



Original Article

Comparative study of attachment styles in mothers of 8 to 12 year-old children with and without behavioral problems

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Abstract

Introduction: As the major attachment figures, mothers have an undeniable effect on behavioral development of children. The present study aims to investigate the relationship between attachment styles in mothers of 8 to 12 year-old children with and without behavioral problems.

Materials and Methods: The samples of this causal-comparative study included 120 mothers of male and female elementary school students in schools of Neishabour (2013-14). Cluster sampling and random sampling methods were used for mothers of children with and without behavioral problems respectively. The study instruments included the Rutter's Behavior Scale for children and the Revised Adult Attachment Scale (RAAS) for mothers. Data were analyzed using SPSS 18, by independent samples t-test, and logistic regression.

Results: There is a significant difference between anxious and secure attachment styles in mothers of children with and without behavioral problems ($P=0.0001$ and $P=0.001$ respectively). However, there is no significant difference between avoidant attachment style in mothers of children with and without behavioral problems ($P=0.138$). The results of regression analysis also show that anxious and secure attachment styles can be considered as predictors of behavioral problems in children.

Conclusion: The findings of the present study corroborate the attachment theory and show the importance of mother-child interaction. Mothers' secure and insecure attachment styles can be an important predictor for behavioral problems in their children.

Keywords: Attachment, Behavioral problems, Children

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Introduction

Children's early experiences affect various dimensions of their future lives. Mother-child interaction can bring about two completely opposite effects on human personality (1). In his study, Shik (2) investigated the effect of parental characteristics on adolescent mental health. He concluded that parental characteristics and their attachment styles were concurrently and longitudinally correlated with adolescent mental health. Moreover, the mothers with secure attachment style are more sensitive to their children's symptoms than those with insecure

attachment style. A possible explanation for this is mothers' memories of their relationships with their own parents. Therefore, it is found that there is a relationship between parental (especially maternal) attachment and children's attachment styles and their behavioral disorders so that a kind of convergence between the two sides (mother-child attachment) is observed (3).

The concept of attachment is defined differently; however, what is common in all these definitions is that attachment is considered as the basic element of natural human development (4). In other words, attachment refers to the instinctive ability of human infants to make strong and significant emotional connections with their families and caregivers (5). Previous studies have shown that attachment style can be an underlying factor for how an individual

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deals with life issues and it can also determine an individual's attitude towards issues and problems. Attachment style can also determine an individual's willingness to solve problems, actions and reactions against social problems and failures (6).

Adults with secure attachment style consider themselves as individuals deserving kindness and attention by others. They also see others as accessible, reliable, and reassuring individuals and tend to have close and intimate relationships with them (7). Parents' avoidant insecure attachment style causes attachment problems, behavioral disorders, academic problems, memory and learning impairment, and low self-esteem in children. The diagnostic criteria for attachment problems include substantial communication difficulties, which are not proportional to children's intellectual development. Many of these problems appear before the age of 5, which might result from lack of proper care or parents' insecure attachment style during childhood. Each group of parents, depending on their personality type and psychological characteristics, treat their children differently from others, and such diversity in parents' parenting and behavioral styles creates attachment styles (8). Ambivalent (anxious) insecure attachment style: Due to lack of self-competence, parents often experience a great deal of anxiety and impulsivity during their intimate relationships, and they are always worried about being rejected by others (8). In a study, Baezzat et al. compared attachment styles in students with behavioral disorders, dyslexic students, and normal students. They found that there was a significant difference between attachment styles in dyslexic students and those with behavioral disorders. Consequently, compared to normal students, dyslexic students and those with behavioral disorders grow up with an insecure attachment style (9).

