Original Article

Validity and reliability of the Pictorial Pediatric Symptom Checklist

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Abstract

Objectives: This study was conducted methodologically to adapt the Pictorial Pediatric Symptom Checklist (PPSC) into Turkish and test its validity and reliability. The adaptation of the PPSC into Turkish will ensure the early diagnosis at risk children aged 6–16, directing families and children to necessary health institutions in a timely manner for detailed diagnosis and treatment; it shall also mean that nationwide studies can be conducted at a lower cost, as well as more effectively and more easily.

Methods: This methodological study was completed using 799 parents whose children, aged 6–16 years, were studying in two different primary schools in Istanbul.

Results: Content and construct validity were used to validate the PPSC, while internal consistency and test-invariance technique were used for reliability. The Content Validity Index was found to be 92.2%. Within the item-total correlations, only one item's correlation (item 20) was found to be below 0.30 and it was removed from the scale. Thus, the factor analysis of the scale was applied to a total of 34 items. A four-factor structure emerged as a result of the factor analysis and the factor loadings of the items were found to be between 0.33 and 0.72. The total variance of the four-factor structure is 37.63%. The Cronbach alpha value of the PPSC was calculated as 0.89.

Conclusion: The Turkish version of the PPSC was found to be a valid and reliable surveying tool that provides the opportunity to examine children' psychosocial and behavioral problems.

Keywords: Child and adolescent mental health; PPSC; validity and reliability.

Mental health is as important as physical health regarding those indicators that relate to children's health. Mental illnesses affect the lives of children and their family in all their aspects. It was reported that approximately 10–15% of pre-school children experience social/emotional problems;[1,2] these problems cause severe issues for their families, and may lead to the impairment of function and quality of life for affected children and their families in subsequent years.[3,4] In this sense, early diagnosis and treatment of psychosocial problems are important for the child and their family.[5,6]

According to a survey report conducted in London's Barking and Dagenham region it is estimated that, in 2015, 10.4% (n=6796) of children under the age of 19, and 11% (n=7188) of young adults were diagnosed with mental illness. It is predicted that at least 8,044 children and adolescents living in this region by 2020 will have a mental health problem that requires the application of "Child and Adolescent Mental Health Services (CAMHS)".[7] In Bista et al.'s[8] 2016 study using 787 students at 13 schools in Nepal, 17.03% of the adolescents were found to have psychosocial problems, a result that the authors of the study found alarming. Waddell et al.[9] (2002) reported that the rate of having any mental disorder in childhood and adolescence was 9.5% in Britain, 12.7% in Brazil, and 14.5% in Germany.

Baysal et al.[10] (2004) also reported that attention deficit and disruptive behavior disorders, anxiety disorders, and depres-

What is known on this subject?

• The aim of this study was to determine the validity and reliability of the Psychosocial and Behavioral Problems Checklist (PPSC) in order to facilitate the early diagnosis of psychosocial problems in healthy children.

What is the contribution of this paper?

• In Turkey, the screening tools which diagnose psychosocial and behavioral problems in healthy children are insufficient. In this respect, gaining a measurement tool will be a gain for nursing literature.

What is its contribution to the practice?

• This study found that the PPSC is a general and reliable screening tool due to its easy removal and low cost regarding its daily clinical use by health personnel and other healthcare professionals.

sive disorders are all common conditions among children in Turkey, especially among children aged 6–15 years. Durukan et al.[11] (2011) found that 74.7% of all cases were diagnosed as psychiatric cases among 538 children–adolescents, and that the most frequent diagnoses were attention deficit and disruptive behavior disorders at 26.5%, generalized anxiety disorder at 7%, mental retardation at 5.7%, depression at 5.2%, and enuresis at 5%.

The source of mental problems in adults can often be explained by childhood psychosocial problems.[12,13] Kim-Cohen et al.[14] (2003) reported that 25–60% of all adult mental problems have a history of disruptive behavior problems in childhood. Early diagnosis is thought to be effective in reducing these problems. However, identifying such problems in children is highly difficult. Sheldrick et al.[15] (2011) point out that primary care physicians see children outside of their natural environment and for a limited period of time; they only use their clinical impressions and they do not carry out survey studies. As a result, developmental–behavioral problems in children may be difficult to diagnose.

