

The Parental Bonding Instrument: Evaluation of its Psychometric Properties with Turkish University Students

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SUMMARY

Objective: The present study aimed to evaluate the psychometric properties of the Parental Bonding Instrument (PBI) with Turkish university students.

Method: The study included 336 (61.5%) female and 211 (38.5%) male students from Ankara and Pamukkale Universities. The mean age of the participants was 21.55 years (SD: 1.65 years; range: 18-26 years). The construct validity of PBI was examined by exploratory factor analysis; the criterion validity was assessed by examining the correlation of the PBI with two other instruments, the Parental Attitude Research Instrument (PARI) and Parenting Style Inventory (PSI). The reliability of the PBI was assessed by Cronbach's Alpha, test-retest, and split-half reliability statistics.

Results: The factor analysis yielded twofactor solutions for both parents, as did the original PBI. Nevertheless, the items related to controlling behaviors were loaded on the care factor instead of the overprotection factor, as found by Parker et al. (1979). Thus, these two factors were called care/control and overprotection subscales. Additionally, PBI was found to generally demonstrate a high level of correlation with PARI and PSI, supporting criterion- validity. Finally, the reliability studies of the PBI demonstrated that it is a highly reliable scale and showed stability over a period of 3 weeks.

Conclusion: The psychometric properties of PBI were satisfactory and could be used to assess parental attachment. It is suggested that further studies may illuminate the clinical value of PBI and quantify parental contribution to psychopathology.

Key Words: Parental bonding, care, overprotection, validity, reliability, parental bonding instrument

INTRODUCTION

There is a general acceptance regarding the effects of the parent-child relationship on a child's development, relationships with others, and psychological adjustment. The initial and most important steps that resulted in this point of view were Bowlby's research findings, which demonstrated the importance of the social bond between primary care giver and child (attachment) to normal child development (Crockenberg et al., 1993).

According to Bowlby (1969, 1973), the most important factors in the development of attachment between the primary care giver and the child are: a) orientation towards preferring human beings and moving objects; b) learning to differentiate the most frequently seen people from others; c) approaching acquaintances and avoiding strangers; d) differentiating behaviors that lead to desired results from those that do not, and to increase those behaviors.

Based on Bowlby's theory, Ainsworth et al. (1978) defined three attachment styles. Infants with a caregiver that responds timely to their needs feel safe to engage in play and exploration. This kind of a secure attachment with a caregiver is beneficial to the infant's general adaptation. In cases where the caregiver's reactions to an infant's needs are inconsistent or when the caregiver cannot respond on time, an unstable/anxious attachment style might form. On the other hand, in situations where the caregiver is consistently non-responsive to the infant's needs, an anxious/avoidant attach-

ment style forms. There are numerous research studies regarding the relationship between mental health, both in childhood and adulthood, and the attachment style between the infant and the primary caregiver (Rohner and Britner, 2002).

In parallel with the acceptance of the importance of the parent-child relationship to an individual's life, a number of scales/tools were developed in order to understand the child's/individual's perception of the parent-child relationship, which include the Own Memories of Childhood Rearing Experiences (Perris et al., 1980), Parental Attachment Questionnaire (Kenny, 1987), and the Continued Attachment Scale-Parent Version (Berman et al., 1994).

Tools for assessing the parent-child relationship as perceived by the children, adolescents or adults have also been developed or adapted in Turkey. The first one of these scales is the Parental Attitude Inventory developed by Kuzgun (1972). This inventory assesses the perceptions of children and adolescents about their parents' attitudes towards them, i.e. democratic, authoritarian, or careless. Other tools were also developed based on Kuzgun's inventory (Bilal, 1984; Polat, 1986). In the Perceived Child Rearing Attitudes Scale developed by Okman (1979), perceived parental attitudes are evaluated in terms of the following dimensions: ability to separate from the mother, self-control, autonomy, and personality characteristics.