Behavioral problems are one of the most common problems during childhood, which jeopardize the relationship between parents and children. Behavior is considered to be troublesome when it bothers an individual or others and disrupts their lives. In other words, behavioral problems are created when behavioral patterns disrupt learning environments and opportunities (10). Studies on different cultures have shown that a considerable percentage of school-age or preschool children suffer from behavioral problems. Behavioral problems refer to all repetitive, normal, and annoying behaviors

such as finger-sucking, nail-biting, stuttering tics, beating, and stubbornness, which hamper individual and family functioning and have negative effects on their learning, communication, and social performance. Statistics on the incidence of this disorder varies between 11.8 0.0 and 25.7 00.0 in different societies. It is believed that factors such as age, gender, socioeconomic structure and status affect its incidence (11). In Iran, emotional and behavioral disorders have affected a large group of children more than any other time, which is especially due to unbalanced family and social life over the past few decades (12). Allen et al. (13) observed that inappropriate mother-child interactions during childhood could lead to internalized (anxiety and depression) and externalized (aggression and hyperactivity) behavioral problems during adolescence, which are under the influence of ambivalent and avoidant attachment styles respectively. About 90% of the studies on attachment styles have been concentrated on child attachment styles, and only a few studies have investigated parent attachment style. Therefore, the studies on mother-child attachment and relationships in the field of psychology are very limited (14). Given the role of maternal attachment in children's individual and social life, it is necessary to conduct studies on this issue. Hence this study intends to investigate and compare maternal attachment styles with children's behavioral problems.

Materials and Methods

In this descriptive (causal-comparative) study, children's behavioral problems were determined using the Rutter's Children's Behavior Questionnaire based on how the data were obtained. The statistical population of the study included all mothers whose children were students during the 2012-2013 academic-year and suffered from behavioral problems. The sample group included two groups: 1) Mothers of children with behavioral problems whose behavioral problems symptoms at home and school were confirmed by parents and teachers respectively. 2) Mothers of normal children. Given that the statistical test used in the study was linear regression analysis (Alpha = 0.05, Power = 0.80, mean effect size = 0.25), the sample size was obtained at least 75 individuals and overall, 150 individuals were selected using G*Power 3 (15). Random sampling method was used for the mothers of children with no behavioral problems. The questionnaires were completely randomly sent to children and parents'

houses, and they were collected after they were filled out by parents. Cluster sampling method was used for the mothers of children with behavioral problems. To select the samples, two regions (regions 1 & 2) were randomly selected out of the triple regions of Neishabour. From each region, two elementary schools (one boys and one girl school) and from each school, five classes were randomly selected. The questionnaires were given to children and parents and then collected after they were completed. Overall, after elimination of incomplete questionnaires, 120 questionnaires out of 150 questionnaires were completely returned and analyzed. Inclusion criteria were as follows: parental consent, child's age, and elementary school education. Exclusion criteria were as follows: teacher's unwillingness to cooperate and mothers' failure to respond to questionnaires.

Measurement Instruments

a) *Collins and Read Revised Adult Attachment Scale (RAAS)*: This questionnaire includes self-assessments of relationship-building skills and self-description of methods of forming close (intimate) attachments. The questionnaire consists of 18 items, which is measured by marking on 1 and rating on a five-point Likert scale for each item (from 0 = not at all characteristic of me to 5 = entirely characteristic of me). Factor analysis specifies three 6-item subscales, measures individuals' level of trust and reliance on others (given that they are available when needed), assesses intimacy (that is, individuals' comfort in a relationship with intimacy and emotional closeness), and measures anxiety (that is, fear of having a relationship). Reliability and validity of this scale for each of the three subscales (closeness, attachment, and anxiety) were reported to be 0.68, 0.71, and 0.52 respectively (16).

b) *Rutter's Behavior Scale (B2) for children (Teacher's Scale)*: This questionnaire was designed in 1967 by Michael Rutter et al. in order to provide a reliable and valid instrument to assess behavioral problems in children at school. This questionnaire consists of two forms; form A (parents' form) which is filled out by parents, and form B (teachers' form) which is filled out by students' teacher. Form A consisted of 31 questions and form B consisted of 26 items, which, due to similarity, turned into a 30-item questionnaire by adding 6 new items and combining two more items with other items. This questionnaire has acceptable validity. In Rutter's initial study (1967) on 91 children, the percentage

agreement between the questionnaire and psychiatric diagnosis was reported to be significant at the 0.001 level. Moreover, the validity of the questionnaire was reported to be significant at the 0.01 and 0.05 levels through an agreement between psychiatric diagnosis and Rutter's questionnaire. On the reliability of this test, several studies indicate that pre-test and post-test reliability after a 2-month interval was 0.89. Using the test-retest method, Mohammad Ramzpour (1995) reported that the scale reliability coefficient of generalized and emotional disorders was 0.72 (17).