Globally, there are only a few surveys that diagnose behavioral problems, which are also free and that require no professional expertise for scoring One of these is the Pediatric Symptom Checklist (PSC), which is used to facilitate the diagnosis of cognitive, emotional, and behavioral problems. The PSC is used in the United States and in other countries as a reliable tool to identify the psychosocial and behavioral problems in different pediatric populations.[5,16–19] The Turkish validity and reliability study on the PSC, as developed by Jellinek et al.[16] (1999), was performed by Erdoğan and Öztürk[20] (2011). In 2007, Leiner et al.[5] added a feature that would be more noticeable by parents, through the creation of the PPSC question form—which they developed by adding pictures for each question—thereby making the questions more visually appealing for children and more attention-grabbing and easier to use for families. When using the PPSC, Joshi et al.[21] (2017) found that the prevalence of emotional and behavioral problems among 258 HIV-infected children was 11.2%. Leiner et al.[22] (2015) found that 12% of American children had emotional and behavioral problems in a comparative study of communities living near the Mexican–American border. Comparatively, among Mexican children, this rate was found to be 31%. The study conducted by Erdoğan and Öztürk[20] (2011) showed that the

prevalence of childhood psychiatric problems was about 14%.

In this context, the main purpose of the current study was to adapt the PPSC for use in Turkish society, which will facilitate the early diagnosis of psychosocial problems in children from Turkish families, especially those of low socioeconomic status. The most important reason for choosing the PPSC in this study was that this surveying tool contains pictures that facilitate the easy collection of information from large groups in a short time. It was reported that the multidimensional characteristics of surveys with pictures—such as color, shape and size—have several advantages in transmitting the main message, and also that some people are better at perceiving pictures in comparison to using words.[5] The PPSC that uses pictorial descriptions is generally completed by families in a period that is less than ten minutes and makes it possible to assess the child's functions in several psychosocial fields, such as the child's feelings, behaviors, family, and friends. In their 2007 study, Leiner et al.[5] showed that this diagnostic tool does not provide a specific diagnosis, but rather serves as an indicator for diagnosing potential psychosocial problems. Although measurement tools to diagnose children and adolescents exist Turkey, there is little to no measurement tool to identify children who are at a high risk of experiencing emotional and behavioral problems in early childhood period. Apart from the study conducted by Erdoğan and Öztürk[20] (2011), another, iterative purpose has not been found for this screening tool. Based on the needs of our country in this field, PPSC which has previously been adapted to Turkish and validated by this study, is thought to make a significant contribution to the literature.

This study was conducted with the aim of answering the following question.

1. Is PPSC a valid and reliable measurement tool that may be used for the early diagnosis of psychosocial and behavioral problems of children in Turkish society?

Materials and Method

Design

This study was carried out methodologically to adapt the PPSC, developed in 2007 by Leiner et al.,[5] to Turkish society.

Population and Sample

The study population comprised 2,613 parents whose children were studying at two public primary schools in the Province of Istanbul, Turkey (Anatolian side), both of which had more than 1,000 students, and that accepted collaboration to conduct this study. A total of 838 people who agreed to participate in this study from among these 2,613 parents formed the study sample. The data collection forms from 19 parents were removed from the analysis as they were filled out incompletely, and the final sample consisted of 799 parents. It is stated that, for scale adaptation studies, the size of the sample in methodological studies should be at least five times the total number of items in the scale. Although no clear information for scale

adaptation studies exists, it is reported that reliability increases as the number of participants increases.[23] As reported in 2005 by Şencan,[24] according to Comrey and Lee[25] (1992), a sample size n=50 is very weak; n=100 is weak; n=200 is mediocre; n=300 is good, n=500 is very good, and n=1000 is excellent.

Inclusion Criteria

• Voluntary participation in this study,

• Evaluations of parents with children aged 6–16 years.

Exclusion Criteria

• Assessments of parents, whose children had previously been diagnosed with a psychosocial and behavioral problem and whose children have received or been receiving any treatment in this regard, were not included in the study.

• Questionnaire forms with four or more blank items were also excluded from the scope of the study.

Data Collection Tools

Survey data were collected by the "Information Form", which was prepared by the researcher and composed of sociodemographic characteristics, and the PPSC. Surveys with explanations about the purpose of the study and the content of questionnaire forms were enclosed in sealed envelopes, accompanied by the school counselors, and distributed to the students with necessary explanations; the students were asked to take the envelopes to their parents. The envelopes were collected as they had been sealed by students.

