

The Relationship between Attachment Style, and Temperament, Personality, and Bipolar Symptoms: A Controlled Study on Bipolar Patients and Their Children

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Abstract

Objective: This study aimed to identify the attachment style of bipolar patients and their children, and to investigate the relationship between attachment style, and temperament, personality characteristics, and clinical features of bipolar disorder.

Method: The study included 44 euthymic bipolar patients, 35 of their healthy children (>16 years old), and 84 healthy controls (matched in terms of age, gender, and sociocultural background with the patients and their children). Diagnostic interviews were conducted using SCID-I, SCID-II, and SCID-NP. Bipolar symptoms were evaluated using SCIP-TURK. Temperament and attachment style were measured using TEMPS-A and AAS.

Results: More of the bipolar patients had an avoidant attachment style and more of their children had an anxious/ambivalent attachment style than did the healthy controls ($p < 0.001$ and $p < 0.001$). There was a negative correlation between insecure attachment and hyperthymic temperament ($p = 0.008$ and $r = -0.623$, and $p = 0.049$, $r = -0.386$). Insecure attachment style in the bipolar patients was predicted by borderline personality disorder, the severity of manic/depressive episodes, and depressive temperament. Insecure attachment in their children was predicted by anxious-avoidant and anxious-ambivalent attachment styles, the number of depressive episodes, irritable temperament (children), low-level social functioning, and a depression-mania-remission pattern.

Conclusion: We observed a reciprocal relationship between insecure attachment style and mood disorders. This study shows that depressive temperament in bipolar patients and irritable temperament in their children predicted insecure attachment in both patients and their children.

Key Words: Attachment, temperament, bipolar disorder

INTRODUCTION

Attachment is the relationship pattern that develops during infancy and persists throughout adulthood (Bowlby, 1973). The clinical manifestations of each attachment style differ and are easily observable, but difficult to measure objectively. The quality of the parenting style and that of significant others, and family life events are strongly correlated with attachment style. A secure attachment pattern that develops early could de-

teriorate in response to negative life events and mood disorders (Klonken and Bera, 1998). Hence, some researchers have suggested that attachment styles should be assessed during both childhood and adulthood (Main et al., 1985); however, attachment theorists argue that attachment patterns reflect the early relationship pattern between a child and his or her caregiver, that it affects the child's identity formation and beliefs about significant others, and therefore does not significantly change over

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Table1a. Attachment styles.

	Patient group		Child group		Control group	
	n	%	n	%	n	%
Secure attachment	13	29.5	7	20	69	82.1
Avoidant attachment	16	36.4	8	22.8	7	8.4
Anxious-ambivalent attachment	15	34.1	20	57.2	8	9.5

time (Ainsworth, 1989; Sund and Wincstrom, 2002). In other words, the ability to form close relationships with significant others and maintain a supportive relationship pattern persist throughout life. The present study assumed that insecure attachment, in combination with temperament and the clinical features of bipolar patients would affect the patients' attachment relationships with their children.

As do attachment patterns, temperament also persists throughout adulthood and determines the behavioral pattern of the individual. An individual's attachment pattern is affected by the personality characteristics (e.g. temperament) of the mother and the child, and the nature of the mother-child relationship. Temperament characteristics appear to discriminate secure attachment from insecure attachment (Mangelsdorf and Frosch, 1999) by affecting the quality of the parent-child relationship. In particular, a negative emotionality temperament is a significant predictor of attachment pattern in general. As such, temperament and attachment patterns develop during the emotional and social developmental stages of the child in a transactional way, by shaping the child's emotional and social functioning.

The most important predictor of an optimal relationship between parent and infant is secure attachment. Studies have shown that there is a relationship between secure attachment and healthy child development (Nakash-Eisikovits et al., 2002). Bowlby (1973) reported that insecure attachment that develops during childhood is related to psychopathology in adulthood. Several studies indicate that insecure attachment is associated with major depressive disorder, postpartum depression, panic disorder, social phobia, obsessive-compulsive disorder, posttraumatic stress disorder, and pain disorder (Eng et al., 2001; Bifulco et al., 2003; Ciechanowski et al., 2003; Simpson et al., 2003; Myhr et al., 2004; Twaite et al., 2004; Sabuncuoğlu and Berkem 2006; Marazziti et al., 2007; Smith et al., 2009). Ponizovsky et al. (2007) did not observe a relationship between secure attachment scores in male schizophrenic patients and healthy

controls; however, the frequency of an anxious attachment pattern was higher in bipolar disorder (BD) patients during remission and during manic/depressive episodes than in healthy controls (Morris et al., 2009). The present study aimed to examine the attachment pattern of BD patients and their children, and to investigate the relationship between attachment pattern, and temperament, personality characteristics, and the clinical features of BD.

MATERIAL AND METHODS

Participants

The patient group consisted of 44 BD patients. The inclusion criterion was a euthymic state, because BP patients can experience perceptual or judgment errors related to a depressive or elevated mood. One study reported that BP patients in manic states had higher secure attachment scores than those in depressive states (Morris et al., 2009).