c) *Rutter's Behavior Scale for children (Parents' Scale)*: This questionnaire consists of 18 items and it encompasses issues related to children's health and habits. Scoring of the questionnaire is done based on a trio set (including 0- true, 1- partially true, and 2- absolutely true). Rutter (1994) carried out an extensive study on 10-11 year-old children. In this study, 1536 children were assessed using Rutter's questionnaire, and then the reliability of this questionnaire was assessed. In a pretest posttest study at a 2-month interval, Rutter reported that the test-retest reliability and internal consistency of the questionnaire was 0.74. Moreover, the correlation between mothers and fathers' answers was 0.64. Other studies on the validity of Rutter's questionnaire show that their internal consistency is 0.79. In a pretest posttest study at a 2-month interval in Iran, Karami (1992) reported that the correlation of parents' form was 0.74. To assess the validity of Rutter's parent questionnaire, he assessed 36 children with behavioral disorders during a clinical interview by a psychiatrist, and it was found that only 3 children were healthy (18). In addition to descriptive statistics such as measures of central tendency (mean), dispersion (standard deviation), and distribution tables, the independent samples t-tests as well as logistic regression were used to analyze data and assess research hypothesis. To perform statistical analysis, the data obtained from questionnaires were first coded and then general data were coded. After that, charts and other descriptive indicators were obtained using SPSS.

Results

In this section, first, descriptive statistical indicators were used. Then correlation matrix and stepwise regression were used in order to investigate the relationship between variables.

Table 1: Descriptive statistical indicators for study variables (mother's age, child's age, maternal attachment styles, and children's behavioral problems)

Variable	Normal		Abnormal		Comparison between the two groups (t-test)
	Mean	Standard Deviation	Mean	Standard Deviation	P
Mother's Age	31.28	3.60	30.95	3.12	0.939
Child's Age	9.60	1.51	9.44	1.09	0.878
Anxious Attachment Style (Maternal)	2.02	1.17	4.97	1.35	0.0001
Avoidant Attachment Style (Maternal)	3.80	2.23	3.64	1.97	0.138
Secure Attachment Style (Maternal)	5.11	2.46	2.75	3.10	0.001
Inattention (Children)	1.28	1.33	3.38	1.33	0.0001
Aggression (Children)	1.49	1.67	4.50	2.72	0.0001
Maladaptive Behavior (Children)	1.75	1.40	4.78	2.66	0.0001
Antisocial Behavior (Children)	1.32	1.11	4.14	1.11	0.0001

Discussion

As seen in table 1, the two groups of mothers of normal children and mothers of children with behavioral problems were matched for age. Moreover, there was no significant difference between the two groups in terms of child's age and maternal avoidant attachment style.

In table 2, first correlation matrix and then

stepwise regression analysis are presented. Multiple regression analysis was used to assess the power of maternal attachment style variable in predicting children's behavioral problems. Hierarchical (stepwise) method was used in regression analysis. Correlation matrix was the first stage of the implementation of regression analysis for the variables.