In addition to these scales developed in Turkey, there are also various scales that were adapted to the Turkish culture. The Parental Attitude Research Instrument (PARI) developed by Schaefer and Bell in 1958 was adapted by LeCompte et al., 1978. The Parental Acceptance-Rejection Questionnaire-Child Form developed by Rohner et al. (1980) was adapted - by Erdem, 1990. Another scale, the Parenting Style Inventory, originally developed by Lamborn et al., (1991) was adapted to Turkey by Yilmaz (2000). One of the most frequently used scales in the international literature is the Parental Bonding Instrument (PBI) (Parker et al., 1979). It is also one of the first scales that was based on Bowlby's attachment theory (1969, 1973).

Bowlby related deficient/pathological parenting with lack of care and excessive control/protection dimensions. The term "lack of care" includes providing deficient care, an inability to meet the in-

fant's needs, and belittling, criticizing, or rejecting the child-. On the other hand, the term "excessive control" was defined as over protection, not supporting the development of the child's autonomy, or excessively controlling the child's behavior. PBI developed by Parker et al., (1979) in order to measure the parent-child attachment pattern, includes care and control/protection dimensions, as Bowlby had proposed. Perceived parental behaviors are scored separately according to these dimensions. In addition, the perceived parental behavior pattern can be evaluated with a quadrant classification model by taking these two dimensions into consideration. According to this quadrant model, high care-low overprotection is defined as optimal attachment. Low care-low overprotection is classified as non-attachment or poor attachment. Parents who display high care overprotection behaviors are classified in the affectionate constraint group. Lastly, low care overprotective parental behaviors are classified as affectionless control.

In the studies conducted with PBI in different cultures, the issue of whether the scale has two factors (care and overprotection) or three factors (care, overprotection, and control) remains controversial. In addition to the studies supporting that the scale has two factors (Uehara et al., 1998, Parker et al., 1997), there are also studies that support three factors in the scale (Cox et al., 2000; Martin et al., 2004; Lizardi and Klein, 2002). Some research findings showed that the scale supports both the two factorial and three factorial structures (Qadir et al., 2005). Furthermore, approximately 15-20 years after the development of PBI with 25 items, Pederson (1994) proposed that the items may be reduced down to 10 and Kendler (1996) proposed that items of the inventory might be reduced down to 16.

Fundamentally, the scale assesses a child's perception of the parent-child relationship retrospectively. Studies conducted with PBI showed that the scale could evaluate the contribution of the parent-child relationship to mental disorders, and that it is therefore a valuable tool for use in clinical studies. Studies have found a relationship between attachment to parents and mental disorders during adolescence and adulthood. For example, perceived low parental care and excess control were found to be related to various psychological disorders, such as depression (Uehara et al., 1998), anxiety disorders (Chambers et al, 2004), schizophrenia

Table I. Sociodemographic Characteristics of the Participants

	n (547)	%
Gender	336	61.5
Female		
Male	211	38.5
Classroom Undergraduation level (as years)	38	6.9
I		
II	190	34.7
III	169	30.9
IV	150	24.4
Mothers' education level	42	8.5
Illiterate		
Primary school	242	44.6
High-school	135	26.6
University	88	17.3
Fathers' education level	11	1.6
Illiterate		
Primary school	190	37.4
University	132	26.0
	175	34.4
Number of siblings	n (515)	%
No sibling		
1 sibling	40	7.8
2 siblings	163	31.7
3-8 siblings	168	32.6
	144	27.9

(Willinger et al., 2002), adolescent suicide (Violato and Arato, 2004), eating disorders (Meyer and Gillings, 2004), substance abuse (Gerra et al., 2004), and obsessive compulsive disorders (Myhr et al., 2004).

PBI has been shown to be a valid and reliable tool in Western cultures, and Near and Far Eastern cultures, including Pakistan (Quadir et al., 2005), Japan (Narita et al., 2000), Belgium, Holland, Italy, Spain, and France (Heider et al., 2005).

The primary aim of this study was to evaluate the psychometric properties of the PBI for the Turkish culture. The PBI assess perceived and actual parenting characteristics retrospectively. (Parker, 1983 can measure the parent-child relationship over a long period of time, as much as 20 years (Wilhelm et al., 2005), has a clinical value and is short, easy to administer and score.