The child group consisted of 35 of the BD patients healthy children. Children with any mental disorder ($n = 1$) were excluded from the study, as they could interfere with attachment evaluations. Additionally, children <16 years of age ($n = 7$) were excluded from the study because the attachment measure we used is reliable and valid only for those ≥ 16 years of age (Garbarino, 1998). Informed consent for 16-18 aged children was provided from the parents. The study also included a control group that consisted of 84 healthy volunteers matched with the patients' and their children's age, gender, and sociocultural background.

Instruments

Structured Clinical Interview for DSM-Axis I Disorders (SCID-I)

The Turkish form of SCID-I was used to assess the patients' symptoms. It was translated into Turkish by Çorapçıoğlu et al. (1999).

Table 1b. Attachment style scores.

	Patient group (mean $\pm$ SD)	Child group (mean $\pm$ SD)	Control group (mean $\pm$ SD)
Secure attachment	3.6 $\pm$ 1.1	2.7 $\pm$ 0.9	4.5 $\pm$ 1.2
Avoidant attachment	4.6 $\pm$ 1.3	3.7 $\pm$ 0.9	2.8 $\pm$ 0.8
Anxious-ambivalent attachment	3.6 $\pm$ 1.1	4.6 $\pm$ 1.2	3.2 $\pm$ 0.9

Structured Clinical Interview for DSM-Axis II Disorders (SCID-II).

The Turkish form of SCID-II was used to assess the patients' symptoms. It was translated into Turkish by Sorias et al. (1990).

Structured Clinical Interview for DSM-Axis I Disorders-Non-Patient (SCID-NP)

The Turkish form of SCID-NP was used to assess the presence of symptoms in the healthy controls. It was translated into Turkish by Sorias et al. (1990).

Diagnostic and Monitoring Form for Mood Disorders (SCIP-TURK)

SCIP-TURK was developed by Özerdem et al. (2004) in order to assess the clinical characteristics of BD patients. It collects data concerning the age of onset and treatment, duration of illness, history of physical and sexual abuse, academic and social functioning, the presence of premenstrual syndrome, and the type and severity of the first episode (postpartum onset, seasonality, or depression subtype). It also collects data on psychotic attacks during manic/depressive episodes, suicide attempts, the number of hospitalizations, the number and duration of episodes, the dominant episodic pattern, the presence of sudden onset/end of episodes, and continuity and rapid cycling of the symptoms. Data on smoking, alcohol, and drug use were also collected.

Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Auto questionnaire (TEMPS-A)

TEMPS-A was developed by Akiskal (1989) in order to assess depressive, cyclothymic, hyperthymic, irritable, and anxious temperament. It includes 100 yes or no questions. Vahip et al. (2005) translated it into Turkish.

Adult Attachment Scale (AAS)

The first section of the AAS was developed by Hazan and Shaver (1987) to assess the attachment style of adults. It includes 3 different statements about relationship quality and behavioral patterns of adults during their childhood. It is utilized for classifying respondents'

attachment patterns as secure, anxious-ambivalent, or avoidant. The second section of the scale was developed by Mikulincer et al. (1990) and consists of 15 items scored on a 7-point Likert-type scale. It includes 3 subscales consisting of 5 items for secure attachment, 5 for anxious-ambivalent attachment, and 5 for avoidant attachment. The highest subscale score represents the attachment pattern of the individual.

The internal consistency of the AAS anxious-ambivalent and avoidant subscales were at acceptable levels (Cronbach's alpha was 0.61 and 0.66, respectively), but the internal consistency of the secure attachment subscale was low (Cronbach's alpha = 0.42) (Garbarino 1998; Sabuncuoğlu and Berkem 2006). As such, we revised the scale's ambiguous statements and developed 2 new items (increasing the number of items from 15 to 17). We asked respondents to evaluate each item as true or false for their condition (instead of evaluating them on 7-point scale). After these changes, the internal consistency of the secure subscale increased to 0.70 (Cronbach's alpha for secure, anxious-ambivalent, and avoidant attachment subscales was 0.72, 0.82, and 0.85, respectively).

The second section of the scale represents an attachment profile, instead of a dominant attachment pattern. When attachment patterns were evaluated categorically the consistency between the dominant attachment pattern score and the selected attachment statement from the first section was only 55%. When participants were evaluated as either securely attached or insecurely attached (anxious-ambivalent attachment or avoidant attachment), the consistency between the first and second sections of the scale increased to 82%. Nevertheless, the mean attachment score for each subscale was utilized for comparisons between groups.

Procedure

This study was approved by the Adnan Menderes University Ethics Committee. Patients that were diagnosed with BD and routinely followed-up between December 2008 and August 2009 participated in the study.

Table 2. Temperament scores.