Information Form

This form consists of 20 questions and includes questions on the child's demographic characteristics, such as their age, gender, and class, as well as questions on familial characteristics and assessments of the presence of a previously diagnosed psychosocial disease.

Pictorial Pediatric Symptom Checklist (PPSC)

The validity and reliability of the PPSC, according to Leiner et al.[5] (2007), was used by parents to evaluate the behavior of their children in regarding to the early stages of psychosocial problems among children aged 6–16. The PPSC consists of a scale whose checklist where questions are scored according to a 3-point Likert-type scale. It is expected that the expressions and pictures of the scale will be evaluated by the parent as being "Not True/Never", "Sometimes or Somewhat True", and "Frequently True". Items are scored between 0 and 2, with the scale's highest possible score being 70. If one to three items on the scale are left blank by the parents, they are evaluated as (0). If four or more items are left blank, the questionnaire is considered invalid. Leiner et al.[5] (2007) determine the cutoff score as 28 and over for children aged 6–16 years. High

scores indicate a risk. Items 5, 6, 17, and 18 in the PPSC relate to school conditions, and are canceled for children aged 4–5 who are not enrolled in school. The total score is calculated based on the remaining 31 items. For young children (aged 4–5), the cut off score is 24 and over.

Translation

Translation and back-translation was used for the language adaptation of the scale. Each section of the Pictorial Pediatric Symptom Checklist (PPSC) parental form was translated from English into Turkish by two people: one instructor from the School of Foreign Languages, and one lecturer from the English Language and Literature department, who had overseas experience. Translation reliability was increased by using two different translators, and attempts were made to avoid loss of meaning that might have arisen from a lack of field knowledge. The joint Turkish text obtained in the translation process was then translated back into English by another expert member of the teaching staff at the School of Foreign Languages, who was blind to the translation process. At the first stage, the project manager and experts who were experienced in both languages evaluated the original text, the 1st translation and the 2nd translation texts together, and thereby created a joint text.

Data Analysis

Study data were evaluated using the SPSS 20.0 (Statistical Package for the Social Sciences) software program. The Kolmogorov–Smirnov test was used to evaluate the normal distribution of variables. In the analysis of the study data, descriptive statistics (frequency, percentage, mean, standard deviation) showing normal distribution were used, and Student's t-test was used to compare the means of the variables for two subgroups. ANOVA was used to compare the means of the variables with more than two subgroups. P-values <0.05 were accepted as being statistically significant. Pearson's correlation test was used to determine test–retest reliability.

In terms of content validity, a pilot study was conducted with 20 families to demonstrate how the items were understood by members of the Turkish community. After approximately three weeks of piloting, the American grading system (A, B, C, D, E, F) as shown in the picture in item (#18) was revised according to the grade system used in primary education in Turkey (5, 4, 3, 2, 1). The opinion of an art teacher was given in regard to how the pictures would be perceived by the parents.

The content validity of the scale was tested based on expert opinion. Accordingly, the scale was sent to a total of eleven specialists, including four Mental Health and Psychiatric Nursing Faculties, one Public Health Nursing Faculty member, three Psychiatry faculty members with medical Specialization, one Sociology Department faculty member, and two Psychology Department Instructors, so that each item of the scale could be evaluated in terms of its suitability and understandability.

The internal consistency of the scale was assessed based on the Cronbach's alpha coefficient. The factorial structure of the scale was determined by the exploratory factor analysis technique. The principal component analysis technique and the varimax rotation method were then used to identify the factors.

Ethical Considerations

Dr. Marie A. Leiner, the original developer of the PPSC, currently works as a professor of pediatrics at the Texas Tech University Health Sciences Center. Leiner was first contacted by the authors via mail in November 2011, and the necessary permission to use the scale was received in writing via e-mail. The necessary permits were obtained in writing from the participating schools from the Maltepe District Directorate of National Education in the province of Istanbul. Before the data were collected, participants were informed about the purpose and procedures of this study, and written consent was obtained from all participants by using informed consent forms. Lastly, written permission was obtained from the Marmara University Health Sciences Institute Ethics Commission (22.05.2012-1).

