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PARENT IRRATIONAL BELIEFS SCALE: RELIABILITY AND VALIDITY ON PARENTS WITH SECONDARY SCHOOLS CHILDREN[1]

(ANNE BABALARIN AKILCI OLMAYAN İNANÇLARI ÖLÇEĞİ: ORTAOKULDA ÇOCUKLARI OLAN ANNE BABALAR ÜZERİNDE GEÇERLİK GÜVENİRLİK ÇALIŞMASI)

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ABSTRACT

The aim of this study was to assess psychometric properties of Parent Irrational Beliefs Scale on parents having children attending secondary school. The research sample comprised of 489 parents (248 mothers and 241 fathers). A Demographic Data Form prepared by the researchers, Irrational Beliefs Scale (IBS) and Dysfunctional Attitute Scale (DAS) were used in order to obtain data. The results of the confirmatory factor analysis showed that Parent Irrational Beliefs Scale having two-factor including 29-items fit the data well enough. To examine the validity of the scale, the correlations between the scores on the expectations subscale of Parent Irrational Beliefs Scale and Dysfunctional Attitude Scale (DAS) (.33), Irrational Belief Scale (IBS) (.24) were assessed. The perfectionism subscale of Parent Irrational Beliefs Scale was correlated with DAS (.62), and IBS-S (.45). The test-retest correlations were .81 for expectations subscale and .71 for perfectionism subscale respectively. Cronbach Alpha internal consistency coefficients were .85 for expectations subscale and .82 for perfectionism subscale. The results obtained from this study demonstrate that Parent Irrational Beliefs Scale is a valid and reliable for assessing irrational beliefs of parents having children attending secondary school.

Keywords: Irrational beliefs, parent, validity and reliability, secondary school.

ÖZET

Bu araştırmanın amacı; Akılcı Duygusal Davranışçı Terapi (ADDT) çerçevesinde, anne-babaların akılcı olmayan inançlarını ölçmek için ilkokula devam eden çocuğu olan anne babalar üzerinde geliştirilen Anne-babaların Akılcı Olmayan İnançları Ölçeği'nin (ABAOİÖ) ortaokula devam eden çocuğu olan anne babalar üzerinde psikometrik özelliklerinin incelemektir. Araştırmanın örneklemi, ortaokula devam eden çocuğu olan 489 (248 anne, 241 baba) anne babadan oluşmaktadır. Çalışmada; araştırmacı tarafından geliştirilen Demografik Bilgi Formu, Akılcı Olmayan İnançlar Ölçeği (AOİÖ) ve Fonksiyonel Olmayan Tutumlar Ölçeği (FOTÖ) ile veriler toplanmıştır. Ölçeğin yapı geçerliğine yönelik yapılan doğrulayıcı faktör analiz sonucunda elde edilen değerlerden, iki faktörlü modelin uyum indekslerinin çocuğu ortaokula devam eden anne babalar için de uygun olduğu görülmüştür. Ölçüt geçerliliği kapsamında yapılan analizlerde Ölçeğin Beklentiler alt boyutu, FOTÖ ile .33, AOİÖ ile .24; Mükemmeliyetçilik alt boyutunun ise FOTÖ ile .62, AOİÖ ile .45 ilişkisi olduğu tespit edilmiştir. Ölçeğin güvenirlik çalışması kapsamında, Beklentiler alt boyutunun test-tekrar test güvenirlik katsayısı .81 ve Cronbach Alfa iç tutarlılık güvenirlik katsayısı .85 bulunurken, Mükemmeliyetçilik alt boyutunun test-tekrar test güvenirlik katsayısı .71, Cronbach Alfa iç tutarlılık güvenirlik katsayısı ise .82 bulunmuştur. Bu bulgular, ABAOİÖ'nün çocuğu ortaokula devam eden anne-babaların çocuk yetiştirme ve anne baba olmaya ilişkin akılcı olmayan inançlarını değerlendirmede geçerli ve güvenilir bir ölçme aracı olduğu göstermiştir.

Anahtar Kelimeler: Akılcı olmayan inançlar, anne-baba, geçerlik ve güvenirlik, ortaokul.

