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Psychometric Properties of the Antisocial Process Screening Device in a Non-Clinical Sample of Turkish Children

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Abstract

The aim of this study was to evaluate the psychometric properties of the Antisocial Process Screening Device (APSD; Frick & Hare, 2002) to be used with non-clinical Turkish samples. APSD is a 20-item scale that evaluates antisocial behaviors and the presence of psychopathic traits in children between 6-13 years of age. Study 1 was designed to check the internal consistency and test-retest and inter-rater reliabilities. Despite satisfactory test-retest and inter-rater reliability coefficients, the Cronbach alpha coefficients of the Callous Unemotional (CU) dimension were very low in all the three forms (parent, teacher, and combined). Study 2 was designed to check the internal consistency after conducting the revisions and also validity analyses, mainly by using the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). Consequently, the Turkish version of APSD showed reliable and valid results to evaluate the psychopathic traits and antisocial behaviors of the children between 8-11 years of age in the non-clinical Turkish sample.

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Keywords: Assessment; child psychopathology; psychometric study; antisocial behavior; callous-unemotional (CU) traits

1. Introduction

Research on child psychopathology literature suggests a theoretical model with two distinct etiological pathways to the development of conduct problems in children, specifically for the Childhood-onset type. According to this model, one group of children experience impulsivity and conduct problems and a second group of children experience impulsivity and conduct problems along with callous-unemotional (CU) traits (Frick, O'Brien, Wootton, & McBurnett, 1994), which are similar to the interpersonal and affective characteristics typically seen in adults with psychopathic tendencies (Hare, Hart, & Harpur, 1991; Harpur, Hare, & Hakstian, 1989). This distinction has become crucial since years because findings show that the presence of psychopathic traits in the second group has been associated with greater severity and variety of conduct problems suggesting a separate and more severe developmental pathway both in clinic-referred (Christian, Frick, Hill, Tyler, & Frazer, 1997) and in community samples (Frick, Bodin, & Barry, 2000). Thus, detection of children with CU traits is greatly important both for the sake of prevention and treatment programs.

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Frick and Hare (2002) developed a 20-item behavior rating scale called Antisocial Process Screening Device (APSD) to evaluate the presence of psychopathic traits and antisocial behaviors in children between the ages of 6 and 13. APSD has both parent and teacher version with same items except one item that is not rated by teachers. If two informants' ratings are available, the obtained scores are combined onto a combined form. Factor analyses from a large screening community sample (Frick, Bodin, & Barry, 2000) found three dimensions underlying this rating scale: a Callous-Unemotional dimension assessing the affective and interpersonal features common in psychopathy, a Narcissism dimension evaluating narcissistic tendency, and an Impulsivity dimension reflecting the behavioral problems associated with antisocial actions. The three dimension scores are summed into a Total score. For the three APSD dimensions, higher scores indicate that the child is high on CU traits, has a greater narcissistic tendency, and is more impulsive. Furthermore, higher Total score indicates that the child has higher antisocial tendencies.

Normative studies of the APSD were conducted by Frick, Bodin, & Barry (2000) on a large community sample. All the dimensions of the APSD were found to be correlated significantly with disruptive behavior disorders in the community sample, with narcissism exhibiting the strongest correlations and CU exhibiting the weakest correlations. Reliability of the APSD was evaluated by examining the Cronbach alpha values. The Cronbach alpha coefficients of the three dimensions and the Total Scale ranged between .68 and .86 in the parent form, between .79 and .93 in the teacher form, and between .74 and .90 in the combined form. In addition, inter-rater reliability was checked through examining the correlations between parent and teacher ratings. These correlations ranged between .26 and .43, all at $p < .01$. Validity of the APSD was conducted by checking the associations between DSM-IV symptoms and APSD dimensions, the scale intercorrelations, the criterion validity with regard to intelligence, parental psychopathology, laboratory studies on reward dominance and psychophysical responsiveness to distress, and the association between various clinical symptoms and APSD dimensions. In general, validity studies showed that the APSD is a valid instrument to evaluate the psychopathic traits in children.

The aim of this study was to evaluate the psychometric properties of the APSD in order to be used with non-clinical Turkish children. The whole study was designed in two sub-studies. Study 1 was designed to check the internal consistency and test-retest and inter-rater reliabilities of the APSD. Following this, Study 2 was designed to check the internal consistency after conducting the revisions and also to conduct convergent validity analyses.

