it was determined that the scale has adequate reliability scores. In scale development and adaptation studies, considering that scales with a .70 and above reliability coefficient are accepted to be reliable (Nunnally and Bernstein, 1994), it can be said that the internal consistency, split-half and test-retest coefficients of the school refusal assessment scale reliability coefficients are adequate. The school refusal assessment scale is a 5 likert-type scale and the scores that can be got from the scale range between 0 and 76. The highness of the scores that can be got from the total scale indicate school refusal. Besides, scores for each sub-dimension of the scale are calculated, and the highness of the score from the each sub-dimension indicates school refusal in the related dimension. As a result, it can be said that School Refusal Assessment Scale whose adaptation into the Turkish culture was done within this study is a valid and reliable instrument to be used to determine the attitudes of the secondary and high school students towards school refusal.

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