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INTRODUCTION

According to Rational Emotional Behavior Therapy (REBT), one of the models in Cognitive Behavioral Therapy, negative feelings and behaviors of parents might result from their parenting irrational beliefs than general irrational beliefs (Ellis, Moseley and Wolfe, 1966; Joyce, 1989, 2006). The theoretical foundations of Rational Emotional Behavior Therapy claim that irrational beliefs of parents negatively affect not only the parents' child-rearing practices but they also distort parent-child relationship (Ellis, 1979; Joyce, 1990, 1994).

Many studies reported that there was significant relationship between parents' irrational beliefs and parent stress (Acherman, 1991; McDonald, 1993; Starko, 1991; Witt, 2005). Results indicated that distressed parents hold more irrational relationship beliefs and more conflict than nondisstresed parents group (Eryüksel, 1996; Eryüksel & Akün, 2003; Robin, Koepke & Moye, 1990; Vincent-Roehling & Robin, 1986). Morever, Vincent-Roehling and Robin (1986), Reed and Dubow (1997) examined the association between mothers' and adolescents' actual communication behavior during a problem solving interaction task and their irrational beliefs. They found that mothers' irrational beliefs were positively related to negative communication behaviors. And also, it was reported that irrational parenting beliefs are negatively related to perception of parents' competence (Acherman, 1991).

Parental beliefs are called in different ways; such as child rearing beliefs, parenting cognitions, parenting schemas. In a broad definition, however, parental beliefs consist of parents' beliefs about child rearing, parental expectation and attribution from their children, parental perceptions of children behavior, and parental self-efficacy (Azar, Nix, & Makin-Bryd, 2005; Bornstein & Cote, 2004; Haskett, Scott, Grant, Ward, & Robinson, 2003; Johnston, 1996).

The classifications of parental beliefs are varying through the literature (Hauch, 1967; Robin & Foster, 1989; Wilde, 1992). The most common classification was reported by Joyce (2006) in which the researcher based the classification on fundamental irrational belief types in REBT. Joyce's (2006) classification of irrational beliefs that parents hold are as follows; *a) Demandingness:* This category of irrational beliefs contains absolutist, rigid beliefs which include should, ought to, have to statements. *b*) *Awfulizing:* In awfulizing a negative event is evaluated as worse than it absolutely should be. *c*) *Low frustration tolerance*: These beliefs assert the fact that one cannot tolerate or bear an event or set of circumstances, therefore the situation appears to be intolerable. *d*) *Global evaluation of human worth*: In this belief category, individuals as human beings are valued depending on their success and skills.

Until now, two scales have been developed to evaluate irrational parental beliefs. One inventory which is often used is Parent Irrational Belief Scale investigating parental expectations of their children and themselves (Ackerman, 1991). Similarly, Cognition/Belief Subscale of the Parent Adolescent Relationship

Questionnaire was developed to measure parents' irrational beliefs by Roehling and Robin (1986).

Parent Irrational Beliefs Scale that could measure irrational beliefs of Turkish parents whose children are attending primary schools was developed by Kaya & Hamamcı (2011). This scale contains 29 items and assesses parental beliefs including expectation and perfectionism subscales. However, the scale is needed in order to determine irrational beliefs of parents whose children are in different ages, for instance children attending secondary school in Turkey. An instrument is required to evaluate parents 'irrational beliefs in relation to various variables, such as stress, depression level, the attitudes of parents with secondary schools children and do research into the effects of interventions to reduce the irrational beliefs of the parents on parents.

The aim of this study was to assess psychometric properties of the Parent Irrational Beliefs Scale on parents having children attending secondary schools. This study investigates the factor structure of the scale, test-retest correlation, item-total correlations, internal consistency, and criterion-based validity.

METHODOLOGY

Participants

This study was carried out a total of 489 parents (248 mothers and 241 fathers). The data for factor analysis of the scale was collected from 334 parents (176 mothers and 158 fathers). The validity and reliability studies were done with 155 parents (72 mothers and 73 fathers). The participants' age ranged from 23 years to 56 years (M= 39.5, SD=6.35) with a mean of 3, 44 children (SD=1.87). Of the participants, 63 % completed 8 years of compulsory education or less, 21.3 % were high school graduates, and 15.7 % completed higher education.

Measures

Demographic Information Form: All participants completed a Demographic Information Form developed by researchers. This form was used to obtain information about socio-demographic features of the participants such as age, gender, and education level.