	Patient group	Child group	Control group
Depressive temperament	14.6 ± 2.2	12.5 ± 2.9	8.2 ± 1.4
Cyclothymic temperament	17.3 ± 2.1	18.4 ± 2.3	16.8 ± 1.5
Hyperthymic temperament	18.4 ± 1.9	17.6 ± 1.8	18.2 ± 1.3
Irritable temperament	20.2 ± 2.2	22.5 ± 3.4	16.8 ± 2.5
Anxious temperament	21.5 ± 2.3	19.7 ± 2.3	18.3 ± 3.1

Healthy children of the patients were invited to participate in the study and all agreed. In all, 4 children lived in long-distance destinations from the hospital and they could not participate in the study. -

Diagnostic interviews were conducted using SCID-I, SCID-II, and SCID-NP. BD patients were interviewed using SCID-I and SCID-II; healthy controls were interviewed using SCID-NP. Subsequently, we conducted open interviews with the BD patients using SCIP-TURK and consulted the patients' relatives for additional information not obtained from the patients. All the participants were then administered the TEMPS-A and AAS. They were instructed to consider their entire life while completing the forms and that when unsure of how to answer they could provide yes or no responses.

Statistical Analysis

Categorical variables were analyzed using the chi-square test and continuous variables were analyzed using the t test (standard deviation/mean < 0.3). Attachment scores of the BD patients, their children, and the healthy controls were compared with one-way ANOVA. Pearson's correlations were used for correlation analysis. The statistical significance level was accepted as $p < 0.005$ and all tests were 2-tailed. Regression analysis was used for the predictors of attachment patterns that had normal distribution ($p < 0.05$).

RESULTS

1. Sample characteristics

The study included 28 female (63.6%) and 16 male (36.4%) BD patients. Mean age of the patients was 40.7 ± 13.4 years. In all, 82.4% of the patients were married. Mean level of education was 8.7 ± 2.3 years, mean age at onset of BD was 23.2 ± 6.1 years, mean duration of illness was 18.7 ± 3.5 years, and mean number of manic/depressive episodes was 6.8 ± 3.3 . In total, 18.2% of the patients attempted suicide at least once and 68.2% of the patients were hospitalized at least once.

The study included 35 of the BD patients healthy children; 22 (62.8%) were female and 13 (37.2%) were male. Mean age was 25.4 ± 8.5 years, mean level of education level was 12 ± 2.7 years, and 74.8% were single.

The healthy control group included 84 volunteers matched with the BD patients and their children in terms of age (32.6 ± 2.8 years) and gender (65% female, $n = 55$; 34.5 male, $n = 29$ (respectively, $p = 0.714$ and $r = 0.876$; $p = 0.112$ and $r = 0.056$).

2. Comparison of attachment scores between groups

The attachment scores in the patient group and control group were compared. The frequency of insecure attachment was higher in the patient group ($p < 0.001$, $\chi^2 = 19.306$, $SD = 1$) (Table 1a). Mean avoidant attachment score in the patient group was higher than in the control group ($p = 0.004$, $t = 3.2$, $SD = 68$) (Table 1b).

The attachment scores of the BD patients and their children were compared and the 2 groups did not differ in terms of insecure attachment ($p = 0.056$, $\chi^2 = 0.978$, $SD = 1$) (Table 1a). Mean anxious-ambivalent attachment score in the child group was higher than that in the patient group ($p = 0.008$, $t = 3.1$, $SD = 79$) (Table 1b).

The attachment scores in the child group and control group were compared. The frequency of insecure attachment in the child group was higher than that in the control group ($p < 0.001$, $\chi^2 = 9.665$, $SD = 1$) (Table 1a). Mean avoidant attachment and anxious-ambivalent attachment scores in the child group were higher than those in the control group (respectively, $p = 0.03$, $t = 2.4$, $SD = 82$, and $p = 0.005$, $t = 3.1$, $SD = 78$) (Table 1b).

Mean secure attachment score in the control group was higher than that in the patient and child groups (control group > patient group > child group, $F = 1.781$, $p = 0.037$) (Table 1b). Mean avoidant attachment score in the patient group was higher than that in the child group, and mean avoidant attachment score in the child group was higher than that in the control group (pa-

Table 3a. Predictors of insecure attachment in the BD patients.

	OR	95% CI
Borderline Personality Disorder	33.2	3.9-280.9
Severity of episodes	3.2	1.7-6.03
Depressive temperament	2.2	1.01-5.11

tient group > child group > control group, $F = 1.923$, $p = 0.035$). Mean anxious-ambivalent score in the child group was higher than that in the patient and control groups (child group > patient group = control group, $F = 4.419$, $p = 0.014$).

3. Comparison of temperament and attachment pattern

We observed a positive correlation between avoidant attachment score, and depressive, cyclothymic, irritable, and anxious temperament scores in the patient group ($p = 0.011$ and $r = 0.481$, $p = 0.044$ and $r = 0.327$, $p = 0.027$ and $r = 0.45$, and $p = 0.018$ and $r = 0.448$, respectively). There was a negative correlation between avoidant attachment score and hyperthymic temperament score in the patients ($p = 0.008$, $r = -0.623$). Mean depressive, cyclothymic, irritable, and anxious temperament scores were higher in the insecurely attached patient subgroup than those in the securely attached patient subgroup ($p = 0.015$, $t = 2.8$, and $SD = 83$, $p = 0.042$, $t = 1.2$, and $SD = 91$, $p = 0.037$, $t = 2.1$, and $SD = 87$, and $p = 0.028$, $t = 2.1$, and $SD = 85$, respectively).

