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## THE ADAPTATION OF PERCEPTION OF PARENT SCALE (POPS) INTO THE TURKISH CULTURE\*

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**Abstract:** The main goal of this study was to analyze the psychometric properties of the Perception of Parents Scale (POPS) developed by Robbins (1994), with a sample of middle-adolescents with ages between 14 and 18 years. The confirmatory factor analysis was conducted to examine the reliability and validity of a three-dimension model of adolescents' perception of mother and father based on perspective of Self-Determination Theory. Results of the confirmatory factor analyses suggested the original factor structure of the POPS does not fit the data for adolescents ratings of mother and fathers on the measures. As a result of modification indices check, the relationships between the error terms of items were determined. The second confirmatory factor analyses revealed that the new three-factor model provides acceptable fit. It was concluded that the POPS constitutes a useful tool for the assessment of both parent and peer attachment in adolescent aged between 14 and 18 years

**Key Words:** Self determination theory, adolescents, parents.

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## **Introduction**

Developmental tasks during adolescence are achieved most effectively in families where autonomy is encouraged, conflict is effectively managed, and members feel supported and loved. In other words, most adolescents are influenced by and live within a family structure, it is important to identify how family functions patterns interact with adolescent behaviors and it is significant to provide support for healthy adolescent development.

Insufficient and ineffective parental relationship with their children has received a great deal of attention as a correlate to adolescent risk taking. The available research suggests that involved parents who are warm, supportive, and consistent in their behavior and style of discipline can effectively reduce the probability that their child/adolescent will engage in risk-taking behaviors. For instance, quality family relationships have been consistently found to be important impediment of adolescent problem behaviors, including smoking, other substance use and alcohol use (Coker, & Borders, 2001). Dysfunctional family structure, inadequate parenting skills, and lack of parental attention are strongly associated with the adolescent's selection of substance-using friends and with the tendency (Hindelang, Dwyer, & Leeming, 2001). Ackard and his colleagues (2006) stated that adolescents' perceptions of low parental caring, difficulty talking to their parents about problems and valuing their friends' opinions for serious decisions were significantly associated with compromised behavioral and emotional health. In conclusion, since parents are the main figures in development of their children's healthy personalities, parent involvement and effective relationship between parents and adolescents are offered as primary prevention in the hopes of avoiding emotional and social difficulties in children life.

There has been increased concern regarding the importance of self-determination for the relationship between parents and adolescents. From the self-determination theory, parents as a socializing agents face the important challenge of how to mobilize, facilitate, and support a child's natural tendency to internalize cultural values, attitudes, and behaviors. The role of parents is crucial to the development and expression of the self-determination regarding the psychological well-being of the adolescents. Self-Determination Theory (SDT) identified three universal human needs-the needs for competence, relatedness, and autonomy (Ryan & Deci, 2000). According to the theory, these needs-the needs for competence, autonomy, and relatedness must be ongoingly satisfied for people to develop and function in healthy or optimal ways. Healthy adjustment and higher levels of self-determined motivation are presumed to result when the individual experiences satisfaction of these needs by feeling effective, connected to others, and autonomous. A key aspect of the theory is that individuals will be most intrinsically motivated, and most autonomous for extrinsically motivated activities, when the environment satisfies the need for autonomy. Such an environment supports people's experiences of autonomy instead of controlling their behavior.

Given the importance of self-determination, several researchers believe that teachers and parents must play a critical role in promoting adolescents' self-determination skills (Sands & Doll, 1996; Wehman, 1998). Recently, adolescent relationship with their parents has been explicitly considered in many studies and a vast number of studies provide empirical evidence for the link between parent relationship and well-being in

adolescence (Grolnick, Deci, & Ryan, 1997). A child's development is affected by both mother and father, for it is through interaction with both parents that children acquire the skills needed for better development. Furthermore, research with adolescents (Allen, Hauser, Bell, & O'Connor, 1994) has found that displays of autonomy and relatedness are positively associated with measures of ego development and self-esteem.

Based on the Self Determination Theory, Perceptions of Parents Scale (POPS) was developed to assesses children's perceptions of their parents' autonomy support, involvement and warmth. The scale has 42 items: 21 for mothers and 21 for fathers. From these items, 6 subscale scores are calculated: Mother Autonomy Support, Mother Involvement, and Mother Warmth, as well as Father Autonomy Support, Father Involvement, and Father Warmth. Robbins (1994) dissertation provided preliminary evidence for the reliability and validity of the scale. This study linked parental autonomy support to autonomy-related child outcomes, including self-esteem, self-regulation, mental health, and causality orientations. It also showed that high perceived parental autonomy support was associated with greater vitality and self-actualization, while low perceived parental autonomy support was associated with greater separation-individuation difficulty. Data collected from the parents of the college-student participants revealed that student perceptions of paternal autonomy support were positively associated with fathers' self-reported self-esteem and mental health, and that student perceptions of maternal autonomy support were positively associated with the degree of autonomous causality orientation in mothers.