2. Method

2.1. Participants

The participants of Study 1 were randomly selected 336 elementary school children with 159 (47.3 %) females and 177 (52.7 %) males with a mean of 9.56 years of age (*SD* = 1.16). To obtain test-retest data, a subset of participants were randomly selected. Fifty participants of the retest data consisted of 24 (48 %) females and 26 (52 %) males. The age of the retest sample has a mean of 9.40 years (*SD* = 1.16). Study 2 included randomly selected 71 elementary school children with 34 (47.9 %) females and 37 (52.1 %) males, with a mean of 9.37 years of age (*SD* = 1.14). The data was collected from another school, so that the participants of the two studies did not overlap.

2.2. Measures

In Study 1, in addition to the APSD, parents were also asked to complete the Demographic Information Form in order to collect information related to various demographic characteristics of the child and the family. In Study 2, in addition to the revised Turkish version of the APDS and the Demographic Information Form, Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) was used to conduct the convergent validity analyses. SDQ is a brief behavioral screening questionnaire designed to assess the prosocial behavior and emotional and behavioral problems of children in five subscales. In the Turkish adaptation study (Eremsoy, Karancı, & Kazak Berument, 2006) four subscales were found, namely conduct problems/hyperactivity, emotional problems, prosocial behavior, and inattention problems. All subscales except the prosocial behavior subscale are summed to generate a Total Difficulty score.

2.3. Procedure

After obtaining permissions for using the APSD for the Turkish sample, translation and back-translation procedures were followed by a team of four psychologists. In Study 1, data was collected from six different elementary schools in Ankara, representing different socioeconomic levels. The children included in the study were

recruited through random sampling in two phases. First, from each school, two classes from second, third, forth, and fifth grades were randomly selected by the researcher. Second, from each of the randomly selected class, ten students were again randomly selected. For each of the randomly selected child, teachers were asked to complete APSD-Teacher form and parents were asked to fill in APSD-Parent form and the Demographic Information Form. The retest data were collected from three schools, each representing different socioeconomic levels. In each of these schools, children included in the previous phase were again randomly selected. For each of the randomly selected child, parents and teachers, who had completed the instruments in the first phase, were asked to complete them again. Based on the findings of Study 1, necessary changes were made in the translation of the APSD. Children included in Study 2 were recruited through random sampling in two phases. The data collection procedure was similar to Study 1 except giving the SDQ parent and teacher forms besides.

3. Results

3.1. Internal Consistency

Cronbach alpha coefficients were computed for CU, narcissism, and impulsivity dimensions and for the Total Scale of the APSD-Parent, Teacher, and Combined forms separately. They were ranging from .22 (for CU) to .73 (for total scale) in the parent form, from .57 (for CU) to .86 (for total scale) in the teacher form, and from .51 (for CU) to .83 (for total scale) in the combined form. Item analyses indicated that Cronbach alpha coefficients would be increased to .47, .70, and .64 for parent, teacher, and combined forms, respectively, when 2 items in CU dimension were removed. After retranslation of these two items in CU dimension, in Study 2 Cronbach alpha coefficients were computed again and found to be ranging from .58 (for narcissism) to .85 (for total scale) in the parent form, from .70 (for narcissism) to .87 (for total scale) in the teacher form, and from .65 (for narcissism) to .87 (for total scale) in the combined form. In Study 2, the internal consistency of the CU dimension was found to be .75, .73, and .76 for parent, teacher, and combined forms, respectively.

3.2. Inter-rater Reliability

In Study 1, correlations between parent and teacher ratings were found to be $r = .20$ in CU dimension, $r = .30$ in impulsivity dimension, and $r = .27$ in the Total Scale, all at $p < .001$. Parent and teacher ratings in narcissism dimension did not significantly correlate with each other, $r = .10$, n.s. After the revision, inter-rater reliability was rechecked in Study 2. Correlations between parent and teacher ratings were $r = .54$ in CU dimension, $r = .57$ in narcissism dimension, $r = .50$ in impulsivity dimension, and $r = .54$ in the Total Scale, all at $p < .001$.

3.3. Test-Retest Reliability

Test-retest correlation coefficients for three or four weeks interval were obtained for a subset of the sample in Study 1. As seen in Table 1, all the test-retest correlation coefficients of the three APSD dimensions and the Total Scale score were at significant levels for all the three forms.