In the child group anxious-ambivalent attachment score was positively correlated with cyclothymic and irritable temperament scores ($p = 0.003$, $r = 0.582$, and $p = 0.001$, $r = 0.64$), and was negatively correlated with the hyperthymic temperament score ($p = 0.049$,

$r = -0.386$). There was a positive correlation between avoidant attachment score, and depressive and anxious temperament scores in the child group ($p = 0.042$, $r = 0.364$, and $p = 0.052$, $r = 0.301$). Depressive, cyclothymic, irritable, and anxious temperament scores in the insecurely attached children were higher than those in the securely attached children ($p = 0.009$, $t = 3.2$, and $SD = 77$, $p = 0.001$, $t = 3.9$, and $SD = 72$, $p = 0.001$, $t = 3.9$, and $SD = 72$, and $p = 0.002$, $t = 3.9$, and $SD = 73$, respectively).

There wasn't a correlation between attachment scores and temperament scores in the healthy controls. The cyclothymic temperament score was higher in the insecurely attached healthy controls than in the securely attached controls ($p = 0.03$, $t = 3.1$, $SD = 78$).

Table 3b. Predictors of insecure attachment in the children of BD patients.

	Mean	95% CI
Avoidant attachment	10.2	3.6-28.7
Anxious-ambivalent attachment	7.5	1.2-47.5
The number of depressive episodes	2.7	1.5-5.83
Irritable temperament	2.1	1.8-4.62
Social functioning	1.5	2.01-3.62
Depressive-manic-remission pattern	1.4	1.7-4.5

4. Comparison of attachment pattern and clinical features

Insecure attachment was more frequent in the type-I BD patients than in the type-II BD patients ($p = 0.025$, $\chi^2 = 10.821$, $SD = 1$). Among the 36 type-I BD patients, 29 (80.5%) had secure attachment and 7 (19.4%) and insecure attachment, versus 3 (37.5%) type-II patients with secure attachment and 5 (62.5%) type-II patients with insecure attachment.

Histories of physical/sexual abuse and premenstrual syndrome were more frequent in insecurely attached patients, as compared to securely attached patients ($p = 0.02$, $\chi^2 = 11.254$, and $SD = 1$, $p = 0.025$, $\chi^2 = 10.862$, and $SD = 1$, and $p = 0.008$, $\chi^2 = 14.825$, and $SD = 1$, respectively). Severe manic/depressive episodes were more frequent among the insecurely attached patients ($p = 0.028$, $\chi^2 = 9.456$, $SD = 2$). Postpartum onset, seasonality, a depression-mania-remission pattern, and sudden onset were more frequent in the insecurely attached patient subgroup ($p = 0.052$, $\chi^2 = 1532$, $SD = 1$, $p = 0.029$, $\chi^2 = 7562$, $SD = 1$, $p = 0.039$, $\chi^2 = 7685$, $SD = 7$, and $p = 0.039$, $\chi^2 = 7430$, $SD = 1$, respectively). The number of hospitalizations was higher in patients with insecure attachment ($p = 0.039$, $t = 2.7$, $SD = 8$). Moreover, alcohol and drug use were more frequent in the insecure attachment patient subgroup ($p = 0.034$, $\chi^2 = 8125$, $SD = 1$ and $p = 0.051$, $\chi^2 = 1248$, $SD = 1$). The rates of schizoid, histrionic, borderline, and obsessive-compulsive personality disorders were higher in insecurely attached patients than in securely attached patients ($p = 0.051$, $\chi^2 = 1642$, and $SD = 1$, $p = 0.051$, $\chi^2 = 1642$, and $SD = 1$, $p = 0.001$, $\chi^2 = 13.474$, and $SD = 1$, $p = 0.051$, $\chi^2 = 1642$, and $SD = 1$, and $p = 0.051$, $\chi^2 = 1642$, and $SD = 1$, respectively). Low-level social functioning was more frequent in insecurely attached patients ($p = 0.007$, $\chi^2 = 14.520$, $SD = 3$).

Regression analysis showed that borderline personality disorder increased the risk of insecure attachment 33.2-fold (3.9-280.9) (Table 3a). Insecure attachment

was also predicted by the presence of severe manic/depressive episodes and depressive temperament.