Results

On examination of the parents' sociodemographic characteristics, it was found that the parents' mean age was 36.69+5.77 (n=799), that 80% of parents (n=636) were women, and that 95.2% (n=757) were married. The mean number of children the participants had was 2.47+1.16, while 55.2% (n=438) had one or more other children. Overall 64% (n=504) were not employed, while 78% (n=613) had moderate income levels. Overall 69.8% of the mothers (n=554) and 59.1% of the fathers (n=472) had primary-school degrees. It was found that 3.2% of the parents (n=25) and 1.3% of their spouses (n=10) had a psychosocial problem; among these, 4.7% of parents (n=22) and 1.5% of their spouses (n=7) had been received treatment for their problems (Table 1).

Content Validity

In this study, 11 experts were consulted for their opinions for content validity, and the content validity of PPSC was found to be 0.92. The CVI scores of the 7th, 19th, and 20th items were found to be 72.7%, 54.5%, and 63.6%, respectively. These low-scored items were revised in line with expert recommendations.

Construct Validity

Kaiser-Meyer-Olkin (KMO) and Bartlett's test results were taken into account when determining whether the size and structure of the sample were appropriate for the factor analysis. The KMO value (0.91) showed that the sample size of 799 individuals was sufficient, while the results of Bartlett's test

Table 1. Distribution of the sociodemographic characteristics of parents (n=799)

Characteristics	n	%
Has another child		
Yes	356	44,8
No	438	55.2
Mean number of children	2.47+1.16	(1–10 çocuk)
Mean age	36.69+5.77	(18–61 yaş)
Gender		
Female	636	80
Male	159	20
Employed		
Yes	284	36
No	504	64
Marital status		
Married	757	95.2
Widowed/divorced/separated	38	4.8
Income level		
Low	158	20.1
Moderate	613	78.0
High	15	1.9
Mother's education		
None	19	2.4
Primary school	554	69.8
High school	178	22.4
University or higher	43	5.4
Father's education		
None	6	0.8
Primary school	472	59.1
High school	260	32.6
University or higher	60	7.5
Presence of psychosocial health problems in parents (panic attack depression, conversion disorder, bipolar disorder, obsession)		
Yes	25	3.2
No	766	96.8
Received treatment		
Yes	22	4.7
No	446	95.3
Presence of psychosocial health problems in parents' spouses (mental retardation, panic attack, depression, social phobia)		
Yes	10	1.3
No	776	98.7
Spouse received treatment		
Yes	7	1.5
No	449	98.5

(p<0.01) showed that the data had normal distribution. The factor analysis of the scale was applied to a total of 34 items after a single item was excluded from the scale. The factor

Table 2. Findings on the exploratory factor analysis of PPSC

	Factor 1		Factor 2		Factor 3		Factor 4	
	29	0.717	13	0.665	8	0.591	30	0.589
	16	0.636	3	0.585	4	0.522	31	0.561
	32	0.629	11	0.581	23	0.492	10	0.561
	25	0.614	19	0.533	7	0.483	35	0.469
	5	0.611	18	0.483	22	0.467	15	0.419
	33	0.566	24	0.479	1	0.438	14	0.348
	6	0.516	27	0.474			9	0.334
	34	0.466	2	0.431				
	26	0.431	21	0.341				
	12	0.411						
	17	0.350						
	28	0.339						
Eigen value	7.817		2.354		1.635		1.363	
Explained variance	22.335		6.726		4.670		3.895	

PPSC: Pictorial Pediatric Symptom Checklist.

analysis revealed a four-factor structure. The eigen values of the factors were greater than 1 with the explained variances of 22.335; 6.726; 4.670 and 3.895. The total variance explained by the four-factor structure is 37.63%.[26] The factor loadings of the items ranged from 0.33 to 0.72. (Table 2).

Reliability

Item analysis: All items showed highly significant correlations (p<0.001). The lowest correlation value was 0.26 (#20), and the highest correlation value was 0.64 (#13) (Table 3).

Internal consistency: The total Cronbach's alpha coefficient was found to be 0.89. The Cronbach's alpha coefficient for Factor 1 (Attention subscale) was 0.82, and the Cronbach's alpha coefficient for Factor 2 (Externalization problem subscale) was 0.74. For Factor 3 (Internalization problem subscale), the Cronbach's alpha coefficient was 0.59, while for Factor 4 (Unclassified), the Cronbach's alpha coefficient was 0.70 (Table 3).

Test-retest reliability: The test–retest reliability of PPSC was examined two weeks after the application (93 people). Accordingly, it was shown that the reliability level was sufficient after the correlation (r=0.94, p<0.001).

