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Original Article

Attachment styles of patients with major depressive, obsessive-compulsive, and generalized anxiety disorders

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Abstract

Introduction: This study was conducted in order to compare the attachment styles of the patients suffering from major depression disorder (MDD), obsessive-compulsive disorder (OCD) and generalized anxiety disorder (GAD) with those of the healthy people.

Methods: In this case-control study, a total number of 60 male/female patients with MDD and OCD were categorized into three 20-subject groups, then 20 healthy people were included in one control group. The study instruments were Hazan and Shaver's Attachment Style Questionnaire (version 1993), Beck Depression Inventory (BDI-II), Maudsley Obsessive-Compulsive Inventory (MOCI), Penn State Worry Questionnaire (PSWQ), and Beck Anxiety Inventory (BAI). The data were analyzed using chi-square test.

Results: There was a significant difference between the attachment styles of the healthy people and the patients suffering from MDD ($P < 0.001$), OCD ($P = 0.013$) and GAD ($P = 0.013$). Moreover, a significant difference was observed between the attachment styles of patients with MDD, OCD ($P = 0.012$) and GAD ($P = 0.010$). These findings indicated that patients with MDD were more insecurely attached in comparison to patients with OCD and GAD. However, there was no significant difference between the attachment styles of patients with OCD and GAD ($P = 0.089$).

Conclusion: This study indicated that there was a significant difference between the attachment styles of patients with MDD, OCD, and GAD, and the healthy people. This finding indicates that in the etiology of mental disorders, the effects of attachment styles should not be disregarded.

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Introduction

The method of emotional regulation and communicating with the others differs across individuals. Theory of attachment describes these individual differences in children and adults. Attachment means developing deep emotional bonds with specific people through the life in a way that interaction with them results in the feelings of joy and happiness, as well as calmness at times of stress.[1] The main attachment theoretician, John Bowlby, observed the features of mother-child relationships in different situations and concluded that mother-child bonds are responsible for the regulation of the child's emotional and behavioral experiences.[2]

According to Bowlby, the infants, at birth, are equipped with a biologically-based behavioral and motivational system that has evolved to ensure proximity to mother. Attachment is necessary for normal psychological and personal development as well as healthy emotional bonds, and it is a basis for emotional health in social relationships and attitudes to the world. The ability to trust the others affects the people's

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feeling of security, as well as emotional and mental health.[2]

The type of social attachment in childhood is one of the determining factors of the psychological damages in the later periods of life. For example, it is said that early damaged attachments and traumatic separation in childhood predispose to depression.[3] Recent multidisciplinary trends in theory and research on interpersonal relationships have converged with scientific efforts to explain the relationship dynamics, including their antecedents and consequences. Underlying these attempts is the assumption that since human behavior takes place within a relational context, a comprehensive scientific understanding of human behavior requires careful study of interpersonal relationships.[4] Today, most of the new developmental theories believe that social relationships are affected by the psychological damages in childhood. According to the theory of "object relations" and "ego psychology", the child's most intimate and sincere relationships leave the most effects on his/her psychological normality or abnormality.[5] Therefore, the attachment theory has been used recently by the researchers for understanding the behavioral disorders,[6,10] and has been repeatedly mentioned and discussed in the authoritative psychiatric texts as one of the theories of psychopathology.[11]

Depression and anxiety disorders are among the common mental disorders. According to the various epidemiologic studies in different parts of the world, the spread of the lifetime prevalence of unipolar depression is 5 to 17 percent, and for different types of anxiety disorders, it amounts to 16.6 percent.[11] If the etiological factors and the related interventions are not given due attention, the spread of these disorders at their present rate will be too costly for human society. The latest studies on attachment have focused on the relationship between attachment, depression and anxiety. The studies by Bifulco et al.[12] and Adam et al.[13] are a few of the mentioned studies. Bifulco et al. in their study, concluded that the greater intensity and higher rate of insecure attachment and avoidant attachment styles lead to the more correlation between attachment style and clinical depression.[12] Altin and Terzi studied the attachment styles of the depressed people with disorganized and ambivalent styles and concluded that avoidant attachment style had a strong and direct relationship with depression.[14] Trautman and Rollins concluded that there was a correlation between the obsessive-compulsive symptoms and avoidant insecure attachment.[6] Moreover, another result of the mentioned study showed that the students with higher scores in the scale of obsessive thoughts considered their parents to be more rejecting. According to the respondents' answers to the tests, Muris et al. understood that people with insecure attachment styles (avoidant and ambivalent styles) reported greater symptoms of generalized anxiety disorder (GAD) and depression in comparison to those with secure attachment style.[7] In the study by Brown et al. it became clear that insecure ambivalent attachment style had greater relationship with worry in patients with GAD in comparison to secure attachment style.[15] Since major depression disorder (MDD), as a form of mood disorder, as well as obsessive-compulsive disorder (OCD) and GAD, as two forms of anxiety disorders, are among the most common mental disorders that people might face during their lifetime, a need is felt for knowing the etiology of the mentioned disorders and finding the factors that cause and support them.