Among the BD patients, the frequency of premenstrual syndrome ($p = 0.025$, $x^2 = 5.132$, $SD = 1$), postpartum onset ($p = 0.037$, $x^2 = 7.133$, $SD = 1$), atypical depressive subtype ($p = 0.042$, $x^2 = 6.582$, $SD = 1$), psychotic symptoms ($p = 0.045$, $x^2 = 7.413$, $SD = 1$), attempted suicide

($p = 0.05$, $x^2 = 4.918$, $SD = 1$), hospitalization ($p = 0.003$, $x^2 = 13.979$, $SD = 1$), rapid cycling ($p = 0.001$, $x^2 = 14.132$, $SD = 1$), a depression-mania-remission pattern and sudden onset ($p = 0.045$, $x^2 = 7.248$, and $SD = 7$, and $p = 0.035$, $x^2 = 8.142$, and $SD = 1$), low academic and social functioning ($p = 0.042$, $x^2 = 4.334$, and $SD = 3$, and $p = 0.005$, $x^2 = 13.232$, and $SD = 3$), and borderline personality disorder ($p = 0.01$, $x^2 = 10.253$, $SD = 1$) was higher in those with insecurely attached children than in those with securely attached children. The number of depressive episodes was higher among the patients with insecurely attached children ($p = 0.005$, $t = 3.4$, $SD = 33$).

Regression analysis indicated that avoidant attachment and anxious-ambivalent attachment in the BD patient group increased the risk of insecure attachment in their children 10.2-fold (3.6-28.7) and 7.5-fold (1.2-47.5), respectively (Table 3b). Other predictors were the number of depressive episodes, irritable temperament, level of social functioning, and a depression-mania-remission pattern.

5. Comparison of attachment pattern and sociodemographic variables in the BD patients

Among the BD patients, there weren't any differences between secure attachment and insecure attachment, in terms of gender, employment status, socioeconomic level, or social support. The rate of being single and the number of children were higher in the patients with insecure attachment, as compared to securely attached patients ($p = 0.036$, $x^2 = 9.358$, and $SD = 3$, and $p = 0.032$, $t = 2.8$, $SD = 42$).

DISCUSSION

The present study is the first to examine attachment patterns in the children of BD patients using an original measure. The present study shows that the clinical features of BD patients were correlated with the attachment patterns in their children. Another novel aspect of the study was the use of original measures to assess attachment and temperament in BD patients and healthy controls.

Attachment in bipolar disorder

BD patients differ from healthy individuals and those with other psychiatric disorders in many ways. BD necessitates a close therapeutic relation with the patient because the disorder is highly related to problems in the family and interpersonal relations. BD patients' cognitions about self and others are highly affected by their attachment patterns (Joyce, 1984; Miklowitz et al., 2005). Patient anger towards self/others, self-criticism, negative life events, and neglect and abuse during childhood all shape their attachment pattern. All these variables were suggested to play a role in the etiology of depression (Gilbert et al., 2007). It was reported that insecure attachment is related to the recurrence of unipolar depression (Bifulco et al., 2006). Two studies showed that BD patients did not differ from healthy controls, in terms of dependent attachment patterns, during periods of remission and depression (Gilbert et al., 2007), and reported that a poor relationship with parents was correlated with the recurrence of manic/depressive episodes and poor compliance with treatment (Joyce, 1984). Nevertheless, these studies did not measure attachment patterns in an original way. One recent study (Morris et al., 2009) compared the attachment patterns of BD patients that were in a depressive or manic episode, or in remission with those of healthy individuals using the Bartholomew and Horowitz Relationship Questionnaire (1991), and reported that BD patients had higher anxious attachment style scores (anxious and socially avoidant attachment), regardless of their mood state.

The present study observed higher rates of insecure attachment and higher avoidant attachment scores in the BD patients than in the healthy controls. Our findings are consistent with those of Morris et al. (2009). Although our findings were inconsistent with a study that reported no difference between dependency scores in euthymic BD patients and those in healthy individuals (Gilbert et al., 2007), the correlation between dependency and attachment was not clear.

Personality disorders are comorbid in 30% of BD patients (Garno et al., 2005) and this rate is closely related to attachment patterns (Critchfield et al., 1994). The comorbidity rate of BD disorder and personality disorder ranges between 9% and 89% (George et al., 2003). The most reliable comorbidity rates come from studies that used structured interviews with euthymic BD patients. Comorbidity rates reported in such studies are usually around 30%. The present study observed that 34% of the BD patients had a comorbid personality disorder and that the most frequent was borderline per-

sonality disorder (66.6%). This might have been related to the overlap between symptom clusters or the clinical features of borderline personality disorder and BD disorder (Goodwin and Jamison, 1990). Another possibility is that borderline personality disorder might indicate vulnerability to bipolar symptoms. The characteristics of borderline personality characteristics in the BD patients might have been shaped by the early symptoms of the illness and the personality of the patients might have affected the prognosis of the illness in return.

We observed that borderline personality disorder predicted insecure attachment. A history of physical and sexual abuse was noted in more insecurely attached BD patients than in those with other attachment styles. Another predictor of insecure attachment in the BD patients was a history of severe depressive/manic episodes, which was more frequent in the insecurely attached BD patients than in those with secure attachment. These findings are inconsistent with those of Morriss et al. (2009). We posit that the insecurely attached BD patients might have had poor treatment compliance and therefore had more severe episodes (Joyce, 1984). Similarly, insecure attachment negatively correlates with “cry for help” behavior (Ciechanowski et al., 2001). As such, insecurely attached patients would not voluntarily participate in any study/interview; however, the present study’s patient group was composed of volunteers that regularly attended their routine follow-ups and complied with their treatment.