Irrational Beliefs Scale (IBS): This scale was used to measure irrational beliefs of adults. There are 15 items under the three subdimensions including Approval, Human relations and Self. Each item is rated on a 5-point scale, ranging from "completely untrue of me" (1) to "describes me perfectly" (5). High scores indicate increasing levels of irrational beliefs.Cronbach alpha internal consistency coefficient of IBT was .75. Test-retest reliability coefficient for the scale was found .81 over a 10-week interval. The correlation between the scale and the Turkish version of Beck Depression Inventory was .16. The correlations between the scale and the Turkish version of Dysfunctional Attitude Scale was .40 (Türküm, 2003).

The Dysfunctional Attitute Scale (DAS): This scale was developed to identify assumptions that commonly underline thoughts typical of depression

(Weissman, 1979). Savaşır and Sahin (1997) developed a Turkish version of DAS. It consisted of 40 items that are rated on a 7-point scale ranging from 7 (totally agree) to 1 (totally disagree) under four subscales; performance evaluation, need of approval, autonomous attitudes, and tentative attitudes. DAS was scored so that higher scores would indicate more dysfunctional attitudes. The coefficient alpha of the Turkish version of DAS was .79 for university students. The Turkish version of DAS was correlated with Beck Depression Inventory (r = .19), and Automatic Thoughts Questionnaire (r = .53).

Parent Irrational Beliefs Scale (PIBS): This scale measures to evaluate irrational parental beliefs. The scale is comprised of 19 statements related to irrational beliefs about parenting. The factor analysis showed that Parent Irrational Beliefs Scale could be defined by a two-factor structure labeled *expectations* and *perfectionism*. The variances explained by the two factors of the scale were 38 %. To examine the validity of the scale, the correlations among the scores on the expectations subscale and Dysfunctional Attitude Scale (DAS) (.14), Irrational Belief Scale (.52), and Beck Depression Inventory (BDI) (.30) were assessed. The perfectionism subscale was correlated with DAS (.27), IBS (.54), and BDI (.19). The test-retest correlations were .84 for expectations subscale and .80 for perfectionism subscale. Cronbach Alpha internal consistency coefficients were .89 for expectations subscale and .86 for perfectionism subscale. The scale uses a 5-point Likert-type scale, ranging from 1= I strongly disagree to 5=I strongly agree. High scores represent a high level of irrational beliefs related to parenting (Kaya & Hamamcı, 2011).

Procedure

The measures were sent parents via their children in an envelope. The information letter including information about the nature and goal of the study was added. In order to provide confidence, participants were asked not to write their names on the questionnaires. Questionnaires were administered to parents between Novembers -December 2011.

Data Analysis

SPSS 17 for Windows statistical analysis packet was used to in the analyses of Parent Irrational Belief Scale. To determine the construct validity of Parent Irrational Beliefs Scale, confirmatory factor analysis (CFA) were conducted. CFA was performed to investigate the fitness of the factorial model of the scale by using LISREL 8.5

In CFA, the goodness-of-fit of the model was evaluated using multiple criteria: Chi-Square Goodness (χ^2), χ^2/df, the Goodness-of-Fit Index (GFI), the Adjusted GFI (AGFI), the Root Mean-Square Residual (RMS/RMR), the Root Mean Square Error of Approximation (RMSEA), the normed fit index (NFI), the non-normed fit index (NNFI), and the comparative fit index (CFI) (27-29). These statistics indicate how the model fits the data compared to a baseline model. To check the fit of the model, the ratio should be as follows: for χ^2/df, below 5; for

GFI, AGFI, NFI, NNFI, and CFI, above 0.90; and for RMR and RMSEA, below 0.05 (Tabachnick & Fidell, 2001; Mars and Hocevar, 1988). But the following values are acceptable criteria for the fit of the model: GFI>0.85, AGFI>0.80, and RMS and RMSEA <0.10 (Anderson & Gerbing, 1984; Cole, 1987; Mars, Balla, & McDonalt, 1988).

