The Reliability and Validity Study of Internalization of Parental Rules Scale into Turkish Culture[1]

Ercan Kocayörük[2]

Abstract

The purpose of present study was to examine the psychometric properties of the Internalization of Parental Rules Scale (IPRS; Soenens & Vatkentkiste, 2009), 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 four-dimension model of adolescents' different reasons to follow parental rules based on perspective of Self-Determination Theory. Results of the confirmatory factor analyses suggested the original factor structure of the IPRS does fit the data for adolescents' ratings of mother and fathers on the measures of internalizing of parental rules. The findings also reveal that the acceptable level of internal consistency is obtained for the four-factor structure (22 items) and the Relative Internalization Index (RII). Test-retest reliability is moderately strong among the subscales and RII score of the IPRS, and the results consistently agreed with the theoretical framework with respect to divergent validity. It is concluded that the IPRS constitutes a useful tool for the assessment of adolescents' different reasons to follow parental adolescents aged between 14 and 18 years.

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

[2] Ercan Kocayörük, Ph.D, Faculty of Education, Department of Psychological Counseling, Çanakkale Onsekiz Mart University, kocayoruk@comu.edu.tr

SDT is an approach to human motivation and personality and most of SDT scholars (Deci & Ryan, 2000; Ryan, Kuhl, & Deci, 1997) points out the importance of humans' evolved inner resources for personality development and behavioral self-regulation. SDT represents a broad theory of people's inherent growth tendencies and innate psychological needs. According to SDT schoolars (Ryan & Deci, 2000: Deci & Ryan, 1985) psychological needs are essential for facilitating optimal functioning of the natural propensities for growth and integration, as well as for constructive social development and personal well-being. SDT have identified the psychological needs as autonomy, competence and relatedness. Feeling autonomous refers to having a sense of choice, initiative, and endorsement of the activities one performs. Feeling competent corresponds to having a sense of mastery over one's capacity to act in the environment. Relatedness refers to feelings of closeness and connectedness to significant others. According to SDT, psychological needs must be ongoingly satisfied for people to develop and function in healthy or optimal ways.

In addition, SDT highlight the present of internalization as a natural outcomes of organismic integration that occurs as people encounter the challenge of achieving meaning full relationship with other. Within the social context, people have interaction with social order and they adapt to some aspect of these social order while modifying other to make them more conducive to fulfilling their psychological needs.

According to SDT, internalizing is the process through which people make the adaptation. In other words, SDT conceptualizes internalization as a natural developmental process in which children and adolescent progressively integrate societal values and norms into a coherent sense of self. Grolnick, Ryan and Deci (1997) indicate that individuals become increasingly autonomous or self-determined for extrinsic motivated as the process of internalization function more fully and effectively to bring the initially external regulations into coherence with one's self.

As a socializing and internalizing agency, families support in providing an involved, autonomy-supportive context that will be conducive to children's healthy development. Many SDT scholars (Grolnick & Slowiaczek, 1994; Ryan et all., 1994) revealed that both mother and father involvement predicted their children's internalization. Furthermore, the authors stated that there was a significant relationship of high school students to their parents and teacher and greater internalization with respect to school-related activities, and their sense of well-being.

Children and adolescents can have different reasons to follow their parents' rules and prohibitions. These reasons vary on a continuum of internalization. Based on the Self

