STUDY ON THE VALIDITY AND RELIABILITY OF THE PARENT AS SECURE BASE SCALE – MOTHER VERSION

Mustafa DAMAR[*]

Abstract:

In this study, the validity and reliability of "Parent as Secure Base Scale – Mother Version" (Cassidy, Ziv, Rodenberg & Woodhouse, 2003), was evaluated to identify mothers' level of being protective, responsible and sensitive to their 12-14 year-old children. 200 students between the ages of 12-14, attending elementary schools participated in the study. The variance in exploratory factor analysis was calculated 58.64%. The single-factor structure of the scale tested in the confirmatory factor analysis was confirmed to show high model compliance. For internal consistency, Cronbach alpha was calculated (α= .95) and Spearman Brown split half test correlation was calculated .93. In accordance with the results obtained, it can be concluded that the Turkish version of the scale is valid and reliable.

Keywords: Attachment; parent attitudes; validity; reliability; scale

* Ministry of National Education, musdamar1@hotmail.com, ORCİD NO: 0000-0002-1435-5975, Makale Geliş Kabul Ediliş Tarihi: 12.03.2018 – 12.04.2018.

GÜVEN ESASLI EBEVEYNLİK ÖLÇEĞİ – ANNE VERSİYONUNUN GEÇERLİK VE GÜVENİLİRLİK ÇALIŞMASI

Mustafa DAMAR*

Öz: Bu çalısmada 12-14 yaş dönemindeki çocukların annelerinin; çocuklarına karşı koruyuculuk, sorumluluk ve duyarlılık düzeyini belirleyebilmek amacıyla Cassidy, Ziv, Rodenberg ve Woodhouse (2003) tarafından geliştirilen "Güven Esaslı Ebeveynlik Ölçeği-Anne Versiyonu'nun geçerlik ve güvenilirliği değerlendirilmiştir. Araştırmaya, ilköğretim okullarında öğrenim gören 12-14 yasındaki 200 çocuk katılmıştır. Açımlayıcı faktör analizi sonucunda tek faktörün açıkladığı varyans % 58,64 olarak hesaplanmıştır. Doğrulayıcı faktör analizi sonucunda ölçeğin orijinal tek faktörlü yapısının yüksek model uyumu gösterdiği bulunmuştur. Ölçeğin güvenilirliğini değerlendirebilmek amacıyla iç tutarlılığına bakılmıştır. Cronbach alfa katsayısı α = .95 ve Spearman-Brown iki yarı test korelasyonu .93 olarak hesaplanmıştır. Elde edilen sonuçlar doğrultusunda ölçme aracının Türkçe formunun geçerli ve güvenilir olduğu söylenebilir.

Anahtar Sözcükler: Bağlanma, ebeveyn tutumları, geçerlik, güvenilirlik, ölçek

Introduction

Attachment involves biological and behavioral components, emotional and psycho-dynamic components and social and systemic components as well as various subjects pertaining to interpersonal interaction and communication issues (Pickover, 2002). John Bowlby highlighted the importance of mother-child relation in the child's upbringing as a physically and psychologically healthy individual and put the mother-child attachment in the center of attachment (as cited Weber, 2003).

The infant naturally desires to be close to its caregiver in the event of danger or threat. Since it is usually the mother who undertakes the role of caregiver, the attachment figure is expected to be the mother. The attachment figure should be psychologically in harmony with the child and meet the child's need for closeness and physical contact in order to fulfill the child's need for security and comfort (Vondra & Barnett, 1999).

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* Milli Eğitim Bakanlığı,musdamar1@hotmail.com.

Achieving this closeness gives the infant a sense of security and comfort. The infant knows that s/he could go to the attachment figure in this sense of security and comfort whenever s/he feels like and needs. Bowlby (1980) defined the conceptual frame of attachment system with three basic functions, which are seeking closeness, secure shelter and secure base. According to Ainsworth (1989), the tie in relationships must be an emotional and permanent one to call it attachment where separation is supposed to cause stress, while reunion gives pleasure and loss is supposed to induce mourning.

Attachment plays an important role in the individual's life, and although it focuses on the infancy, it also includes childhood and adulthood, thus affecting the whole life span of the individual, which lead the attachment theorists to focus on the attachment styles of adults. Various studies conducted in order to determine the relation between attachment styles of children and adults and results revealed that attachment styles showed consistency unless the family of the infant or the child underwent radical changes. According to Svanberg (1998), in Main's (1995) study, attachment styles in childhood showed a consistency of 85%; and in Sroufe and his colleagues' (1991) study it was found that in strange situation classification the attachment styles of 12-month infants could be predicted 70% to the attachment styles of 17-year-old young adults. Hazan and Shaver (1987) studied on Bowlby's attachment theory and Ainsworth's attachment styles in infancy and found that the attachment style in infancy existed in adulthood and adults' behaviors in their romantic relationships were determined by the attachment styles they had formed previously.