Discussion

Determining the children who deviate from normal development in terms of the frequency, intensity, and duration of their behavioral problems comprises the cornerstone of primary and secondary protection studies. In this sense, this study adopted the PPSC, the pictorial version of the PSC—known as a worldwide surveying instrument for different societies—to Turkish society. This adaptation enabled the diagnosis of psychosocial problems in children and adolescents early by achieving equivalence between the Turkish version and the

English original in terms of meaning, concept, content, criterion, implementation, item, and measurement values.

The methodological results of the study were comparatively discussed along with a limited number of other studies that used the PPSC and PSC, the non-pictorial version of PPSC. The content validity of PPSC was calculated by the Content Validity Index (CVI), and the CVI value was found to be 92.2%. According to the literature, when the minimum number of specialists is 11; CGI 0.59 considers sufficient.[23] This value was of a satisfactory level based on the literature, which asserts that content validity may be deemed adequate if CVI is greater than 0.80; this value shows that PPSC is statistically significant.[26]

In this study, the item-total correlations of the PPSC were found to have values between 0.26 (#20) and 0.64 (#13). Additionally, all items showed highly significant correlations (p<0.001). For a scale to be considered reliable is expected that the item-total correlations are greater than 0.30.[26] In this sense, only one item (#20) did not satisfy this criterion. Among Turkish PSC studies, item-total correlation coefficients were found to range from 0.30 to 0.70.[20]

In this study, a further reliability value—the Cronbach's alpha internal consistency coefficient—was found to be 0.89, which is a sufficient level. In 2003, Borowsky et al.[27] showed that the total Cronbach's alpha consistency of PSC was 0.67. The result of this study, in addition to satisfying the Cronbach's alpha criterion adequately, was similar to the results obtained in the PSC Turkish adaptation study of carried out by Erdoğan and Öztürk[20] (2011); Erdoğan and Öztürk[20] (2011) found the alpha value to be 0.81. The results of PSC's original version were equal to those in the 1999 PSC study by Gardner et al.,[28] the 2006 adaptation study of the Dutch PSC by Reijeneveld et al.,[29] and the 2009 Philippines PPSC by Canceko-Llego et al.[30]

In this study, time-invariance technique was used to deter-

Table 3. Total correlations of the PPSC and Cronbach's Alpha

Factor	Items	Item Total Correlation	p	Cranbach Alpha
Attention subscale	5 Has trouble with teacher	0.49	0.000**	0.82
	6 Less interested in school	0.56	0.000**	
	12 Is irritable, angry	0.63	0.000**	
	16 Fights with other children	0.52	0.000**	
	17 Absent from school	0.38	0.000**	
	25 Takes unnecessary risks	0.52	0.000**	
	26 Gets hurt frequently	0.44	0.000**	
	28 Acts younger than other children his or her age	0.44	0.000**	
	29 Does not listen to rules	0.61	0.000**	
	32 Teases others	0.49	0.000**	
	33 Blames others for his or her troubles	0.53	0.000**	
	34 Takes things that do not belong to him or her	0.32	0.000**	
Externalization problem subscale	2 Spends more time alone	0.35	0.000**	0.74
	3 Tires easily, has little energy	0.30	0.000**	
	11 Feels sad, unhappy	0.55	0.000**	
	13 Feels hopeless	0.64	0.000**	
	18 School grades dropping	0.53	0.000**	
	19 Is down on himself or herself	0.48	0.000**	
	21 Has trouble sleeping	0.37	0.000**	
	24 Feels he or she is bad	0.40	0.000**	
	27 Seems to be having less fun	0.51	0.000**	
Internalization problem subscale	1 Complains of aches and pains	0.37	0.000**	0.59
	4 Fidgety, unable to sit still	0.44	0.000**	
	7 Acts as if driven by a motor	0.39	0.000**	
	8 Daydreams too much	0.40	0.000**	
	22 Worries a lot	0.46	0.000**	
	23 Wants to be with you more than before	0.35	0.000**	
Unclassified	9 Distracted easily	0.59	0.000**	0.70
	10 Is afraid of new situations	0.41	0.000**	
	14 Has trouble concentrating	0.62	0.000**	
	15 Less interested in friends	0.46	0.000**	
	30 Does not show feelings	0.42	0.000**	
	31 Does not understand other	0.51	0.000**	
	35 Refuses to share	0.36	0.000**	

PPSC: Pictorial Pediatric Symptom Checklist.

mine reliability, and the result (r=0.94) showed that there was a strong relationship (>0.80) at the reliability level.[24] In the 2001 study by Erdoğan and Öztürk(20), the Turkish PSC was found to have a coefficient value of r=0.72 in terms of time-invariance.