The reliability of the scale was measured using internal consistency and the test-retest method. Cronbach alpha was used to measure the internal consistency. For test-retest reliability of the scale, the correlation coefficients, measured for total scale and each dimension and test-retest coefficients over a 15-day interval were calculated. To assess the criterion-based validity of the scale, the Pearson correlation coefficient was used to test the correlation between Parent Irrational Beliefs Scale and Dysfunctional Attitude Scale, the Irrational Belief Scale scores.

RESULTS

Confirmatory Factor Analysis

CFA was used to investigate the correlation between the model and the data. In the analysis, the two-factor model determined for parents with primary school children was evaluated for parents whose children were attending secondary children. For the two-factor model, the fit indices were χ^2(N=334, SD=376) = 688.02, p<0.01; (χ^2/SD) =1.83, RMSEA = 0.053, Standardized RMR = 0.068, GFI = 0.87, AGFI = 0.85, NFI = 0.91, NNFI = 0.95, and CFI = 0.96. Accordingly, the CFA results for the model showed that it did fit the data obtained from parents with secondary school children well.

The standardized coefficients that show the relationships between the items and their factors were given in Figure 1. All standardized coefficients were significant at the 0.01 level. The coefficients ranged from 0.52 to 0.93 for the items and 0.26 to 0.70 for the subscales.