In the secure attachment pattern, the mother meets the child's needs as soon as possible, lives up to the child's expectations in terms of her sensitivity and availability and might react to child's distress in three ways: She may turn the child's distress into comfort, or aggravate it or she may give inconsistent reactions (Kozlowska & Hanney, 2002). The mother tries to understand the infant's level of distress by looking at his/her face. While doing so, her facial expression automatically reflects the situation. The mother feels the distress of the infant on psychological level and tries not to prolong it. The mother handles the situation immediately by using the information she received from the infant (Peck, 2003). Those who have secure attachment style have got an affirmative model about themselves and the others (West & George, 2002). Mothers of the securely attached children provide a secure base for discovery thereby socialize the children's emotions. They accept the children's positive and negative emotions and are moderate in controlling the children's expressions (Berlin & Cassidy, 2003). In secure attachment, individuals find their means adequate to achieve the related tasks. They attach importance to others' recommendations and support (Kobak & Sceery, 1988).

A large number of studies have been conducted on attachment in various countries. However, in Turkey, attachment issue has been handled by few researchers and little study has been conducted on it. Currently, in Turkey scales developed or adapted in order to assess attachment in children or adults are little if any. Attachment styles

in 6-year-old group were identified via "Incomplete Doll Family Stories" scale, developed by Cassidy (1988) and adapted to Turkish culture by Seven and Güngör-Aytar (2010). Hortaçsu and Cesur (1993) assessed the attachment styles of children who were brought up by their families and in orphans' asylum by using the attachment items prepared by Hazan and Shaver (1987) and proved that the attachment items in question could be adapted to Turkish culture. In their study with infant school students, Alp and Orhan (1999) evaluated mothers' attachment styles by using the "Relationship Questionnaire" developed by Bartholomew and Horowitz (1991) (as cited Kayahan, 2002). Sümer and Güngör (1999) examined the reliability and validity of the Relationship Scales Questionnaire (Griffin & Bartholomew, 1994) through the Relationship Questionnaire (Bartholomew & Horowitz, 1991) which assessed the four styles of attachment model and made an intercultural comparison. They proved that these two scales could be described in the frame of four styles of attachment model in Turkish culture. They determined that the Relationship Scales Questionnaire gave more consistent results compared to the Relationship Questionnaire. Meanwhile, in their studies in which university students in Turkey and the USA were compared, they found that the scales had similar psychometric characteristics. Sümer and Güngör (1999) conducted a study in which, along with other variables, they addressed the child-rearing and attachment styles the university students inherited from their parents. It was found that the child-rearing styles that consist of acceptance/attention and supervision/control dimensions by parents were in relation with variables such as self-characteristics, attachment styles and satisfaction with close relations.

As is seen, in the attachment studies conducted in our country, different scales were used, different variables were examined and different results were gathered. Although important results were achieved in these studies, research was limited. Therefore, it is important to develop new scales for attachment or to adapt the existing valid and reliable scales in global literature to Turkish and Turkish Culture. In this study, information on the adaptation studies of the Parent as Secure Base Scale – Mother Version is given.

Method

Participants

For the study, 4 elementary state schools among 18 in Muş Province/Turkey in the academic year of 2011-2012 were chosen based on the availability principle. The participants voluntarily participated in the study and consisted of 200 students (98 female, 102 male) between the ages of 12-14 attending the 4 schools in question and who lived with their biological parents and who had no handicaps. The participants accepted to participate in the study voluntarily.

Instrument

The scale was prepared in 13-items by Cassidy, Ziv, Rodenberg and Woodhouse (2003) in order to determine mothers' level of being protective, responsible and sensitive towards their children. Although the scale originally consisted of 16 items, it was reduced to 13 items as a result of the factor analysis conducted. In the study, the scale is stated to have a single-factor structure (Cassidy, Ziv, Rodenberg & Woodhouse, 2003). The Cronbach Alpha reliability coefficient of the scale was found to be α=.91. Children were asked to assess to what extend the statements in the scale items such as "my mother is someone who stands by me when I need her" or "my mother is someone to whom I can go when I feel sad" reflect their relationships with their mothers. In the 5 point likert scale, items are graded according to children's filling the scale by choosing the most appropriate choice for themselves for the statements starting from "not true at all (1)" to "absolutely true (5)" options. In the original scale, total scores range between 13 and 65. High scores indicate secure parent perception (Dykas, Woodhouse, Ziv, Feeney & Cassidy, 2007).