Attachment in the children of BD Patients

Unlike the children of the healthy individuals, the children of the BD patients contended with the recurrence of manic/depressive episodes associated with their parents’ illness. During periods of remission, children must cope with deterioration of their parents’ social functioning. The present study shows that the most significant predictor of insecure attachment in these children was their parents’ level of social functioning. During acute periods of the illness these children should be protected from the adverse effects of their parents’ symptoms, but are usually neglected (Vahip and Kocadere, 2003) and can develop distorted images and emotions concerning the ill parent or themselves. Patients might feel guilty about their poor parenting skills, they might think they are not good mothers or fathers, and they may not be patient with their children.

All of these cognitive and emotional experiences of BP patients and their children might negatively affect the parent-child relationship. Additionally, the emotions

and behaviors of BD patients might be related to BP symptoms or psychological defenses, diminishing the security of the relationship between the child and the parent. This situation is exacerbated when the onset of BD occurs before the child’s birth. The postpartum period, in particular, poses a risk for the recurrence of BD symptoms (Çakır et al., 2009). Postpartum onset BD symptoms have a significantly negative affect on infants. According to attachment theorists, attachment patterns (secure or insecure attachment) are shaped during infancy and are sustained throughout life (Hamilton, 2000). The present study included 5 cases with postpartum onset of BD and the children of all these cases were insecurely attached. Postpartum onset and premenstrual syndrome were more frequent in the mothers of insecurely attached children than in those of securely attached children. Premenstrual syndrome might increase the risk of postpartum depression, resulting in a child’s insecure attachment with the mother (Ohara et al., 1991).

In addition, we observed that the rates of atypical depression, psychotic symptoms, suicide attempts, hospitalization, rapid cycling, a depression-manic-remission pattern, sudden onset of symptoms, low-level academic performance, depressive episodes, and borderline personality disorder were higher in the BD patients with insecurely attached children than in those with securely attached children. Regression analysis indicated that avoidant attachment and anxious-ambivalent attachment in the BD patients increased the risk of insecure attachment in their children 10.2-fold (3.6-28.7) and 7.5-fold (1.2-47.5), respectively. The number of depressive episodes, irritable temperament, level of social functioning, and a depressive-manic-remission pattern of symptoms also predicted insecure attachment in the children.

Psychotic symptoms, suicide attempts, and hospitalization during acute periods of BD might coincide with the adverse life events of the patients’ children. Rapid cycling and sudden onset of BD might negatively impact the continuity and consistency of the relationship between BD patients and their children. A depression-manic-remission pattern of BD and a high number of depressive episodes depression might also result in insecure attachment in the children of BD patients. Moreover, the rate of insecure attachment was higher among the children of type-II BD patients than among the children of type-I patients. Similarly, Morris et al. (2009) reported that secure attachment scores were higher during BD patients’ depressive episodes. The present study also shows that depression was one of the most important predictors of insecure attachment.

Female BD patients' insecure attachment was found to increase the risk of postpartum onset of BD (Bifulco et al., 2004; McMahon et al., 2005; Sabuncuoğlu and Berkem, 2006). The risk of insecure attachment was higher among the children of mothers with BD and insecure attachment (Miller et al., 1997). The present study indicates that insecure attachment was more frequent among the BD patients and their children, as compared to the healthy controls. The avoidant attachment and anxious-ambivalent attachment scores of the children of the BD patients were even higher than those of their parents and healthy controls. Insecure attachment pattern scores (avoidant attachment and anxious-ambivalent attachment scores) of the BD patients were the most significant predictor of their children's insecure attachment scores.

The literature does not fully support the 7-fold and 10-fold increases in the risk that BD patients' attachment will affect their children's attachment that were observed in the present study, but it is clear that insecure attachment and mood disorders have reciprocal negative effects on each other. As the BD patients' children were healthy, we suggest that the attachment patterns of the BD patients were the most basic determinants of the attachment patterns of their children. The data available concerning the heritability of attachment patterns are limited, and hence the nature of the relationship between attachment patterns of the BD parents and their children was attributed to the parent-child relationship, BD symptoms, and psychosocial functioning of the patients. We think that the parents' disorder affected their children's attachment patterns, because we assumed that as the BD patients' children were healthy they were free of the effects of *in situ* bipolar symptoms. These children could possibly develop BD later in life, but this could not be controlled for in the present study.

The relation between attachment and temperament

The present study shows that the avoidant attachment score in the BD patient group was positively correlated with depressive, cyclothymic, irritable, and anxious temperament scores, and was negatively correlated with the hyperthymic temperament score. We observed a positive correlation between the anxious-ambivalent score in the children of the BD patients and depressive and anxious temperament scores. The relationship between the avoidant attachment score, and depressive and anxious temperament scores in the BD patients was signifi-

cant, whereas their anxious-ambivalent attachment score was positively correlated with irritable temperament scores. These findings are in agreement with the finding that depressive and anxious temperaments are correlated with each other (Vahip et al., 2005). Insecurely attached healthy controls had higher cyclothymic temperament scores than securely attached controls.