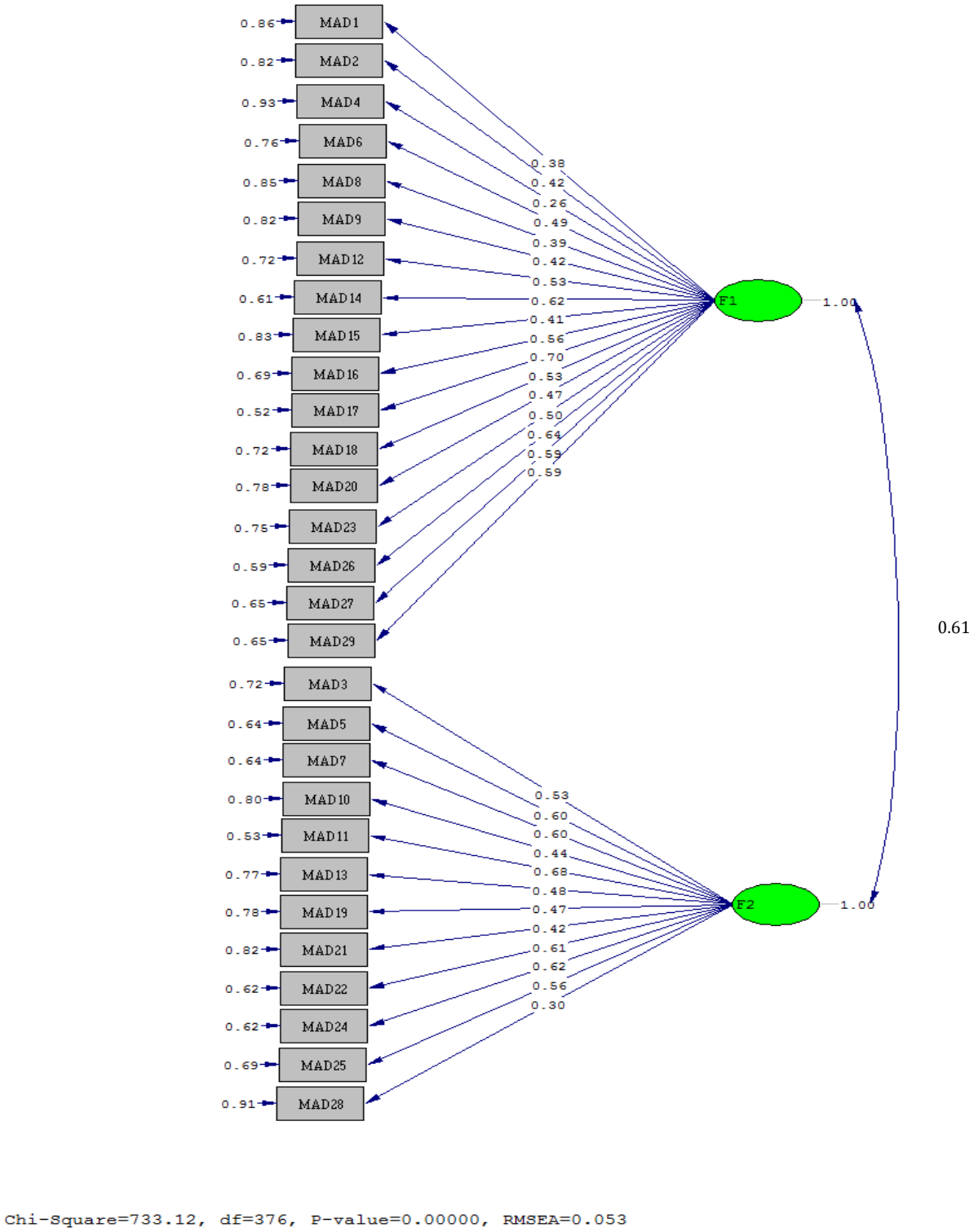

Figure1.The Final Model of The Conformatory Factor Analysis of PIBS with Standardized Factor Loadings (F1: Expectation, F2: Perfectionism)

Item Analysis

The correlations between items in perfectionism and expectations subscales were measured (Table 1). In the correlation analysis, the item-total correlations of expectations subscale varied from .35 to .70; and those of perfectionism subscale varied from .39 and .70 ($p<.01$).

Table 1. Item-Total Correlations within Parent Irrational Beliefs Scale

Factor/Item	Total PIBS	Expectation Subcale	Perfectionism Subscale
Expectation			
01.I can not tolerate my child not being agree on any subject.	.42*	**.45***	.21*
02. It is dreadful for parent to be critized by their children.	.48*	**.49***	.32*
04. Being harsh with children prepares them for life.	.27*	**.35***	.04
06. Decisions taken by children never can not be trusted.	.47*	**.55***	.20*
08. If relations with my child destroyed it would never be healed.	.38*	**.47***	.10
09. There must be compensation for parents' alturism.	.46*	**.49***	.27*
12. I can not tolerate my child's speaking without giving my permission.	.53*	**.59***	.25*
14. Child must always behave as expected by their parents.	.65*	**.61***	.50*
15. If my child does not obey the rules I put, it means that s/he doesn't care about me.	.47*	**.43***	.39*
16. If I compromise my rules, I lose my value near my child.	.57*	**.59***	.35*
17. I always be serious in order to be taken into consideration by my child.	.68*	**.70***	.41*
18. If I make mistake as parents, it has no return.	.51*	**.57***	.25*
20. Accepting my child's requests show our weaknesses as parents.	.46*	**.54***	.16
23. Mistakes of children should never be tolareted.	.45*	**.55***	.13**
26. That children's making their parents sadden is an unacceptable situation.	.63*	**.65***	.40*

Table 1-continue

Factor/Item	Total PIBS	Expectatio Subcale	Perfectionis Subscale
27. There is always only one correct way of bringing up a child.	.60*	**.60***	.40*
29. Children can not do anything without their parents.	.56*	**.52***	.28*
Perfectionism			
3. The parents must venture everything for the future of their children.	.40*	.22*	**.60***
5. I must not make any mistake while bringing up my child.	.52*	.35*	**.64***
7. If the child I brought up is perfect, it show that we are good parent.	.54*	.38*	**.65***
10. I must always solve my child's problems as parents.	.54*	.45*	**.52***
11. I must always be perfect parents.	.56*	.37*	**.70***
13. Parents must always protect their children from making mistakes.	.42*	.27*	**.53***
19. Parents should make sacrifice about every subject in order to bring up a good child.	.36*	.18*	**.54***
21. I must do everything I can for my child's not to face the problems I had.	.34*	.18*	**.51***
22. I aim at my children being perfect in every subject.	.48*	.30*	**.64***
24. The relationship between I and my child must always be perfect.	.51*	.33*	**.65***
25. If I bring up my child as perfect I can be a good parent.	.52*	.38*	**.59***
28. Parents must be a good example for their children.	.22*	.08	**.39***

*p<.01 **p<.05

Correlations between the factors

Table 2 presents the correlations between the factors of the scale, the average scores on the factors, and standard deviations. The bivariate correlation between the two factors of the PIBS was .51 including that the correlation between the factors

was moderate level. The correlation values between each subscale and total scale were .93 for expectation subscale and .79 for perfectionism subscale.