The main aim of the present study is to determine how well the identified model of the original version of the Perceptions of Parents Scales (POPS) fits the Turkish adaptation of POPS (POPS-T) and make contribution to framework of Self-Determination Theory from diverse culture. Considering this aim, the psychometric properties and adaptation of POPS was examined for Turkish adolescents (IPPA-T) by using comprehensive statistical procedures and providing data about the reliability and validity of POPS. In addition, many studies (e.g. Lieberman, Doyle and Markiewicz, 1999; Simons, Paternite, & Shore, 2001) suggested that the relationship of adolescents with their parents could not be assessed by a single dimension, and that the perception of father and mother should be considered separately. This was the second aim of the present study, that the psychometric properties of perception to mother (MA), father (FA) were separately examined in a sample of middle adolescence by using the POPS (25 items for each scale).

## **Method**

### **Participants**

886 high school students, aged between 14-18, were participated from Ankara and Çanakkale. 188 participants were excluded from the study because of their incomplete answers. The results were analyzed for the remaining 698 participants (386 male, 312 female) aged between 14 and 18 years ( $M= 16.06$ ,  $SD=1.02$ ).

### **Instruments**

*Perception of Parent Scale (POPS; Robbins 1994)*. It was developed to assess children's perceptions of their parents' autonomy support and involvement, but in addition it assesses the degree to which the children

perceive their parents to provide warmth. The scale has two forms: mother form (21 items) and fathers forms (21 items). From these items, three subscale scores are calculated for each form: Mother Autonomy Support, Mother Involvement, and Mother Warmth, as well as Father Autonomy Support, Father Involvement, and Father Warmth (Grolnick, Deci, & Ryan, 1997). All three sub-scales (Warmth, Autonomy Support and Involvement) consisted of 21 items for mother and father were translated into Turkish prior to administering the study. Two bilingual Turkish scholars independently translated each item and compared their translations to resolve any disagreements.

All three scales (father, mother, and peers) consisted of 25 items and were translated into Turkish prior to administering the study. Two bilingual Turkish scholars independently translated each item, and compared their translations to resolve any disagreements. From this translation, a Turkish-English bilingual supervisor translated it back into English. The discrepancies emerging from this back-translation were discussed, and the adjustments to the Turkish translation of the POPS were made.

*Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987)*. IPPA derives from the theoretical assumption of attachment theory, and assesses the positive and negative dimension of adolescents' relationship with their parents and close friends. The items in the original version of the IPPA, in sample of college students aged between 16 and 20, demonstrated good internal consistency and through principal components analysis, were clustered into three factors, namely "Communication", "Trust", and "Alienation" (Armsden & Greenberg, 1987).

The Turkish version of the IPPA includes three scales and was adapted by Kocayörük (2010) from Armsden and Greenberg's original drawings. The results of the exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) revealed that the three-factor structures (Communication, Trust, and Alienation), with 18 items for mother, father, and peer attachment scales, were most likely replicated with Turkish middle age adolescents. The results also showed that the acceptable level of internal consistency was obtained for the new three-factor structure (18 items;  $\alpha = .92$  for Communication,  $\alpha = .63$  for Trust, and  $\alpha = .61$  for Alienation) and total mother attachment score of the IPPA-T ( $\alpha = .91$ ). Similarly, the acceptable level of internal consistency was found for total father attachment score of the IPPA-T ( $\alpha = .91$ ) and the three-factor structure (18 items;  $\alpha = .93$ ,  $\alpha = .69$ , and  $\alpha = .66$ , respectively). In this study, total score of mother attachment and father attachment were conducted to analyze the data

### **Data Analysis**

In order to determine the psychometric properties of the POPS, confirmatory factor analyses (CFA) were carried out. Confirmatory Factor Analysis (CFA) was performed on the variance-covariance matrix using Lisrel 8.3. CFA allows determining whether the Turkish version of POPS would yield or construct a similar structure to the original version of POPS. For this analysis, goodness-of-fit statistics were tested with  $\chi^2$  (a non-significant value that corresponds to an acceptable fit). Because  $\chi^2$  are known to increase with sample size and degree of freedom, the use of four indices is commonly suggested; (a) Standardized Root Mean Square Residual (SRMR)  $< .08$ , (b) Root Mean Square Residual of Approximation (RMSEA)  $< .06$ , (c) Goodness-of-

Fit Index (GFI) > .90, and (d) Adjusted Goodness-of-Fit Index (AGFI) > .85 (Hu & Bentler, 1999; Şimşek, 2006).