METHOD

Participants

Of the 547 study participants, 265 were (48.4%) from Ankara University (AU) Engineering Faculty, 55 were (10.1%) from AU Science Faculty, 121 were (22.1%) from AU Educational Sciences Faculty, and 106 (19.4%) were from Pamukkale University Education Faculty. The mean age of the participants was 21.55 years (SD: 1.65; range: 18-26 years). Sociodemographic characteristics of the participants are shown in Table I.

Measures

PBI, The Parental Bonding Instrument (Parker et al., 1979): PBI assesses the perceived parental - relationship retrospectively as perceived by the individual. Mainly, the scale includes two factors; care and control/overprotection. Of the 25 items, 12 items compose the care dimension, (scores

Table II. Factor Structure of ABBÖ.

Items	Factors			
	Mother Form (n = 419)		Father Form (n = 431)	
	Factor I	Factor II	Factor I	Factor I
1. Spoke to me in a warm and friendly voice	-.071	-.003	-.075	
2. Did not help me as much as I needed	-.055	-.012	-.061	-.008
3. Let me do those things I liked doing	-.061	-.012	-.061	-.032
4. Seemed emotionally cold to me	-.061	-.008	-.067	
5. Appeared to understand my problems and worries	-.060		-.066	
6. Was affectionate to me	-.062		-.069	
7. Liked me to make my own decisions	-.068		-.065	-.026
11. Enjoyed talking things over with me	-.068	-.011	-.073	
12. Frequently smiled at me	-.071		-.076	
14. Did not seem to understand what I needed or wanted	-.055	-.023	-.057	-.017
15. Let me decide things for myself	-.067	-.017	-.064	-.039
16. Made me feel I wasn't wanted	-.050	-.008	-.047	-.027
17. Could make me feel better when I was upset	-.071	-.005	-.078	
18. Did not talk with me very much	-.067	-.013	-.068	
21. Gave me as much freedom as I wanted	-.056	-.018	-.051	-.037
22. Let me go out as often as I wanted	-.056	-.018	-.046	-.032
24. Did not praise me	-.027	-.014	-.036	
25. Let me dress in any way I pleased	-.054	-.012	-.052	-.034
8. Did not want me to grow up		-.062		-.054
9. Tried to control everything I did	-.024	-.061	-.025	-.059
10. Invaded my privacy	-.029	-.044	-.027	-.055
13. Tended to baby me		-.059	-.013	-.061
19. Tried to make me feel dependent on her/him	-.029	-.063	-.025	-.055
20. Felt I could not look after myself unless she/he was around	-.014	-.049		-.051
23. Was overprotective of me	-.016	-.067	-.019	-.055
Eigen value	7.21	2.39	7.80	2.60
Variance explained	28.8%	9.6%	31.2%	10.4%
Cronbach's Alpha (Subscales)	0.90	0.70	0.91	0.70
Cronbach's Alpha (Total scale)	0.87		0.89	

range between 0 and 36). High scores reflect the perception of warm, understanding, and accepting parents, whereas low scores represent the perception of cold and rejecting parents. There are 13 items in the control/overprotection dimension

(scores range between 0 and 39) and high scores indicate the perception of overprotective parenting or not allowing child's autonomous behaviors. The individual is required to rate the parental behaviors represented in each item regarding the first

Table III. Correlations between ABBÖ, PSI, and PARI.

	Mother Form			Father Form		
	ABBÖ total	ABBÖ-care/control	ABBÖ-protection	ABBÖ total	ABBÖ-care/control	ABBÖ-protection
ABBÖ-care/control	-.94***			-.95***		
ABBÖ-protection	-.61***	-.29***		-.60***	-.27***	
PARI-1. Overprotective mothering	-.16**	-.02	-.39***	-.06	-.03	-.26***
PARI-2. Democratic Attitude and Equality	-.41***	-.42***	-.17**	-.43***	-.43***	-.17***
PARI-3. Rejecting of Homemaking role	-.32***	-.21***	-.37***	-.18***	-.09	-.30***
PARI- 4. Marital conflict	-.27***	-.19***	-.29***	-.41***	-.36***	-.32***
PARI-5. Strict discipline	-.35***	-.23***	-.42***	-.29***	-.20***	-.35***
PSI-1. Aacceptaence/involvement/autonomy	-.20***	-.28***	-.10*	-.23***	-.31***	-.11*
PSI-2. Direct control	-.20***	-.18***	-.12*	-.28***	-.25***	-.21***
PSI-3. Indirect control	-.19***	-.26***	-.07	-.11*	-.18***	-.11*