Determination Theory, Internalization of Parental Rules Scale (IPRS) was developed to assesses children's different reasons to follow parental rules (Soenens, & Vansteenkiste, 2009). The scale has 21 items for mothers and fathers' rules about bad behavior such as lying, stealing and breaking a promise. IPRS taps into different reasons to follow parental rules, ranging from straightforward defiance against parental authority (rebellion) to acceptance and endorsement of parental rules (identification). From these items, 4 subscale scores are calculated: Identification, Introjection, External Regulation and Rebellion. Soenens, Vansteenkiste and Niemiec (2009) provided preliminary evidence for the reliability and validity of the scale with a study linked parents' prohibition of peer relationships and adolescents' deviant peer affiliation. The authors assessed participants' reasons for following parental rules for moral domain and friendships using the Self-Regulation Questionnaire (SRQ; Ryan & Connell, 1989), which presented adolescents with the 18 items. The differential relations of styles of prohibition to adolescents' internalization of parental rules for friendships were examined. Structural equation modeling was conducted to test the differential relations of autonomy-supportive and controlling styles of prohibition to deviant peer affiliation were mediated by their differential relations to internalization with a sample of 234 Belgian mid-adolescents (Mage = 16.45 years; 65% female). The results of the study provided support for the hypotheses as the differential relations of autonomy-supportive and controlling styles of prohibition to deviant peer affiliation were mediated by their differential relations to internalization.

The main aim of the present study is to determine how well the identified model of the original version of the Internalization of Parental Rules Scale (IPRS) fits the Turkish adaptation of IPRS (IPRS-T) and make contribution to framework of Self-Determination Theory from diverse culture. Considering this aim, the psychometric properties and adaptation of IPRS was examined for Turkish adolescents (IPRS-T) by using comprehensive statistical procedures and providing data about the reliability and validity of IPRS.

Method

Participants

315 high school students from Çanakkale, were asked to participate in the study during the 2009-2010 academic year. 299 students from the 9th to 12th grades agreed to participate in the study. 288 participants were excluded from the study because of their incomplete answers. The results were analyzed for the remaining 288 participants (139 male, 149 female) aged between 14 and 18 years (M= 15.96, SD=1.23).

Procedure

A meeting was held with the students to describe the aims of research and to obtain their permission and collaboration. After distribution with separate answer sheets to students, the instructions were read aloud, and the importance of completing all items was emphasized. An identical procedure was followed for the students to explain the study and to obtain consent to take part in the research. The average administration time for both instruments was 10 minutes.

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). The Turkish version of the POPS includes three scales and was adapted by Kocayörük (in printing manuscript) from Robbins's original drawings. 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. 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.

The results of the exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) revealed that the three-factor structures (Warmth, Autonomy Support and Involvement), with 18 items for mother and father dimensions were most likely replicated with Turkish middle age adolescents. The Cronbach' Alpha (α) 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 (α) 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.

Internalization of Parental Rules Scale (IPRS; Soenens, &Vansteenkiste, 2009). IPRS was developed to assesses children's different reasons to follow parental rules (Soenens, &Vansteenkiste, 2009). The scale has 22 items which taps into different reasons to follow parental rules, ranging from straightforward defiance against parental authority (rebellion) to acceptance and endorsement of parental rules (identification). From these items, 4 subscale

scores are calculated: Identification, Introjection, External Regulation and Rebellion. SDT scholars assume the internalization as a continuum describing the extent to which the regulation of extrinsic behaviors has been taken in and integrated with the individual's own sense of self (Wendy S. Grolnick, Carolyn 0. Kurowski, and Suzanne T. Gurland, 1999;). Furthermore, SDT described four styles of self-regulation-external, introjected, identified, and integrated-organized along a continuum of autonomy (Connell & Ryan, 1987). In external regulation, participation in the activity is initiated and maintained by the promise of a reward, the threat of a punishment, or some other external contingency. On the other hand, individuals considered to display an introjected type of regulation have taken on those contingencies and impose the contingencies on themselves. Individuals at this point on the continuum are likely to experience conflict and tension because, although the source of regulation is now within them, they have not "made it their own." Instead, it continues to feel coercive and outside of their choice. Introjection is thus a process in which people feel as if values or goals were thrown or pressed into them by figures whose appreciation they need, such as parents, teachers, peers (e.g., Assor, Roth, & Deci, 2004; Deci & Ryan, 1985). Hence, the introjected values and goals are experienced as internally controlling standards of self-worth and social approval and not as integral parts of the self. Further along the internalization continuum is regulation through identification. In such regulation, individuals identify with the value or importance of the activity and regulate accordingly. In identified regulation, the conflict and tension associated with introjection are absent because decisions are based on personal valuing and are thus congruent with internal preferences. Rebellion refers to be against or rejection of parental authority following the feeling of being controlled by parental rules. IPRS also allow to assess the differences between mother and father dimension in respect to four regulation style.