Table 2. The Correlations between Subscales of Parent Irrational Beliefs Scale with Means and Standard Deviations

Factor	M	SD	1.	2.
1. Total PIBS	95.63	16.02		
2. Expectation	45.75	11.51	.93*	
3. Perfectionism	49.88	6.72	.79*	.51*

*p<.01

Validity of the Scale

To examine the validity of the scale, the correlations between the scores on the Expectations subscale and DAS (.33), IBS (.24) were assessed. The perfectionism subscale was correlated with DAS (.62), and IBS (.45) (Table 3).

Table 3. The Correlations of Parent Irrational Beliefs Scale with DAS and IBS

	DAS	IBS
1.Total PIBS	.49*	.36*
2. Expectation	.33*	.24**
3. Perfectionism	.62*	.45*

*p<.01 **p<.05

Reliability of the Scale

The reliability of the scale was measured through internal consistency and the test-retest method (Table 4). The correlation coefficients, measured for total scale and each subscale and test-retest coefficients over a 15-day interval were calculated. The Cronbach-Alpha internal consistency was found .85 for expectations subscale and.82 for perfectionism subscale. Test-retest correlation value was .81 for expectations subscale and .71 for perfectionism subscale (p<.01).

Table 4. Reliability Coefficients of Parent Irrational Beliefs Scale

	Cronbach Alfa	Test-retest
1.Total PIBS	.89	.82*
2. Expectation	.85	.81*
3. Perfectionism	.82	.71*

*p<.01

DISCUSSION

The aim of this study was to assess psychometric properties of Parent Irrational Beliefs Scale on parents whose children were attending secondary schools. The CFA results showed that two-factor model of PIBS comprised of 29 items fits the data well enough for the present sample.

The relationships among the scores on the PIBS, IBS and DAS indicated that PIBS had criterion-based validity. The correlation coefficients between the perfectionism and expectations subscales of the PIBS and DAS were positive and moderate level. The positive correlations between DAS and PIBS could be explained by the fact that these two scales were developed based on the same theoretical background.

In the current study, low level correlations were found between expectation subscale of PIBS and IBS. The reason of having low level correlation could be that PIBS' expectations subscale measures irrational expectations of parents from children and their relations with children; however, IBS is a kind of instrument which measure individual's irrational beliefs about himself/herself.

The reliability of the scale was measured through internal consistency and the test-retest method. The correlation coefficients, measured for total scale and each subscale and test-retest coefficients over a 15-day interval were calculated. The test-retest correlation of the PIBS was above .70 for the total scale and for each factor, showing that the scale is stable over time. Test retest coefficient for perfectionism subscale was relatively low, but acceptable due to the fact that it was higher than .70 (Nunnaly, 1978). Cronbach Alfa value between .80 and 1.00 shows higher level of internal consistency (Tavşancıl, 2002). Depending these criteria, the scale had higher level of internal consistency.

In addition, each item had moderate level of correlations with its own subscale whereas it had low level of correlations with other subscales. This indicates items' homogeneity, in order words items under each subscale are consistent with own structure.

When the data obtained from analyzes carried out within the scope of validity and reliability studies is examined, scale form which has developed by Kaya & Hamamcı to assess parents irrational beliefs whose children attending primary school show similarity with the findings of this study. The previous form of the scale's test-retest reliability, internal consistency reliability and correlation values with DAS, IBS is close to values which were obtained from parents whose children attending secondary schools in this study.

There is some limitation of this study. One of which is that it only includes parents living in Gaziantep. Other one the sample of this study is community sample. The validity and reliability of the scale can be done on parents showing the specific psychological problems like depression, anger, anxiety, etc., or behavioral disorders, special educational needs in children.

Criterion validity of the scale was measured by IBS and DAS in this study. When it was considered that irrational beliefs are related to variables such as anger

and anger expression styles (Önem, 2010), decision-making styles (Can, 2009), locus of control (Akman-Demir, 2003), criterion validity of the scale can be tested in different studies by scales that measure these variables. After that, in future studies the relationship between parents' irrational beliefs and parenting stress, depression land life satisfaction levels of parents can be investigated. In addition the validity and reliability of the scale can be repeated on parent whose children are attending to pre-school and high school.

This study demonstrates that the Parent Irrational Beliefs Scale is a valid and reliable for assessing irrational beliefs of parents whose children are attending secondary school.

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