Included among the mentioned factors are the individuals' attachment styles in childhood, youth and adulthood described by Bowlby and Mahler's theory of attachment pathology. They believed that insecure attachment in childhood, especially between the parents and the children, can lead to various mental disorders in the later periods. Therefore, due to the importance of attachment styles in predicting mental

disorders and determining the type of attachment styles in different common mental disorders, further discussion is needed. The present study aims to compare the attachment styles of the patients with MDD, OCD, and GAD with those of the healthy people. It also intends to clarify whether there is a difference between the attachment styles of patients with MDD, OCD, and GAD and those of the healthy people.

Methods

The variables of this basic study have not been manipulated (they have happened in the past)[16] Attachment styles and their probable causes were studied in the present research. The population included all patients suffering from MDD, OCD, and GAD who had visited four psychiatry and clinical psychology clinics in Maragheh City, Iran, up to November 2012. The samples used for the healthy individuals group were selected from the staff of two high schools in Maragheh City using convenience sampling method. After applying Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV Axis I Disorders (SCID-I) and Structured Clinical Interview for Axis II Disorders (SCID-II), 60 male/female patients with MDD, OCD, and GAD were selected and categorized into three groups. Moreover, after homogenization, by clinical interview and the application of SCID-I and SCID-II, 20 healthy people were also selected. Finally, the tests and the questionnaires were administered.

Inclusion criteria were detection of MDD, OCD, or GAD and IQ above 90. Exclusion criteria were epilepsy or other severe physical, congenital, and psychiatric diseases such as psychotic disorders and autism. In this research, that part of Hazen and Shaver's attachment styles questionnaire (new version, 1993) which is measured in the nominal assessment scale was used. Therefore, the chi-square test was used for the statistical analysis of the data. The necessary explanations were given to all subjects, and they were free for participation in the research. In addition, informed consent was obtained from the participants.

Hazan and Shaver's Attachment Style Questionnaire (New version, 1993): This questionnaire is a self-report measurement instrument developed by Hazan and Shaver.[17] They revised their original scale several times for the purpose of validity and reliability.[18] The underlying assumption of the scale was that there is a resemblance between infant-caregiver attachment style and the relationships among the adults. This instrument, used for measuring the individuals' attachment style, included two parts. In the first part, the major paragraph was given in the form of descriptive statements in which the subject should select his replies in a 7-item scale. The items, in fact, determine the degree of correspondence between the subject's characteristics and his/her emotions about closeness and sincerity of relationships that indicates a particular attachment style. In the second part, the same descriptions were given, but this time the subject must express his/her similarity to the mentioned statement by selecting one of the descriptions. The first part of the questionnaire was scored according to the subject's choice for each description in a 7-item Likert scale. Based on the three descriptions that must be judged by the subjects, 3 scores were obtained; the first score showed avoidant attachment, the second score indicated anxious/ambivalent attachment, and the third score showed the rate of secure attachment; this part of questionnaire was measured in interval scale. In the second part of the questionnaire, that was in the form of forced-choice, the subject must choose one of the choices according to the degree of correspondence between the descriptions and his/her characteristics. Therefore, 1, 2, and 3 are used as nominal scales; 1 is avoidant attachment style, 2 is anxious/ambivalent attachment style, and 3 is secure attachment style. In data analysis, these scores were used separately as nominal scale scores. Acceptable reliability and validity for this questionnaire have been

obtained by various researchers. Furthermore, Hazan and Shaver reported satisfactory psychometric properties of their self-report instrument.[17] Feeney et al. believed that the researchers who had used this scale in their studies had confirmed its efficiency in determining the adults' attachment styles.[18]

They studied the construct validity of this questionnaire using correlation and ANOVA as well as studying the subjects in three groups: secure, avoidant and anxious/ambivalent. They finally concluded that the three descriptions of Hazan and Shaver's questionnaire measure three separate contents and reported that both Hazan and Shaver's questionnaire and their own questionnaire, based on Hazan and Shaver's questionnaire, have acceptable validity. In a study by Feeney et al., done by ANOVA on a sample of 295 subjects, it was found that the groups had a significant difference at $P < 0.001$ in terms of the constructs under study.[18] In the present study, Hazan and Shaver's adult attachment questionnaire (new version, 1993) was used.