In addition, it is possible to compute an overall score for the relative internalization of parental rules, as follows:

Relative Internalization Index (RII) = 3*Identification − Introjection - 2*External Regulation

Initially, translation of the items of IPRS into Turkish was carried out by two bilingual scholars independently for the adaptation procedure and examining its content validity. Considering the feedback on the translation of the items, some minor changes were done.

Data Analyses

Confirmatory Factor Analysis (CFA) was performed on the variance-covariance matrix using Lisrel 8.3 (Joreskog & Sörbom, 2001) in order to determine how well the

identified model of the original version of the IPPA fits the Turkish adaptation of (IPRS-T). CFA provide empirical-based evidence for determining whether the Turkish version of IPRS would yield or construct a similar structure to the original version of IPPA. CFA procedure, goodness-of-fit statistics were tested with χ^2 (a non-significant value that corresponds to an acceptable fit). Because χ^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). In addition, Expected Cross-Validation Index (ECVI) and Model AIC were also reported to allow comparing zero with the alternative measurement model. ECVI and Model AIC are assumed to be lower fits more acceptable in confirmatory factor analysis (Joreskog & Sörbom, 2001). Finally, the test-retest reliability and convergent validity of IPRS were examined

Results

Reliability

Internal Consistency: The Cronbach' Alpha (α) internal consistencies were found .86 for Relative Internalization Index of mother dimension, .87 for Identification, .83 for Introjection, .75 for External and .86 for Rebellion subscales. The Cronbach' Alpha (α) internal consistencies were also found .85 for Relative Internalization Index of father dimension, .87 for Identification, .84 Introjection, .75 for External, and .86 for Rebellion subscales.

The results also revealed that each of the RII scores highly correlated with their respective sub-scale scores (Table 1). The RII score for mother dimension was correlated with .63, .25, -.50 and -.27 for Identification, Introjection, External and Rebellion, respectively. Similarly, the RII score for father dimension was correlated with .63, .24, -.53 and -.26 for Identification, Introjection, External and Rebellion, respectively. Furthermore, as expected, the intercorrelations between subscales, within the scale (mother and father), were moderately high. Mother Identification was positively correlated with Mother Introjection and External (r=.81 and r=.30 respectively)) and negatively correlated with Rebellion (r=-.25) Similarly, Father Identification was positively correlated with Father Introjection and External (r=.76 and r=.40) and negatively correlated with Rebellion (r=-.29).

Table 1
Pearson's product-moment inter-correlation coefficients between the IPRS scale and subscale scores

	Variables	1	2	3	4	5	6	7	8	9	10
1	RII(Mother)	-									
2	Mot. Iden.	.62**	-								
3	Mot. Intro.	.25**	.82**	-							
4	Mot. Ext.	-.51**	.31**	.45**	-						
5	Mot. Reb.	-.27**	-.30**	-.30**	.79**	-					
6	RII (Father)	.82**	.52**	.25**	-.44**	-.26**	-				
7	Fat. Iden.	.54**	.84**	.73**	.23**	-.28**	.63**	-			
8	Fat. Intro.	.26**	.72**	.85**	.34**	-.24**	.24**	.80**	-		
9	Fat. Ext.	-.45**	.23**	.37**	.82**	.06**	-.53**	.27**	.41**	-	
10	Fat. Reb.	-.25**	-.27**	-.27**	.92**	.74**	-.26**	-.31**	-.28**	.024	-