*P < 0.05; **P < 0.01; ***P < 0.001

16 years of his/her life on a 4 point Likert-type rating scale (very like = 3.... very unlike = 0) – The individual makes two different ratings, one each for his/her mother and father. In the scoring of the care subscale, items 2, 3, 4, 7, 14, 15, 16, 18, 21, 22, 24, and 25, and items 8, 9, 10, 13, 19, 20, and 23 on the control overprotection subscale are reversely coded. (0-3).

The two-factorial structure of the PBI is evaluated as two separate scales and two total scores are calculated from the subscales. High scores in the care dimension and low scores in the overprotection/control dimension represent positively perceived parental behavior. These two scales can be used independently, as well as together.

In the second type of application, perceived parental behaviors can be quadrant classified as previously described. A number of reliability studies were conducted for the PBI Test-retest reliability was found to be 0.76 for the care dimension and 0.63 for the overprotection/control dimension, split-half reliability was 0.88 and 0.74, and interrater reliability coefficients were 0.85 and 0.69 respectively. For the concurrent validity study of the PBI, it was shown that scores from the interview and scores derived from the PBI factors were also

related (care: 0.77; overprotection/control: 0.50).

In the Turkish adaptation study of the PBI, two qualified academicians translated the scale independently into Turkish from English. After making the required corrections between these two separate translations, the back translation was performed by another qualified academician. In the comparison of the original scale and the back-translated form, it was agreed upon that the statement of the items were conceptually equal. A group of university students were asked to evaluate the items in terms of their understandability and it was concluded that the items were easily understandable. As pointed out above, the original scale has two dimensions, with high scores in the care dimension and low scores in overprotection/control dimension representing positively perceived parental behavior. For this study, as the factor structure of the Turkish version was not known, all items were scored in the same direction (increased scores reflecting positive parental attachment). Only the following items were reversely coded: items 2, 4, 8, 9, 10, 13, 14, 16, 18, 1, 2, 23, and 24. Increased scores in both total score and subscale scores would thus represent perceived positive attachment towards parents. The Turkish version of the scale is called Ana Baba'ya Bağlanma Ölçeği (ABBÖ).

Parental Attitude Research Instrument (PARI) (Schaefer and Bell, 1958), adapted by LeCompte et al. (1978): The scale consists of 60 items and 5 subscales, which are Overprotective Mothering Democratic Attitude and Equality, Rejection of Homemaking Role, Marital Conflict, and Strict Discipline. Items 2, 29, and 44 are reversely coded. Increased scores of the factors, except Democratic Attitude and Equality, indicate negative parental attitude. There is no total score of the scale; only the subscale scores are evaluated. Test-retest reliability of the factors was between 0.58 and 0.88. In a study conducted by Küçük (1987) with high school students and their parents, construct validity of PARI subscales were also supported. This tool, which is frequently used in Turkey, was used with the aim of evaluating the criterion validity of ABBÖ.

Parenting Style Inventory (PSI) (Lamborn et al., 1991), adapted by Yılmaz (2000): The scale consists of 26 items and three dimensions of parenting style: acceptance/involment, psychological autonomy and strictness/supervision. Items 1-18 are scored between 4 and 1, items 19 and 20 are scored between 0 and 6, and items 21-26 are scored between 1 and 3. Test-retest reliability and internal consistency of the scale were evaluated with primary school, high school, and university students. The reliability coefficients for each subscale and for the 3 study groups ranged between 0.60 and 0.93. In the validity study of the scale, a similar factor structure to the original study was found; however, item total correlation of the third item in all 3 study groups and the factor loading values of the 10th and 16th items for the university students were low. In conclusion, the scale was reduced to a 23-item scale after excluding these 3 items. The factors found for the university students were as follows: acceptance/involvement/autonomy; direct control; indirect control. The scale was used with the aim of evaluating the criterion validity of ABBÖ.