Beck Depression Inventory-Second version (BDI–II): BDI, as a self-report instrument, has been widely used for assessing depression-related cognitions. Twenty one statements in this questionnaire were obtained by studying the attitudes and the common symptoms of the depressed patients.[19] These statements were scored between 0 to 3, based on the intensity of the reported state; therefore, the total questionnaire score was scored in a range of 0 to 63. In fact, this questionnaire shows both the existence of depression and the intensity of symptoms of depression. The revised version of this questionnaire (BDI-II) has more correspondence with DSM system, and covers all the elements of depression delineated in the cognitive theory.[20] Beck et al. showed that the second version, like the first one, indicates the existence and intensity of the symptoms of depression among the patients and the normal people.[21] They reported the internal consistency coefficient of this version (BDI-II) for psychiatric outpatients to be 0.91.

Maudsley Obsessive-Compulsive Inventory (MOCI): This questionnaire, devised by Hodgson and Rachman, contains 30 true/false statements that are used for measuring the dimensions of the OCD symptoms.[22] In addition to the total obsession score, separate scores were also obtained for different subtests of checking, cleaning, slowness and doubting. This test had an acceptable validity and reliability coefficients in test-retest reliability measures.[23,24] Sternberger and Burns reported the reliability of the mentioned test to be 0.89 by test-retest method.[24]

Penn State Worry Questionnaire (PSWQ): Pennsylvania Worry Questionnaire is a 16-item questionnaire devised and designed by Meyer et al. for measuring the intensity of worry and uncontrollability.[25] In this scale, the subjects were asked to report their worry in a 5-degree Likert scale in a range of 1 (never) to 5 (very much). A large number of researches have shown acceptable validity and reliability for PSWQ.[26,28] It was found that the reliability of PSWQ in mean Cronbach's Alpha was 0.91 in one study; and in the other study the mean reliability coefficient was 0.84 using test-retest method with a time interval of 2 to 10 weeks .[27] The construct validity of the mentioned questionnaire has also been verified by factor analysis.[26,28,29]

Beck Anxiety Inventory (BAI): BAI is a self-report scale including symptoms of anxiety. The subject has to choose an option that indicates the existence of anxiety and its intensity. Four possible choices include "never", "weak", "average", and "strong". The four choices in each item have been scored in a four-degree range of 0 to 3. Each item of the test describes one of the common symptoms of anxiety. Therefore, the total score of the test falls in a range of 0 to 63. Beck et al. measured the internal consistency of the mentioned test to be 0.92, and the reliability by test-retest method in a time interval of one week was reported to be 0.75.[30] Moreover, BAI has a satisfactory correlation ($r = 0.48$) with measures of anxiety.[30]

Table 1. Comparison of the attachment styles of the patients with major depressive disorder (MDD) and those with obsessive-compulsive disorder (OCD)

Attachment styles	Groups		Total
	Patients with MDD [n (%)]	Patients with OCD [n (%)]	
Secure	5 (24)	10 (52)	15 (50)
Anxious/ambivalent	12 (60)	8 (38)	20 (3.4)
Avoidant	3 (16)	2 (10)	5 (7.1)
Total	20 (100)	20 (100)	40 (100)

MDD: Major depressive disorder; OCD: Obsessive-compulsive disorder

Results

To examine the first research hypothesis claiming that there is a difference between the attachment styles of the patients with MDD and those with OCD, chi-square test was used. The results showed that out of the total number of patients suffering from MDD, 24 percent had secure attachment style, 60 percent had anxious/ambivalent attachment style, and 16 percent had avoidant attachment style. However, out of the total patients suffering from OCD, 52 percent had secure attachment style, 38 percent had anxious/ambivalent attachment style and 10 percent had avoidant attachment style. Moreover, at P = 0.012 and $\chi^2 = 8.82$ and degree of freedom (df) = 2, there was a significant difference between the attachment styles of the two groups under study. Meanwhile, the patients suffering from MDD were generally less secure than those with OCD (Table 1).

Examining the second hypothesis on the existence of a difference between the attachment styles of the patients with MDD and those of the patients with GAD showed that out of the total number of patients with MDD, 24 percent had secure attachment style, 60 percent had anxious/ambivalent attachment style, and 16 percent were facing avoidant attachment style. However, out of the total number of patients with GAD, 52 percent had secure attachment style, 34 percent had anxious/ambivalent attachment style, and 14 percent had avoidant attachment style. Moreover, at P = 0.011, with $\chi^2 = 7.54$, and df = 2, there was a significant difference between the two groups in attachment style, and the patients with MDD were generally more insecure than those with GAD (Table 2).

Examining the third hypothesis claiming that there is a difference between the attachment styles of patients with GAD and those with OCD indicated that out of the total number of patients with GAD, 52 percent had secure attachment style, 34 percent had anxious/ambivalent attachment style, and 14 percent had avoidant attachment style. However, out of the total number of patients with OCD, 52 percent had secure attachment style, 38 percent had anxious/ambivalent attachment style, and 10 percent had avoidant attachment style.