After the factor structure of POPS was examined, internal consistency of POPS was analyzed. Next, the test-retest reliability was conducted using Pearson product moment correlation. Finally, the correlations between the POPS and IPPA (Inventory of Parent and Peer Attachment) were analyzed to determine the convergent validity of the POPS.

## Results

### Factor Structure

To examine the factor structure of POPS, Confirmatory Factor Analysis (CFA) with the maximum likelihood method was performed on the variance-covariance matrix. With the data set, the model which specified a three factor model as reported by the original developers of the POPS was tested. It was assumed that all items of POS were constructed in the same factors as in the original version of POPS. The results yielded that the original factor structure of the POPS indicated an inadequate model fit. The RMSEA and SRMR were higher than the cutoff value for an acceptable level, and the GFI, AGFI and CFI were below .90, indicating a poor fit of the original model. Indeed, the results suggested that original factor structures of the POPS showed poor goodness-of-fit-statistics for mother and father (Table 1).

The results of the modification indices revealed that the relationship between the error terms of items 2-12, 2-6-12-3, 15-9 and 16-15 negatively affects the model fit in the mother scale. In the same way, it was seen that the relationship between the error terms of items 2-5, 2-9, 14-16 and 11-19 negatively affects the model fit in the father scale. In addition this result, correlations between the items suggested that item 2 did not significantly related with items of POPS and it was decided to eliminate the item 2 from the both mother and father scale. After the addition of the correlation terms between the error terms of the mentioned items, results showed that modified model produced a good fit to the data (Table 1).

**Table 1. Fit Indices of Confirmatory Factor Analyses**

Models	$\chi^2$	df	SRMR	RMSEA	GFI	AGFI	CFI
Original Model							
Mother	658.68*	170	.083	.091	.86	.84	.88
Father	655.16*	170	.079	.086	.89	.86	.90
Modified Model							
Mother	668.79*	170	.029	.065	.96	.94	.95
Father	654.12*	170	.027	.064	.98	.97	.96

Notes: N = 698. Confidence intervals for the RMSEA were as follows: 1-Mother Form: .18-.20; 2- Father Form: .059-.064; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; SRMR = root-mean-square residual; RMSEA = root-mean-square error of approximation; CFI = comparative fit index.

## **Reliability**

*Internal Consistency:* The Cronbach' Alpha ( $\alpha$ ) internal consistencies were found .91 for total perception of mother scale, .90 for Mother Autonomy Support, .61 for Mother Involvement, and .58 for Mother Warmth subscales. The Cronbach' Alpha ( $\alpha$ ) internal consistencies were also found .93 for total perception of father, .92 for Father Autonomy Support, .69 for Father Involvement, and .62 for Father Warmth subscales.

The results also revealed that each of the total POPS scores highly correlated with their respective sub-scale scores. The total perception of mother score was correlated with .97, .62, and .73 for Mother Autonomy Support, Mother Involvement, and Mother Warmth, respectively. The total perception of father was correlated with .97, .81, and .72 for Father Autonomy Support, Father Involvement, and Father Warmth respectively. Furthermore, as expected, the intercorrelations between subscales, within the scale (mother and father), were moderately high. Mother Autonomy Support and Mother Involvement were positively correlated with  $r=.54$ , Mother Autonomy Support and Mother Involvement with  $r=.77$ , and Mother Involvement, and Mother Warmth with  $r=.67$  for mother scale. Similarly, Father Autonomy Support and Father Involvement were positively correlated with  $r=.62$ , Father Autonomy Support and Father Warmth with  $r=.63$  and Father Involvement and Father Warmth with  $r=.59$  for father scale.

*Test-Retest Reliability:* Test-retest reliability was conducted using Pearson product-moment correlation coefficient over a two-week interval. The sample of the test-retest reliability study consisted of 177 adolescents ( $M=16.35$ ,  $SD=.85$ ) aged between 14 and 18. The result of the Pearson's product-moment correlation coefficient revealed that test-retest reliability was high for mother form (.71) and for father form (.77).