We think that temperament cycling might risk the insecure attachment patterning of an healthy individuals, and as in the case of BD it could predispose person to insecure attachment pattern. Depressive temperament in the BD patients and irritable temperament in their children predicted insecure attachment in the BD patients and in their children. Hyperthymic temperament in the BD patients and their children was negatively correlated with avoidant attachment and anxious-ambivalent attachment patterns. We posit that hyperthymic temperament could protect against insecure attachment, which is supported by a study in which BD patients in a manic phase had secure attachment scores that were similar to those in healthy individuals (Morris et al., 2009). Moreover, secure attachment was related to easy temperament, positive emotionality, and self-confidence (Rutter, 1989; Mangelsdorf and Fosche, 1999). We suggest that mothers could easily attach to children that have a hyperthymic temperament.

In conclusion, insecure attachment and the pattern of mood disorders had a reciprocal negative relationship with each other. The acute symptoms of BD and a decline in psychosocial functioning in the BD patients negatively affected their relationships with their children. A history of physical and sexual abuse, premenstrual syndrome, postpartum onset of BD, a seasonal pattern of BD symptoms, a depression-manic-remission pattern, rapid cycling, sudden onset of episodes, a high number of depressive episodes, severe episodes, psychotic episodes, low-level functioning, and borderline personality disorder in the BD patients were significantly correlated with the attachment patterns of the BD patients and their children. The temperament and attachment patterns seemed to be related variables. We observed that insecure attachment in the BD patients significantly affected the attachment pattern in their children. The present study shows that attachment patterns were related to psychopathology and that in order to prevent adverse effects of BD on children, BD patients should be given psychological support before, during and after pregnancy.