Table 2: Correlation matrix for the variables of inattention, aggression, maladaptive behavior, antisocial behavior, and behavioral problem (overall Rutter score)

	Anxious	Avoidant	Secure
Inattention	0.34*	0.12	-0.39 **
Aggression	0.37**	0.11	-0.47 **
Maladaptive behavior	0.41**	0.13	-0.36 *
Antisocial behavior	0.44**	0.09	-0.40 **
Behavior problem (overall Rutter score)	0.48**	0.23*	-0.43**

$P < 0.01$ ** $P < 0.05$ *

Table 2 shows the correlation between variables. As can be seen, there is a significant relationship between different maternal attachment styles (secure, avoidant, anxious) and inattention, aggression, maladaptive behavior, and antisocial behavior at the 0.01 level. Among attachment styles (secure, avoidant insecure, and anxious insecure), the highest correlation was observed between maternal anxious attachment style and children's behavioral problems ($r=0.48$, $P < 0.01$). Moreover, there was a significant positive relationship between maternal avoidant attachment style and children's behavioral problems ($r=0.23$, $P < 0.01$). There was also a

significant negative relationship between maternal secure attachment style variables and children's behavioral problems ($r=-0.43$, $P < 0.01$). Therefore, according to the findings, maternal insecure attachment style has a significant positive relationship with children's behavioral problems. On the other hand, there is a negative correlation between maternal insecure attachment style and children's behavioral problems. To perform regression analysis, behavioral disorder score (overall Rutter score) was used as the criterion variable, and then maternal attachment style scores (three attachment styles) were entered in the model as predictor variables.

Table 3: Summary of regression analysis results and coefficients for children without behavioral disorder and attachment styles of mothers of children with behavioral problems

Stage		B	SE B	β	ΔR^2
First	Anxious Attachment Style	0.145	0.28	0.70	0.48
Second	Anxious Attachment Style	0.090	0.033	0.433	0.105
	Secure Attachment Style	-0.350	0.134	-0.428	

Hierarchical (stepwise) regression analysis was used, and the software determined the priority of

including the variables into the model or excluding them from the model. Table 3 presents

the results of regression analysis. The results of stepwise regression analysis showed that at the first stage, the score of anxious attachment style as the predictor variable and the score of Rutter test as the criterion (dependent) variable were included in the study ($R^2=0.48$, $R^2_{adj}=0.471$, $R^2 = 0.489$, $\Delta=0.489$, $P=0.000$) and the model was obtained significant ($F_{(1, 118)}=26.83$, $P=0.000$). At the first stage, the prediction model was obtained as follows:

Behavioral disorder score = (anxious attachment style score \times 0.145) + 0.37

At the second stage, the score of secure attachment style was also added to the predictor variable ($R^2=0.59$, $R^2_{adj}=0.565$, $\Delta R^2=0.489$, $P=0.000$) and again, the model was obtained significant ($F_{(2, 117)}=19.81$, $P=0.000$). The only difference was that at the second stage, a greater proportion of the changes in the criterion variable was predicted by the predictor variables. At the second stage, the prediction model was obtained as follows:

Behavioral disorder score = (anxious attachment style score \times 0.090) – (secure attachment style score \times 0.350) + 0.22

As the table above shows, avoidant attachment style was excluded from the model. The results indicated that although the first stage of the model was significant and 48% of the changes in behavioral disorder was predicted by the score of anxious attachment style, on the whole, the variables of anxious and secure attachment styles predicted 58% of the changes in behavioral problem. In summary, the results of regression analysis showed that anxious and secure attachment styles could be considered as the predictor variables for behavioral problems.

Discussion

The present study aims to investigate the relationship between attachment styles in mothers of children with and without behavioral problems. The results show that there is a significant direct relationship between children's behavioral problems and their mothers' attachment style. Moreover, there is a significant negative relationship between maternal secure attachment style and children's behavioral problems. In other words, mothers with anxious insecure attachment style are more likely to raise children with behavioral problems, and such problems will be significantly less in children of mothers with secure attachment style. Posht-Mohammadi et al. conducted a study on the effectiveness of a