Table 1. Test-Retest Consistencies of Three Dimensions and Total Scale of APSD

	Test-Retest Correlations		
APSD Dimensions	**Parent** (N = 48)	**Teacher** (N =50)	**Combined** (N = 50)
CU	.73*	.63*	.71*
Narcissism	.66*	.59*	.57*
Impulsivity	.90*	.82*	.77*
Total Scale	.84*	.82*	.79*

*$p < .001$

3.4. Construct Validity

The construct validity of the APSD was investigated by scale intercorrelations. All in parent, teacher, and combined forms of the APSD, the three dimensions and the Total Scale score were found to be highly correlated

with each other. According to parent ratings, CU correlated with narcissism at r = .35, p <.01. In addition, CU correlated with impulsivity at r = .55 and with Total Scale at r = .79, all at p <.001. Narcissism correlated with impulsivity at r = .53, and with Total Scale at r = .76, both at p <.001. Lastly, impulsivity correlated with Total Scale at r = .86, again at p <.001. According to teacher ratings, CU correlated with narcissism at r = .42, with impulsivity at r = .58, and with Total Scale at r = .82. Narcissism correlated with impulsivity at r = .67, and with Total Scale at r = .82. In addition, Impulsivity correlated with Total Scale at r = .88. All the correlations were significant at p <.001. Lastly, according to combined ratings, CU correlated with narcissism at r = .47, with impulsivity at r = .61, and with Total Scale at r = .84. Narcissism correlated with impulsivity at r = .57, and with Total Scale at r = .81. In addition, impulsivity correlated with Total Scale at r = .86. Again, all correlations were significant at p < .001.

3.5. Convergent Validity

The convergent validity of the APSD was examined by assessing the correlation between the three dimensions and the Total Scale score of the APSD and the subscale scores of the SDQ (Table 2). The correlations between three dimensions and the Total Scale score of the APSD-Parent and the four subscales and Total Difficulty scores of the SDQ-Parent were found to be ranging from -.77 to .80. On the other hand, the same correlations ranged from -.79 to .83 between teacher versions of the APSD and the SDQ.

Table 2. Correlations between APSD Dimensions and SDQ Subscales

	SDQ Subscales				
APSD Dimensions	Conduct Problems/ Hyperactivity	Prosocial Behavior	Emotional Symptoms	Inattention Problems	Total Difficulty
CU	.49*/**.51***	-.77*/**-.79***	.42*/**.42***	.53*/**.63***	.56*/**.60***
Narcissism	.60*/**.67***	-.50*/**-.53***	.47*/**.53***	.48*/**.51***	.62*/**.69***
Impulsivity	.68*/**.71***	-.42*/**-.52***	.48*/**.61***	.78*/**.71***	.76*/**.81***
Total Scale	.73*/**.74***	-.70*/**-.75***	.56*/**.61***	.74*/**.73***	.80*/**.83***

Note. Pearson correlations in boldface type are teacher's ratings

*p <.001

4. Discussion

APSD (Frick & Hare, 2002) is a behavior rating scale that evaluates the presence of psychopathic traits and antisocial behaviors in children between the ages of 6 and 13. A validation study performed in a community sample of children revealed three-factor structure underlying this rating scale: CU, Narcissism, and Impulsivity (Frick, Bodin, & Barry, 2000). In Study 1, Cronbach alpha coefficients were computed for CU, Narcissism, and Impulsivity dimensions and for the Total Scale of the APSD-Parent, Teacher, and Combined forms in order to check the internal consistency of the instrument. The Cronbach alpha coefficients of all the three forms were slightly lower than the Cronbach alpha coefficients mentioned in the original version of the scale (Frick, Bodin, & Barry, 2000). However, in Study 1, the Cronbach alpha coefficients of the CU dimension were very low in all the three forms, indicating a low internal consistency of this dimension. Examination of the alpha coefficients with each item deleted indicated that the removal of two items out of six items in CU subscale would notably increase the internal reliability of this dimension and the Total Scale. These items were item #3 "Is concerned about how well he/she does at school or work" and item #19 "Does not show feelings or emotions". When content analysis was conducted, it became evident that there were some problems in the translation of these two items. The problem in item # 3 might be due to the difficulties in the exact translation of the word "concern" into Turkish. The word "worry" is only one of the meanings of "concern" in Turkish, but not the best one for translation of this sentence. Thus, item # 3 was retranslated by stressing "being not interested or does not care" under the meaning of "concern". On the other hand, the translation problem in item # 19 was thought to be due to cultural understandings of "showing emotions". In male dominant Turkish culture, showing emotions might have negative meaning, especially for males. Since showing emotions is believed to indicate weakness especially in some subcultures where masculine characteristics are overvalued, most of the parents of boys might have reported that their child does not show his emotions. However, in the original scale, this item refers to emotional callousness that might indicate psychopathic tendency.