Notes: ** Correlations are significant at p< .01, * Correlations are significant at p< .05; RII (Mother) = Relative Internalization Index of Mother dimension, Mot. Iden.= Mother Identification, Mot. Intro. = Mother Introjection, Mot. Ext. = Mother External and Mot. Reb = Mother Rebellion, RII (Father) = Relative Internalization Index of Father dimension, Fat. Iden. = Father Identification, Fat. Intro. = Father Introjection, Fat. Ext. = Father External, and Fat. Reb. = Father Rebellion;

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 78 adolescents (M=15.85, SD=.75) aged between 14 and 18. The result of the Pearson's product-moment correlation coefficient revealed that test-retest reliability was high for Relative Internalization Index of mother form (.69) and for father form (.67).

In addition, the result of the Pearson's product-moment correlation coefficient revealed that test-retest reliability was moderately high in the mother and father subscales scores. In the mother dimension, Person' product-moment correlation was .61 Identification, .58 for Introjection, .35 for External and .36 for Rebellion subscales. In the father dimension, Person' product-moment correlation was .57 for Identification, .53 for Introjection, .32 for External and .31 for Rebellion subscales.

Validity

To examine the construct validity of IPRS, Confirmatory Factor Analysis (CFA) with the maximum likelihood method was performed on the variance-covariance matrix whether the original version of the IPRS-T fitted the data. With the data set, it was assumed that all

items of IPRS-T were constructed in the same factors as in the original version of IPRS. The results revealed that the structure of the IPRS indicated an acceptable fit of the data. The RMSEA and S-RMR were higher than the cutoff value for an acceptable level for mother dimension (.074 and.018 respectively) and father dimension (.072 and .024 respectively). In addition to this results, the other goodness of fit statistics indices indicated a good fit of data for mother dimension (GFI = .96, AGFI = .92 and CFI = .98) and father dimension (GFI = .96, AGFI = .93 and CFI = .97) with a four factor model. Indeed, the results suggested that original factor structures of the IPRS-T showed good goodness-of-fit-statistics for mother and father dimension.

In addition, in order to test whether the IPRS-T would be replicated in an independent sample, the model of IPRS-T was examined in an independent sample (N=226, M=15.55; SD=.95). In the mother dimension, the results of goodness of fit statistics were: S-RMR=.056, RMSEA=.069, CFI=.91 AGFI=.85, and GFI=.88. In the father dimension, goodness of fit statistics were; S-RMR=.047, RMSEA=.079, CFI=.92, GFI=.86, and AGFI=.82. The results suggested that fit indices were also acceptable in an independent sample.

Divergent Validity with Inventory of Parents and Peer Attachment: Validity analysis was conducted by correlating the Relative Internalization Index (RII) and subscale of IPRS-T scores with Inventory of Parents and Peer Attachment (IPPA). The convergent validity method was used to determine whether both Relative Internalization Index (RII) and subscale scores of IPRS-T (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=288, M= 15.96, SD=1.23) was clearly stated prior to administering the instruments.

The findings revealed that the Relative Internalization Index of mother dimension and Identification, Introjection and External subscales scores were positively correlated to POPS and negatively correlated with Rebellion subscale of POPS. In the same way, Relative Internalization Index of father dimension and Identification, Introjection and External subscale scores were also positively correlated to POPS and as expected negatively correlated with Rebellion subscale scores of POPS (Table 2).