Procedure

The study participants were recruited from Ankara University Engineering, Science, and Educational Sciences Faculties, and Pamukkale University Education Faculty. The aim of the study was briefly explained to the students and 4 students from Ankara University Educational Sciences Faculty declined to participate because they were not well or tired; all other students completed

the scales voluntarily. ABBÖ-Mother, ABBÖ-Father, PSI, and PARI were administered to student groups of 25-30, counterbalancing the questionnaires in each group. Completion of the scales took approximately 40 to 50 minutes.

Data Analysis

To test the stability of ABBÖ scores, correlations of the test-retest scores with a 3-week interval were examined. For the internal consistency of the scale, Cronbach's alpha reliability coefficient was computed, and split-half reliability was examined using Guttman split-half analysis. Exploratory factor analysis was conducted in order to determine the factor structure of the scale. Correlations of PARI and PSI total scores and subscale scores were examined in order to evaluate the criterion validity of the scale.

FINDINGS

Descriptive findings related to ABBÖ

The mean total scores of the father and mother forms of ABBÖ were 51.44 (SS: 10.93; $n = 441$) and 49.12 (SS: 12.03; $n = 440$), respectively, and correlation between these 2 forms was 0.59 ($P < 0.0001$). The t-test results of the dependent groups showed that the difference between these two scales was significant $t(439) = 4.54$; $P < 0.0001$. Generally, this finding indicates that university students developed more positive bonds with their mothers.

When findings related to the subscales, revealed by the factor analysis, were examined, mean of the care/control subscale of the mother form was 39.34 (SD: 9.06) and 36.27 (SD: 10.28) for the father form. The correlation between the two forms was 0.57 ($P < 0.0001$). The t-test results of the dependent groups showed that the difference between groups was significant and that the mothers were perceived as more caring and less controlling; $t(439) = 7.03$; $P < 0.0001$. The mean score of the overprotection dimension for mothers and fathers was 12.11 (SD: 4.05), 12.85 (SD: 4.05) respectively; the correlation between these two forms was 0.57 ($P < 0.0001$). Higher scores in this dimension indicate less protective behavior. The t-test results of the dependent groups showed that the difference between mothers and fathers on this subscale was significant; $t(439) = 4.11$; $P < 0.0001$. According to this finding, participants perceived their mothers as more protective than their fathers.

The validity findings of ABBÖ

Validity studies of the scales were conducted with a total of 441 students from Ankara University Engineering, Science, and Educational Sciences Faculties, of which 262 were female (59.5%) and 179 were male (40.5%); the mean age was 21.97 years (SD: 2.02 years).

1. Factor structure: Exploratory factor analyses for the father and mother forms were performed to determine the factor structure of the scales. In the results of the principal components analysis, 5 factors with Eigen values > 1 were found, which explained 53% of the total variance for the mother form and 57% for the father form. However, when factor loadings were evaluated, it was found that majority of the items loaded onto two factors with Eigen values > 2 . The results of the varimax rotation showed a 2-factor construct for both forms (Table II). For the control/overprotection factor, items that were related only to the controlling behaviors in the original scale (3, 7, 15, 21, 22, and 25) were found to load on the care dimension in the present study. As this factor includes controlling behavior of the parents toward the child, in addition to care, it was called care/control. When items of the second factor were examined (8, 9, 10, 13, 19, 20, 23), it was found that all items included parental overprotective behavior and was called overprotection. Although item 9 loaded onto the overprotection/control factor in the original scale, this item loaded onto overprotection factor in this study.

Two factors derived from the mother form explained 38.4% of total variance. Corrected item total correlations in this dimension were between 0.25-0.68 and were statistically significant ($P < 0.001$). Similar findings were found for the father form; total variance explained by these two factors was 41.6%. Corrected item total correlations was between 0.29 and 0.71, and was statistically significant ($P < 0.001$).