Implementation

The evaluation process for the psychometric characteristics of the Parent as Secure Base Scale – Mother Version is as follows:

1. First of all, the Parent as Secure Base Scale - Mother Version was translated into Turkish. In this scope, the scale was translated into Turkish by two academicians with advanced English level. The translated items were arranged by an expert in the pediatric development field and then translated back to English by another English Language expert. Both translations were compared one by one and checked for their accuracy and it was determined that there were no differences between Turkish and English versions. Turkish version of the scale was reviewed by a Turkish Language expert and finalized in accordance with the experts' recommendations.

2. The suitability of the statements in the scale for Turkish Culture and their adequacy in assessing the targeted characteristics were examined in accordance with the comments of experts in pediatric development and preschool education fields. The academicians were asked to evaluate each item as "Appropriate" or "Not appropriate" with regard to their fitness for the purpose and to give recommendations to improve the items of the scale. The forms were sent to seven academicians. However, three of them did not give feedback and the evaluation of the scale was performed in accordance with the comments of four academicians. It was concluded that the involved experts all agreed on the fitness of the all items of the Parent as Secure Base Scale - Mother Version.

3. In the scope of the study for the validity and reliability of the scales, in order to determine the comprehensibility of the questions and possible hitches, a pilot scheme

was conducted on 3 children at the every each ages of 12, 13 and 14. During the pilot scheme, the comprehensibility of the question form of the Parent as Secure Base Scale - Mother Version and the possible hitches were identified. Corrective actions were performed on the application environment and the texts in this regard.

4. The scale was applied to 200 children between the ages of 12-14 who attended four elementary schools where the study was conducted in May, in the academic year of 2011-2012. The application was carried out with the help of counseling teachers out of regular classes in 15 minutes and in groups. No problems occurred during the application.

Analysis of Data

Exploratory factor analysis was conducted with regard to the validity of the scale and it was evaluated whether the item loads were in the desired levels. The distinctiveness of the items was examined via item total correlations and the validity of the original single-factor structure of the scale for the observations on the 200 students between the ages of 12-14 was tested via confirmatory factor analysis. The reliability level of the assessment instrument was examined by calculating the Cronbach alpha coefficient and Spearman-Brown split half reliability correlation.

Findings

The suitability of the data for exploratory factor analysis was examined through Kaiser-Meyer-Olkin (KMO) coefficient and Barlett Sphericity test. A KMO over .60 and a significant Barlett test indicate that data are suitable for factor analysis (Büyüköztürk, 2002). The KMO value calculated for the assessment instrument was found .91. Factor loads of the items in the original single-factor structure were calculated by making use of the main components analysis in the study and the distribution of the item factor loads in a single factor was examined.

The criteria that were considered in the exploratory factor analysis are as follows: The items in each factor should be consistent with regard to semantics and content, factor eigenvalues should be 1 or more, an item in a factor should bear ".40" or more factor load and the difference between the load values of the factor in which the items take place and the load values in other factors should be at least ".10" or more (Büyüköztürk, 2002). The principle axis factoring method was used in the determination of the adequacy of the item factor loads. In the following analysis, it was found that the eigenvalue of the single factor of the 13-item scale was over 1, which was in compliance with the original scale, and this single factor explained 58,64% of the total variant. The common variant that the factor explained in the items is between 35-78%. The load values of the scale items in a single factor range between .59-.88. On the other hand, the item-total correlations of the items in the scale range between .58 - .85. The eigenvalue, factor load values, common and explained variant proportions and item

total correlation of a single factor that came out as a result of the Factor Analysis are indicated in Table1.

Table 1. EFA and Item Total Correlation Results

	Common Variant	Factor Load Value	Item-Total Correlation
M1	.70	.84	.81
M2	.53	.73	.70
M3	.47	.69	.67
M4	.35	.59	.58
M5	.50	.70	.69
M6	.59	.77	.75
M7	.64	.80	.79
M8	.70	.84	.81
M9	.57	.75	.73
M10	.78	.88	.85
M11	.75	.86	.84
M12	.43	.66	.64
M13	.62	.79	.76

The Variant Explained = 58.64%
Eigenvalue = 8.13

The extent of compliancy of the single factor structure of the scale with the gathered data was examined through Confirmatory Factor Analysis. In confirmatory factor analysis, a hypothesis or theory created previously on the relation between variables, and the factorial structure that was built or discovered are tested (Cole, 1987; Sümer, 2000). In CFA, in order to assess the validity of the factorial structure (model) of the scale chi-square statistics is used along with a number of fit indexes. Among them, the most commonly used indexes are Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Root Mean Square Residuals (RMR or RMS) and Root Mean Square Error of Approximation (RMSEA).