Table 2

Correlations of the IPRS with POPS Measures

IPRS POPS	Mother					Father			
	Total Score	Mot. Sup	Auto.	Mot. Invol.	Mot. Warm.	Total Score	Fat. Auto. Sup	Fat. Invol.	Fat. Warm.
RII (Mother)	.31**	.36**		.27**	.08	.31**	.34**	.32**	.08
Mot. Iden.	.36**	.34**		.31**	.27**	.37**	.36**	.33**	.23**
Mot. Intro.	.34**	.27**		.32**	.30**	.31**	.28**	.27**	.24**
Mot. Ext.	-.05	-.11**		-.06	.16**	-.01	-.05	-.06	.11**
Mot. Reb.	-.35**	-.35**		-.40**	-.12**	-.22**	-.24**	-.31**	-.05
RII (Father)	.26**	.30**		.21**	.06	.32**	.36**	.29**	.12**
Fat. Iden.	.29**	.28**		.25**	.18**	.45**	.42**	.34**	.28**
Fat. Intro.	.29**	.21**		.23**	.22**	.35**	.35**	.28**	.29**
Fat. Ext.	-.06	-.13**		-.04	-.09	.01	-.05	-.01	.13**
Fat. Reb.	-.25**	-.24**		-.33**	-.02	-.31**	-.32**	-.39**	.12**

Notes: ** Correlations are significant at $p < .01$, * Correlations are significant at $p < .05$; RII (Mother) = Relative Internalization Index of Mother dimension, Mot. Iden.= Mother Indefication, Mot. Intro. = Mother Introjection, Mot. Ext. = Mother External and Mot. Reb = Mother Rebellion, RII (Father) = Relative Internalization Index of Father dimension, Fat. Iden. = Father Identification, Fat. Intro. = Father Introjection, Fat. Ext. = Father External, and Fat. Reb. = Father Rebellion; Total Score of Mot.= Total score of POPS, Mot. Auto. Sup. = Mother Autonomy Support, Mot. Invol. = Mother Involvement and Mot. Warm.= Mother Warmth; Toatal Score of Fat.= Total Score of Father, Fat. Auto. Sup= Father Autonomy Support, Fat. Invol. = Father Involvement and Fat. Warm.= Father Warmth.

Discussion

The main purpose of this study was to validate the factorial structure of the Turkish translation of the IPRS in middle-aged adolescent sample. The results of this study show that the four structure that underlies the original IPRS version was replicated in middle-aged adolescent sample with the Turkish translation. The results of the present showed that the four factor model of the IPRS provided acceptable fit to the data and the fit indices confirmed that the four-factor model was appropriate to explain the Turkish data. In other words, original factor structure of the IPRS produced fit the data for adolescent's ratings of mothers and fathers on the measures of internalizing rules of parents as identification, introjection, external and rebellion. These findings of the present study revealed substantial paremeter that IPRS constitutes a useful tool for the assessment of internalizing rules of parents (mother and father) in adolescents aged between 14 and 18 years.

The finding of result is also crucial that the original construct of IPRS replicated for the middle-aged adolescents in another culture. This finding supported the validity of the IPRS construct for the internalizing rules of parents in different groups of adolescents from diverse culture.

At the subscale level, the reliability scores and test-retest reliability were acceptable. Moderate intercorrelations among the subscale scores and with the Relative Internalizing Index for mother and father dimension of IPRS were observed. In addition to this finding, acceptable levels of internal consistency were obtained for the RII score and subscale scores, which were similar to original form of IPRS (Soenens & Vansteenkiste, 2009).

The findings of the current study must be assessed within the context of study limitations. First, caution is recommended regarding reliability. It is acknowledged that a 2-week interest period is too short to evaluate test-retest reliability, and evaluation needs to be extended over longer time intervals. Second, External and Rebellion subscales in the both dimension (mother and father) had lower test-retest reliability coefficients. Further research should examine the test-retest reliability in order to better define the reliability of IPRS in the Turkish culture. Third, results may not generalize to samples of different ages, ethnicities, and social backgrounds or to adolescents in clinical situations. Fourth, the present study was restricted to self-report methodology, leaving open the possibility of common response bias across measures and common method variance. It would be beneficial if future research compared adolescents' reports on the IPRS with information obtained from their parents. Finally, because of the somewhat homogeneous sample from which was collected the data, it will be critical to extend the external validity of the IPRS through testing factorial invariance with additional samples (e.g., collage students, and geographically dispersed samples)..In spite of these limitations and considerations, however, overall results support use of the IIPRS among adolescents in Turkish culture.

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