Criterion Validity

In order to evaluate the criterion- validity of ABBÖ, its correlations with PARI and PSI total scores and subscale scores were examined. Correlation of the ABBÖ-Father and ABBÖ-Mother forms are presented in Table III.

There was a very high correlation between the total scale scores of ABBÖ and the care/control

subscale scores for both the father and mother forms (Table III). Although the overprotection subscale score yielded a lower correlation with the total scale score, the correlation was also significant for both the father and the mother forms ($P > 0.001$). Similarly, correlations between the two subscales of the mother and father forms were significant ($P < 0.001$).

Correlations of PARI and PSI total scores and subscale scores were examined in order to evaluate the criterion- validity. As specified in the methods section, higher scores for the factors of PARI, except the second subscale (Democratic Attitude and Equality), indicate negative parental attitude. As expected correlations between total scores of ABBÖ mother and father forms, and subscale scores with PARI were significant,. While the correlations between the first subscale of PARI, namely, Overprotective Mothering and care/control dimensions of the mother form were not significant, its correlation with ABBÖ's protection subscales were significant. In the father form of ABBÖ, despite the significant correlation between the protection subscale and PARI first subscale, there was no correlation with total ABBÖ scores and the care/control subscale.

When correlations between ABBÖ total and subscale scores and PSI subscales are considered, generally, correlations were significant, and as an expected direction. The correlation between the third subscale of PSI (indirect control) and overprotection subscale of ABBÖ-Father form was negative and statistically significant while this correlation was also negative for the mother form but not statistically significant.

Reliability Findings

The reliability of ABBÖ was calculated using internal consistency, split-half, and test-retest statistics. The Cronbach's alpha value for the mother form was 0.87 and was 0.89 for the father form. The Cronbach's alpha for the protection subscales for both forms was 0.70 and for the care/control subscales it was 0.90 for the mother form and 0.91 for the father form. In the split-half analysis of the ABBÖ, the Guttman split-half method was used. According to the analysis, the value for the total mother form was 0.70, for the care/control dimension it was 0.85 and was 0.68 for the protection dimension. For the father form, these values were as follows: for the total scale, 0.64; for the care/

control and protection subscales, 0.83 and 0.64, respectively.

A separate group of students ($n=106$) participated in the test re-test reliability study of the scale with three weeks interval. Seventy-four of these students were female (69.8%) and 32 were male (31.2%); the mean age was 20.82 years ($SD: 1.95$ years). Test-retest reliability of the mother form was 0.90 and was 0.89 for the father form. For the subscales, the test-retest reliability of the care/control dimension of the mother form was 0.91 and it was 0.90 for the father form. The reliability for the protection dimension was 0.64 and 0.78 for the mother and father forms, respectively.

When reliability and validity findings are considered, it could be concluded that the psychometric characteristics of ABBÖ seems to be satisfactory.

DISCUSSION

The reliability and validity of the PBI, developed by Parker et al. (1979), was evaluated with Turkish university students. In order to evaluate the validity of the Turkish version of the scale (ABBÖ), a factor analysis was performed for construct validity, and ABBÖ's correlations with PARI and PSI were examined for criterion- validity. Internal consistency, split-half, and test-retest reliability coefficients were performed for the evaluation of ABBÖ's reliability

The original scale consists of two factors; care and overprotection/control. In the present study, although ABBÖ displayed a two-factorial construct, it was found that control items that were loaded on the overprotection/control dimension in the original scale were found to load on the care factor. Therefore, this factor was called care/control.

As stated in the introduction, discussions regarding the factor structure of PBI are ongoing. Some studies showed that the scale has two factors, care and overprotection (Uehara et al., 1998; Parker et al., 1997), and other studies proposed that the overprotection and control dimensions as separate factors are more precise and has satisfactory psychometric properties (Cox et al., 2000; Martin et al., 2004; Lizardi and Klein, 2002). In this study, control items were neither loaded on the overprotection factor and nor they appeared as a third factor. As control behaviors of the parents are found to go together with overprotective parenting

in Western cultures, it appeared as a part of caring parenting in Turkish culture. The reason for the control and care items to appear as one factor in the present study could be related to the fact that caring parenting has always been associated with controlling and/or to be informed about offspring's behavior in Turkish culture...