Thus, item # 19 was retranslated by stressing callousness and unemotionality. After making the corrections in the translations of two items, internal consistency of the APSD dimension was rechecked in Study 2 and results showed that the Cronbach alpha coefficients of all the three forms of the APSD were reasonably increased.

In addition, in Study 1, the inter-rater reliability was checked through examining the correlations between parent and teacher ratings. Except for the narcissism dimension, all correlations between parent and teacher ratings, ranging between .20 and .30, were significant, indicating a satisfactory inter-rater reliability. For the original scale, inter-rater correlation coefficients were reported to range between .26 and .43, all at $p < .01$ in the community sample (Frick, Bodin, & Barry, 2000). This degree of correlation between different informants was reported as typical in the assessment of childhood psychopathology (Piacentini, Cohen, & Cohen, 1992). After making the corrections in the translations of two problematic items, inter-rater reliability was reassessed in Study 2. All correlations between parent and teacher ratings increased, indicating an even higher inter-rater reliability reported for the original scale (Frick, Bodin, & Barry, 2000). Moreover, in Study 1, test-retest correlation coefficients for an interval of three or four weeks were checked for a subset of the sample. Results indicated significant test-retest reliability.

Furthermore, validity analyses were conducted in Study 2. The construct validity of the APSD was investigated by scale intercorrelations. All in parent, teacher, and combined forms of the APSD, the three dimensions and the Total Scale score were found to be highly positively correlated with each other. Significant intercorrelations among the three subscales and Total Scale of the APSD indicated the construct validity of the APSD. Additionally, the concurrent validity was examined by assessing the correlation between the three dimensions and the Total Scale score of the APSD and the subscale scores of the SDQ. For the APSD-Parent form, all the dimensions and the Total Scale score of the APSD correlated positively with conduct problems/hyperactivity, emotional problems, inattention problems subscales, and Total Difficulty of the SDQ-Parent. Results were similar regarding to teacher ratings.

In general, reliability and validity studies showed that all the three forms of the Turkish version of the APSD are reliable and valid instruments to evaluate the psychopathic traits in children between 8-11 years of age in the Turkish sample.

References

Christian, R. E., Frick, P. J., Hill, N. L., Tyler, L., & Frazer, D. R. (1997). Psychopathy and conduct problems in children: II. Implications for subtyping children with conduct problems. *Journal of American Academy of Child and Adolescent Psychiatry, 36 (2),* 233-241.

Eremsoy, C. E., Karancı, A. N., & Kazak Berument, S. (2006). Güçler ve Güçlükler Anketinin (The Strengths and Difficulties Questionnaire, SDQ) Türk Örneklem için Psikometrik Özellikleri. Poster Presentation. XIV. Turkish National Psychology Congress, Ankara.

Frick, P. J., Bodin, S. D., & Barry, C. T. (2000). Psychopathic traits and conduct problems in community and clinic-referred samples of children: Further development of the Psychopathy Screening Device. *Psychological Assessment, 12,* 382-393.

Frick, P. J. & Hare, R. D. (2002). *Antisocial Process Screening Device.* Toronto: Multi-Health Systems.

Frick, P. J., O'Brien, B. S., Wootton, J. M., & McBurnett, K. (1994). Psychopathy and conduct problems in children. *Journal of Abnormal Psychology, 103 (4),* 700-707.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: a research note. *Journal of Child Psychology and Psychiatry, 38,* 581-586.

Hare, R. D., Hart, S. D., & Harpur, T. J. (1991). Psychopathy and the DSM-IV criteria for antisocial personality disorder. *Journal of Abnormal Psychology, 100 (3),* 391-398.

Harpur, T. J., Hare, R. D., & Hakstian, A. R. (1989). Two-factor conceptualization of psychopathy: Construct validity and assessment implications. *Psychological Assessment, 1,* 6-17.

Piacentini, J. C., Cohen, P., & Cohen, C. (1992). Combining discrepant diagnostic information from multiple sources: Are complex algorithms better than simple ones? *Journal of Abnormal Child Psychology*, *20,* 51-63.