In addition, the result of the Pearson's product-moment correlation coefficient revealed that test-retest reliability was high in the mother and father subscales scores. In the mother scale, Person' product-moment correlation was .70 for Mother Autonomy Support, .62 for Mother Involvement and .53 for Mother Warmth subscales scores. In the father scale, Person' product-moment correlation was .74 for Father Autonomy Support, .71 for Father Involvements, .64 for Father Warmth subscores.

## **Validity**

*Convergent Validity with Inventory of Parents and Peer Attachment:* Validity analysis was conducted by correlating the total and subscale of POPS scores with Inventory of Parents and Peer Attachment (IPPA). The convergent validity method was used to determine whether both total and subscale scores of POPS (mother and father) correlated significantly and positively with the total score of IPPA. The instruments were completed over four weeks and the voluntary nature of the adolescents' participation ( $N=282$ ,  $M=16.01$ ,  $SD=1.04$ ) was clearly stated prior to administering the instruments.

The findings revealed that the total mother scale scores and Mother Autonomy Support, Mother Involvement and Mother Warmth subscales scores were positively correlated to IPPA and negatively correlated

with Alienation subscale of IPPA. In the same way, the total father scale and Father Autonomy Support, Father Involvements, and Father Warmth subscale scores were also positively correlated to IPPA and as expected negatively correlated with Alienation subscale scores of IPPA (Table 2).

**Table 2. Correlations of the POPS with IPPA Measures**

IPPA	POPS	Mother				Father			
		Total Score	Mot. Auto. Sup	Mot. Invol.	Mot. Warm.	Total Score	Fat. Auto. Sup	Fat. Invol.	Fat. Warm.
Mother (Total score)		.39**	.36**	.45**	.38**	.45**	.40**	.38**	.37**
Communication		.38**	.32**	.40**	.39**	.40**	.38**	.36**	.33**
Trust		.36**	.25**	.30**	.30**	.30**	.29**	.28**	.27**
Alienation		-.20**	-.35**	-.42**	-.40**	-.42**	-.39**	-.37**	-.36**
Father (Total score)		.36**	.37**	.40**	.39**	.40**	.38**	.40**	.39**
Communication		.34**	.30**	.34**	.32**	.34**	.31**	.33**	.32**
Trust		.30**	.36**	.30**	.31**	.30**	.38**	.41**	.38**
Alienation		-.26**	-.40**	-.40**	-.39**	-.40**	-.38**	-.39**	-.39**

Notes: \*\* Correlations are significant at  $p < .01$ , \* Correlations are significant at  $p < .05$ ; Mot. Auto. Sup= Mother Autonomy Support, Mot. Invol. = Mother Involvement, Mot. Warm.= Mother Warmth; Fat. Auto. Sup= Father Autonomy Support, Fat. Invol. = Father Involvement, Fat. Warm.= Father Warmth.

### Conclusions

Results of the initial confirmatory factor analyses suggested the original factor structure of the POPS did not fit the data for adolescent’s ratings of mothers and fathers on the measures of warmth, autonomy support and involvement. The second confirmatory factor analyses revealed that the new three-factor model provides acceptable fit. It was concluded that the POPS constitutes a useful tool for the assessment of perception for mother and father in adolescents aged between 14 and 18 years. This result is crucial that the original construct of POPS was developed for the college students. This study finding supported the validity of the POPS construct for the perception on the relationship with father and mother in different age groups of adolescents.

To summarize, although one of the item (item 2) on the original scale were reduced, POPS could be assumed to assess the three multidimensional constructs in the relationship with father and mother as proposed by Grolnick, Deci and Ryan (1997), POPS is a sound tool for the assessment of the relationship between adolescents and parents in middle adolescents of ages 14 to 18 in the Turkish culture. The findings of the current study provided a good starting point for further POPS and instruments based on the Self-Determination



Theory development in the Turkish culture. In other words, considering the cultural background further studies might try to devise and revise several new items to increase internal consistency of the POPS, particularly the mother and father autonomy support subscale.

These findings should be considered within the context of the study's limitations. First of all, the sample of the current study was limited to middle adolescents, and the results may not be generalizable to samples of different ages. The second limitation of the study is that the small sample size was conducted using convergent validity analysis with IPPA. This finding can be considered tentative and needs to be replicated. Another limitation of the study concerns reliability; meaning that the two-week measure period was too short to evaluate test-retest reliability, and evaluation would have needed to be extended over longer time intervals.

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