Another finding that could be important is that while the ninth item ("tried to control everything I did") loaded onto the overprotection/control factor in the original study, the same item was found to load onto the overprotection factor in this study. Although this item seems to be related to the parental controlling behavior at first glance, it differs from other control items; in fact "trying to control everything" could be a denial of the child's psychological autonomy and thus this parental behavior might reflect an underlying pattern of overprotective parenting. There are some studies that found this item on the overprotection factor supporting the above explanation (Narita et al., 2000; Martin et al., 2004).

In the analyses conducted to evaluate the criterion validity of ABBÖ, it was found that total scale and subscales of ABBÖ demonstrated acceptable correlations with PARI and PSI's subscales. This finding indicates that ABBÖ is a valid instrument in measuring parenting behavior and thus, has criterion-validity. Besides this general finding, some correlations were found to be non-significant. Correlations between the care/control subscale of ABBÖ and PARI 1- overprotective mothering subscale were not significant. When the items of PARI 1- overprotective mothering subscale were examined, it was seen that some items were related to the pattern of ignoring the psychological autonomy of the child. Significant correlations with this dimension of PARI and the ABBÖ overprotection subscale support this finding.

In addition to this, the correlation between the total score of - ABBÖ Father form and PARI-1 overprotective mothering scale was not significant. A possible reason for this finding could be that some items in this scale are related with traditional mother behavior and some are related to both father and mother behavior.

Generally, correlations between ABBÖ total and subscale scores, and PSI were significant. However, the correlation between the third subscale of PSI, indirect control, and the overprotection sub-

scale of ABBÖ was negative for both mother and father forms, but it was also statistically significant, for the father form. Findings that were opposite to our expectations may have been due to a number of reasons. Firstly, the present study, demonstrated a difference between perceived parental behavior patterns but, as the mothers and fathers were not evaluated separately in PSI, it could not reflect the differences among the parents. The findings might also have been due to the behaviors measured by the PSI's indirect control and ABBÖ's overprotection dimensions. For example, a parent showing no effort to find out what a child does after school or at night could be accepted as positive parenting in PSI. This type of controlling parental behaviors are loaded on the care/control dimension of ABBÖ, not in the overprotection dimension, but their content are also different (for example, "Let me decide things for myself").

The reliability of ABBÖ was performed using internal consistency, split-half, and test-retest statistics. It was observed that total scores and subscale scores showed a high degree of consistency for the mother and father forms of ABBÖ. In addition, the high Cronbach's alpha values and split-half correlation coefficients, and significant item total correlations support the reliability of the scale.

The care and protective behaviors that Bowlby proposed to be the two primary dimensions of parenting behavior could be said to be supported in the Turkish version of the scale, as in the original. The findings of the present study showed that

ABBÖ was able to assess the universal dimensions of parent-child attachment, such as care and protection; however, the main difference between PBI and ABBÖ was that while items related to controlling parental behavior go together with overprotective behaviors in PBI, they appear with the caring parental behaviors in ABBÖ. Controlling parental behavior which appears with overprotective behaviors in PBI, but with caring behaviors in the Turkish culture, and yet as a third factor in an other culture (Narita et al., 2000) points out the importance of cultural variables in the controlling parental behaviors.

As stated in the introduction, there are many studies that utilized the PBI to evaluate the parental behaviors that might contribute to various psychiatric disorders, ranging from anxiety disorders (Chambers et al., 2004) to schizophrenia (Willinger et al., 2002). A limitation of this study was that a comparison to a clinical group was not performed. Studies with different clinical groups in Turkey might provide information about the discriminant validity of the scale and also the parent-child relationship characteristics' contribution to psychiatric disorders unique to Turkey. To the best of our knowledge, there are no studies that assessed the relationship between adults' attachment to their own parents and their offspring in the related literature. Assessing this pattern using ABBÖ in Turkey could also provide important information for interventions aiming to improve parent-child relationships.

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