REFERENCES

- Ainsworth MDS (1989) Attachments beyond infancy. *American Psychologist*, 44, 709-716.
- Atasoy Z, Ertürk D, Şener Ş (1997) Altı ve on iki aylık bebeklerde bağlanma. *Türk Psikiyatri Derg*, 8(4):266-279.
- Akiskal HS, Mallya G (1987) Criteria for the soft bipolar spectrum: treatment implications. *Psychopharmacol Bull*, 1987; 23: 68-73.
- Bartholomew K, Horowitz LM (1991) Attachment Styles Among Young Adults: A Test of a Four-Category Model. *J Pers Soc Psychol*, 61(2). 226-244.
- Bifulco A, Figueiredo B, Guedeney N et al. (2004) Maternal attachment style and depression associated with childbirth: preliminary results from a European and US cross-cultural study. *Br J Psychiatry Suppl*, 46:31-37.
- Bowlby J (1973) *Attachment and Loss: Separation, Anxiety and Anger*. New York: Basic Books.
- Ciechanowski PS, Sullivan M, Jensen M et al. (2003) The relationship of attachment style to depression, catastrophizing and health care utilization in patients with chronic pain. *Pain*, 104:627-637.
- Critchfield KL, Levy KN, Clarkin JF et al. (2008) The relational context of aggression in borderline personality disorder: Using adult attachment style to predict forms of hostility. *J Clin Psychol*, 64(1), 67-82.
- Çakır S, Bensusan R, Akça YZ et al. (2009) Does a psychoeducational approach reach targeted patients with bipolar disorder? *J Affect Disord*, 124(4): 75-83.
- Çorapçıoğlu A, Aydemir Ö, Yıldız M et al. (1999) DSM-IV Eksen I bozuklukları için Yapılandırılmış Klinik Görüşme, Klinik Versiyon. Ankara: Hekimler Yayın Birliği.
- Eng W, Heimberg RG, Hart TA et al. (2001). Attachment in individuals with social anxiety disorder: the relationship among adult attachment styles, social anxiety, and depression. *Emotion*, 1:365-380
- Garno JL, Goldberg JF, Ramirez PM et al. (2005) Bipolar disorder with comorbid cluster B personality disorder features: Impact on suicidality. *J Clin Psychiatry*, 66(3), 339-345.
- George EL, Miklowitz DJ, Richards JA et al. (2003) The comorbidity of bipolar disorder and axis II personality disorders. *Bipolar Disord*, 5: 115-122.
- Gilbert P, McEwan K, Hay J et al. (2007) Social rank and attachment in people with a bipolar disorder. *Clin Psychol Psychother*, 14, 48-53.
- Goldwyn R, Stanly C, Smith V et al. (2000) The Manchester Child Attachment Story Task: relationship with parental AAI, SAT and child behaviour. *Attach Hum Dev*, 2(1):71-84.
- Goodwin FK, Jamison KR (1990) *Manic Depressive Illness*. New York: Oxford University.
- Griffin D, Bartholomew K (1994) The metaphysics of measurement: The case of adult attachment. In K. Bartholomew and D. Perlman (Eds.), *Attachment processes in adulthood: Advances in personal relationships* (Vol. 5, pp. 17-52). London: Jessica Kingsley Publishers.
- Hazan C, Shaver PR (1987) Romantic love conceptualized as an attachment process. *J Pers Soc Psychol*, 52,511-524.
- Hamilton CE (2000) Continuity and discontinuity of attachment from infancy through adolescence. *Child Dev*, 7:690-694.
- Horowitz LM, Rosenberg SE, Bartholomew K (1993) Interpersonal Problems, Attachment Styles, and Outcome in Brief Dynamic Psychotherapy. *J Consult Clin Psychol*, 61(4), 549-560.
- Joyce PR (1984) Parental bonding in bipolar affective disorders, 7(3-4), 319-324.
- Kesebir S, Vahip S, Akdeniz F et al. (2005) Bipolar Bozuklukta Mizaç ile Klinik Özelliklerin İlişkisi, *Türk Psikiyatri Derg*, 16(3): 164-169
- Klohn EC, Bera S (1998) Behavioral and experiential patterns of avoidantly and securely attached women across adulthood: A 30-year longitudinal perspective. *J Pers Soc Psychol*, 74(1), 230-250.
- Main M, Kaplan N, Cassidy J (1985) Security in infancy, childhood, and adulthood: A move to the level of representation. Growing points in attachment theory and research. *Monogr Soc Res Child Dev*, 50, 66-104.
- Marazziti D, Dell'osso B, Catena Del'Osso M et al. (2007) Romantic attachment in patients with mood and anxiety disorders. *CNS Spectr*. 12(10):751-6.
- Mangelsdorf SC, Frosch CA (1999) Temperament and attachment: one construct or two? *Adv Child Dev Behav*, 27:181-220.
- Miklowitz DJ, Wisniewski SR, Miyahara S et al. (2005) Perceived criticism from family members as a predictor of one-year course of bipolar disorders. *Psychiatry Res*, 136(2-3), 101-111.
- Mikulincer M, Florian V (1999) The association between spouses' self-reports of attachment styles and representations of family dynamics. *Fam Process*, 38(1): 69-83.
- Morriss RK, van der Guht E, Lancaster G et al. (2009) Adult attachment in bipolar 1 disorder. *Psychol Psychother*, 82(Pt 3):267-77.
- Myhr G, Sookman D, Pinard G et al. (2004) Attachment security and parental bonding in adults with obsessive-compulsive disorder: a comparison with depressed out-patients and healthy controls. *Acta Psychiatr Scand*, 109:447-456.
- Nakash-Eisikovits O, Dutra L, Westen D et al. (2002) Relationship between attachment patterns and personality pathology in adolescents. *J Am Acad Child Adolesc Psychiatry*, 41:111-23.
- O'Hara MW, Schlechte JA, Lewis DA et al. (1991) Prospective study of doğum sonrası blues. Biologic and psychosocial factors. *Arch Gen Psychiatry*, 48(9):801-6.
- Paykel ES, Abbott R, Morriss R et al. (2006) Sub-syndromal symptoms in the longitudinal course of bipolar disorder. *Br J Psychiatry*, 189(2), 118-123.
- Ponizovsky AM, Nechamkin Y, Rosca P (2007) Attachment patterns are associated with symptomatology and course of schizophrenia in male inpatients. *Am J Orthopsychiatry*, 77(2):324-31.
- Rosenfarb IS, Becker J, Khan A et al. (1998) Dependency and self-criticism in bipolar and unipolar depressed women. *Br J Clin Psychol*, 37(4), 409-414.
- Sabuncuoğlu O, Berkem M (2006) Bağlanma Biçemi ve Doğum Sonrası Depresyon Belirtileri Arasındaki İlişki: Türkiye'den Bulgular *Türk Psikiyatri Derg*, 17(4):252-258.
- Shaver PR, Hazan C, Bradshaw D (1988) Love as attachment: The integration of three behavioral systems. In J. R. Sternberg & M. L. Barnes (Eds.), *The psychology of love* (pp. 68-99). New Haven, CT: Yale University Press.
- Simpson JA, Rholes WS, Campbell L et al. (2003) Adult attachment, the transition to parenthood, and depressive symptoms. *J Pers Soc Psychol*, 84:1172-1187.
- Smith M, Calam R, Bolton C (2009) Psychological factors linked to self-reported depression symptoms in late adolescence. *Behav. Cogn Psychother*. Jan, 37(1):73-85.
- Sorias S, Saygılı R, Elbi H (1990) "DSM-III-R Yapılandırılmış Klinik Görüşmesi Türkçe Versiyonu, Kişilik Bozuklukları Formu: SCID-II" Ege Üniversitesi Basımevi, İzmir.
- Sund AM, Wichstrom L (2002) Insecure attachment as a risk factor for future depressive symptoms in early adolescence. *J Am Acad Child Adolesc Psychiatry*, 41(12), 1478-1485.
- Vahip I, Kocadere M (2003) İki Uçlu Bozukluk Sağaltım Kılavuzu. s: 71-85.
- Vahip S, Kesebir S, Alkan M et al. (2005) Affective temperaments in clinically-well subjects in Turkey: initial psychometric data on TEMPS- A. *J Affect Dis*, 85: 113-125.