The fit statistics calculated by CFA, which was conducted to confirm the single factor structure of the Scale are given below: χ^2=202,23 (N=200, sd=63, p=.000), (χ^2/sd)=3,21   GFI= .87, AGFI= .81, SRMR= .041 and RMSEA= .10. According to the literature, (Anderson and Gerbing, 1984; Cole, 1987; Marsh, Balla and McDonald, 1988), AGFI value over .85 and a AGFI value over .80, and RMS value below .10, and a "χ^2/sd" proportion below 5 (Sümer, 2000) are all a criterion for the compliance of the model with real data. Fit statistics indicate that the tested factor structure is in good compliance with real data. These results show that the single-factor structure of the scale is valid for Turkish version in the data obtained from the work group.

In Table 2 it is indicated that the alpha coefficient that was calculated to assess the internal consistency of the scores from the Parent as Secure Base Scale – Mother Version is α=.95. The Spearman-Brown split half reliability test calculated for the scores from 13-item scale is r=.93. These findings show that the reliability of the scores from the Parent as Secure Base Scale – Mother Version is adequate.

The reliability values of the Parent as Secure Base Scale – Mother Version are indicated in Table 2.

Table 2. Reliability values for the scale

	Cronbach Alpha	Spearman-Brown split-half test coefficient	The number of items
The whole test	.95	.93	13 items

In line with these analyses, the Turkish version of the scale, the psychometric characteristics of which were examined, was accepted to be valid and reliable.

Discussion, Conclusion and Suggestions

As far as the attachment issue is concerned, it's becoming more and more common all over the world to use certain assessment instruments developed to assess especially the mother-child attachment. However, it came out that in Turkey the scales for children to assess the mother-child attachment characteristics are insufficient. This poses a critical disadvantage for the researchers who wish to conduct a study on attachment in Turkey. Therefore, along with its suitability for Turkish children, the reliability and validity of the "Parent as Secure Base Scale – Mother Version" to determine the attachment styles of 12-14 year-old children were tested in this study.

In recent years, the basic characteristics of social relations model, the relations between attachment patterns in adulthood and identity development and the relations between behaviors of risk-taking have frequently been handled in the studies on attachment (Morsünbül & Çok, 2011). In this scope, models working inherently, social behaviors, self-worth, relational expectations and social-emotional adequacies have been the focal point (Laible, 2007). When we look at the case in Turkey, we see that a major part of the studies on attachment has been conducted with high school or university groups and mainly the relation scales developed by Griffin and Batholomew (1994) based on the four-patterned attachment style that have been adapted to Turkish are used (Sümer & Güngör, 1999). There are also some studies conducted on the attachment styles and attachment patterns. However, we do not have a bulk data that shall form a basis for the secure attachment in our country on the parent attitudes and attachment to parents (Harma, Öztürk & Sümer 2008). With this study, it is aimed that

an assessment instrument that will facilitate the studies in this regard is introduced for the use of researchers.

The results of the analysis conducted for the assessment of the validity of the Parent as Secure Base Scale – Mother Version showed that the item distinctiveness and the loads of the items in the original single-factor structure were on adequate levels. The exploratory factor analysis showed that the factors in the scale explained the 58.64% of the total variant. This proportion indicates a strong single-factor structure. That the item-total correlations of the items of the scale ranged between .58 and .85 showed that the items were suitable to assess the same behaviors. Results of the Confirmatory Factor Analysis showed that the single-factor structure was in good compliance with real data. Cronbach Alpha coefficient of the scale was found to be .95 and Spearman-Brown split half correlation coefficients of the same were .93. This result shows that the reliability of the scale is adequate. These results prove that the Parent as Secure Base Scale – Mother Version is valid and reliable. From the findings, similar results were obtained that support the results obtained from the original form of the assessment instrument (Cassidy, Ziv, Rodenberg & Woodhouse, 2003).

There are miscellaneous restrictions in this study. First of all, the sampling of the study was not nationwide and the data were obtained from a single work group, which reduced the chance of generalization of the results. Furthermore, an analysis that could provide information with regard to the validity level of the assessment instrument was not conducted. However, in this study, the psychometric characteristics of a crucial assessment instrument on 12-14-year-old children in Turkish culture that was developed in accordance with the attachment theory were tested.

It is expected that the "Parent as Secure Base Scale – Mother Version", the validity and reliability of which were tested in this study, shall form a source for future studies on the attachment security in 12-14 year-old children. Accordingly, this scale is supposed to be useful for research that shall describe the relation between attachment and different variables. Again, on occasion that this scale is applied to a larger sample group, it will be possible to get reliable information on the mother-child attachment of the children in Turkey. Moreover, it is expected that this study will be a pioneer for further studies on new valid and reliable scales that will be used in studies on attachment in children and adults in Turkey.

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