combination therapy of attachment and parenting styles on the symptoms of hyperactivity in children with attention deficit hyperactivity disorder (ADHD) whose mothers had insecure attachment style. The findings showed that children with behavioral problems have more insecure relationships. On the other hand, since attachment issues appear, to a great extent, in the form of behavioral issues and problems, these results can also indicate the relationship between maternal attachment style and children's behavioral problems. The intervention carried out in this study reduced the symptoms of hyperactivity in children with ADHD; however, the rate of this reduction was different among subjects (9, 19). Shik (2) studied the effect of parental characteristics on adolescent mental health. He concluded that parental characteristics and attachment styles are correlated with adolescent mental health. Moreover, compared to the mothers with insecure attachment style, the mothers with secure attachment style are more sensitive to their children's symptoms and respond sensitively to their children's needs. A possible explanation for this is mothers' memories of their relationships with their own parents. Therefore, it is found that there is a relationship between parental (especially maternal) attachment and children's attachment styles and their behavioral disorders so that a kind of convergence between the two sides (mother-child attachment style) is observed (4). Some studies, consistent with the present study, emphasized that parental attachment style could predict children's attachment style (20). As seen, the findings of the study indicated that although the first stage of the model was significant, the variables of anxious and secure attachment styles predicted higher percentages of the changes in behavioral problems after adding the secure attachment style to the model. A study on attachment disorders and attention deficit disorder in children showed that duration of deprivation had a significant relationship with the severity of attachment disorders. Moreover, attachment disorder was associated with attention deficit and behavioral disorders in children (1, 21). In their study, Allen et al. concluded that both children with insecure attachment style and mothers with ambivalent insecure attachment style suffered from more behavioral problems than the children with secure attachment style (13). In a similar study on behavioral disorders and intergenerational attachment patterns, the Adult Attachment

Interview (especially mothers) and the Family Environment Scale (completed by mothers) were used. The results showed that the mothers with secure attachment style had children without behavioral problems and the mothers with insecure attachment style had children with behavioral problems (22). A possible explanation for this is that mothers with avoidant insecure attachment style have learned not to trust others in order to avoid being rejected by them. That is why such mothers become largely isolated. It is most likely that these mothers will use such an interactive style for their own children, too. The response rate proportional to children's needs was lower in mothers with insecure attachment style than in those with secure attachment style (23). On the contrary, the mothers with secure attachment style, who have learned to trust others, be loved, and to be satisfied with social relations, are less likely to raise children with emotional problems. Lack of complete correlation between the hypotheses of this study may be explained through the influence of environmental conditions and genetic factors. Research shows that primary secure or insecure attachment can affect the functions proportional to children's development. The findings of the studies by Frankenhuis (24) also confirm the negative effect of parental insecure attachment style on children's mental health. Therefore, given that the hypothesis about the significant relationship between maternal attachment style and children's behavioral problems was confirmed and also the importance of learning and its effect on the biological relationship of attachment, parents could be trained in how to create a secure attachment with children from now in order to raise a healthy generation in future. The next step or in fact second prevention is screening and early detection of the symptoms of behavioral problems in children. Although difficult, it is possible to reduce these symptoms using the existing therapeutic methods such as attachment-based family therapies. These studies on understanding

attachment theory and the effect of parent-child relationship help recognize and adapt more to the world of children (20). The findings of the present study have significant scientific implications for treatment planning and theorizing emotional problems such as problems in children. In terms of treatment, according to the findings of the present study, identifying and controlling the factors causing problems in children should be paid attention to in prevention and treatment of such problems. Moreover, the Adult Attachment Scale can be used to identify maternal insecure attachment styles. Since the present study has been assessed during a limited time, it is recommended that future studies are conducted on investigating attachment style through longitudinal research and by engaging different generations of a given family in order to identify how attachment styles are transferred in a given society. Some of the limitations of this study included encountering resistance from some of the mothers to their children's being labeled as "the children with behavioral problems", which sometimes caused trouble.

Conclusion

The findings of the present study corroborate the attachment theory and show the importance of mother-child interaction. Mothers' secure and insecure attachment styles can be an important predictor for behavioral problems in their children. Moreover, the study informed families, mothers, consultants, psychologists, researchers, and those involved of the importance of maternal attachment style as one of the most important factors in children's personality development and mental health. This is to the fact that secure attachment style can prevent unhealthy growth in children. Moreover, application of therapeutic interventions prevents the complications of maternal insecure attachment style and promotes children's mental, behavioral, and emotional health so that they can be recognized and live as independent individuals in society.

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