While there is no literature on the sub-dimensions of the total, 35-item-version, of the PPSC, the sub-dimensions were determined in the 2009 Philippines version by Canceko-Llego et al.[30] For this reason, in this study, the factor analysis of the Turkish PPSC was also examined, while one item (#20) with an item-total correlation coefficient of lower than 0.30 was removed from the analysis. A four-factor structure was found as a result of the factor analysis of the Turkish PPSC. The first fac-

tor covered 12 items; five of these 12 items (#16, 29, 32, 33, and 34) were in the Externalization sub-scale in the original English version, while seven (#5, 6, 12, 17, 25, 26, and 28) were non-categorized items. While five of the nine items in the second subscale (#11, 13, 19, and 27) correspond to the Internalization sub-scale in the original English version, four (#2, 3, 1, and 24) were non-categorized. While three of the six items in the third factor (#4, 7, and 8) corresponded to the Attention sub-scale in the original English version, one (#22) corresponded to the Internalization sub-scale. Two items of the same factor (#1 and 23) were non-categorized items. The fourth factor comprised seven items. While two items (#9 and 14) corresponded to the

Attention sub-scale in the original English version, two (#31 and 35) corresponded to the Externalization sub-scale. Three items (#10, 15, and 30) were non-categorized.

Similarly, in their study, Canceko-Llego et al.[30] (2009) explained the factorial structure of the PPSC according to four factors. The first factor covered 12 items, and it can be seen that this factor combined the items in the Attention sub-scale and those in the Externalization sub-scale; it defined children who frequently experience problems with adults as being categorizable as such due to their aggressive attitudes and fights with their peers. The second factor covered items in the Internalization sub-scale and non-categorized items; it showed a structure that generally defined timid and silent children as being usually sad and anxious, and who lacked experience of confidence. The third factor comprised six items that were seen conceptually as not belonging to a field, and so these items were not categorized. The fourth factor comprised only four items, and these were defined to correspond to problems at the school and in learning. In the Philippine version of PPSC, these four factors explained 74.2% of the total variance. In this study, the ratio of the total variance explained was 37.6%. The eigenvalues of these four factors were of an acceptable level (level 1 or higher).[31] The ratio in this study was lower than the explained variance ratio reported to be acceptable for social sciences (40% to 60%).[26]

While the Turkish PPSC showed a four-factor structure in compliance with the Philippine version, this result was also compatible with those reached in 1999 by Jellinek et al.[16] for the PSC. Only one item (#20) with an item-total correlation of under 0.30 was removed from the analysis. This difference was thought to be due to the fact that the population with which this study was carried out is different from those of other studies in cultural terms.

It was reported in the Turkish adaptation study of PPSC that children who are above the cut-off score have behavioral and emotional problems. The results of this study showed that 11 out of 100 children had psychological problems of a serious level. These results were found to be low in comparison to the studies that were conducted in other countries where PPSC, the pictorial format, was used.[7,21]

Recommendations

This study applied the PPSC to Turkish society and demonstrated it as a useful and reliable tool It is suggested that this version of the scale should be used as the Resimli- Psikososyal ve Davranış sorunları Kontrol Listesi (R-PDSKL) in the following studies, and that new studies will be conducted for the first time in which the factor structure studied in this study will be revealed with confirmatory factor analysis technique.

Limitations of the Study

During the pilot phase of the study, the intention was to include parents whose children were in kindergarten. These parents were informed about the necessities relating to the current study and were asked regarding their possible involvement. However, many parents were hesitant to sign the voluntary consent form, though they expressed their willingness to participate if requested by the school administration. This created the limitation of the study for the researcher at the beginning phase of the research.

Conclusion

The results of this study show that the Turkish PPSC is a valid and reliable diagnostic tool for examining psychosocial and behavioral problems among children in the 6–16 age group. As a result, PPSC was found to be an easily applicable surveying tool for investigating psychosocial and behavioral problems among children at schools, in hospitals, and in various treatment centers, by any professional who is or is not a health professional.

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