Moreover, at P = 0.089 with $\chi^2 = 3.68$, and df = 2, there was no significant difference between the attachment styles of the two groups (Table 3).

Examining the fourth hypothesis claiming that there is a difference between the attachment styles of the patients with MDD and the attachment styles of the healthy people showed that out of the total number of patients with MDD, 24 percent had secure

Table 2. The comparison of attachment styles in the patients with major depressive disorder (MDD) and those with generalized anxiety disorder (GAD)

Attachment styles	Groups		Total
	Patients with MDD [n (%)]	Patients with GAD [n (%)]	
Secure	5 (24)	10 (52)	15 (50)
Anxious/ambivalent	12 (60)	7 (34)	19 (3.4)
Avoidant	3 (16)	3 (14)	6 (7.1)
Total	20 (100)	20 (100)	40 (100)

MDD: Major depressive disorder; GAD: Generalized anxiety disorder

Table 3. The comparison of the attachment styles of the patients with generalized anxiety disorder (GAD) and those with obsessive-compulsive disorder (OCD)

Attachment styles	Groups		Total
	Patients with GAD [n (%)]	Patients with OCD [n (%)]	
Secure	10 (52)	10 (52)	20 (50)
Anxious/ambivalent	7 (34)	8 (38)	15 (3.4)
Avoidant	3 (14)	2 (10)	5 (7.1)
Total	20 (100)	20 (100)	40 (100)

GAD: Generalized anxiety disorder; OCD: Obsessive-compulsive disorder

attachment style, 60 percent had anxious/ambivalent attachment style and 16 percent had avoidant attachment style. However, out of the total number of healthy people, 74 percent had secure attachment style, 16 percent had anxious/ambivalent attachment style, and 10 percent had avoidant attachment style. Moreover, at $P < 0.001$ and $\chi^2 = 20.96$ and df = 2, there was a significant difference between the attachment styles of the two groups under study, and the patients with MDD were generally more insecure than the healthy people (Table 4).

Examining the fifth hypothesis claiming that there is a difference between the attachment styles of the patients with OCD and the attachment styles of the healthy people revealed that out of the total number of patients with OCD, 52 percent had secure attachment style, 38 percent had anxious/ambivalent attachment style, and 10 percent had avoidant attachment style. However, out of the total number of the healthy people, 74 percent had secure attachment style, 16 percent had anxious/ambivalent attachment style, and 10 percent had avoidant attachment style. Moreover, at $P = 0.013$ and $\chi^2 = 9.79$ and df = 2, there was a significant difference between the attachment styles of the two groups, and the patients with OCD were generally more insecure than the healthy people (Table 5).

Testing the sixth hypothesis claiming that there is a difference between the attachment styles of patients with GAD and the healthy people revealed that out of the total number of patients with GAD, 52 percent had secure attachment style, 34 percent had anxious/ambivalent attachment style and 14 percent had avoidant attachment style.

However, out of the total number of healthy people, 74 percent had secure attachment style, 16 percent had anxious/ambivalent attachment style and 10 percent had avoidant attachment style. Moreover, at $P = 0.013$ with $\chi^2 = 9.68$ and df = 2, there was a significant difference between the attachment styles of two groups, and the patients with GAD were generally less secure than the healthy people (Table 6).

Discussion

The purpose of the present study was to compare the attachment styles of patients with MDD, OCD, and GAD with those of the healthy people. The results indicated that the patients with MDD were generally less secure than the OCD patients.

Table 4. The comparison of the attachment styles of the patients with major depressive disorder (MDD) and those of the healthy people

Attachment styles	Groups		Total
	Patients with MDD [n (%)]	Healthy people [n (%)]	
Secure	5 (24)	15 (74)	20 (50)
Anxious/ambivalent	12 (60)	3 (16)	15 (3.4)
Avoidant	3 (16)	2 (10)	5 (7.1)
Total	20 (100)	20 (100)	40 (100)

MDD: Major depressive disorder

Table 5. The comparison of the attachment styles of the patients with obsessive-compulsive disorder (OCD) and those of the healthy people

Attachment styles	Groups		Total
	Patients with OCD [n (%)]	Healthy people [n (%)]	
Secure	10 (52)	15 (74)	25 (50)
Anxious/ambivalent	8 (38)	3 (16)	11 (3.4)
Avoidant	2 (10)	2 (10)	4 (7.1)
Total	20 (100)	20 (100)	40 (100)

OCD: Obsessive-compulsive disorder

The findings of this study revealed that there was significant difference between the attachment styles of the patients with MDD and the patients with OCD. It can also be said that the patients with MDD were generally less secure than the patients with OCD. Likewise, according to the results of the present study, there was significant difference between the attachment styles of the patients with MDD and the patients with GAD, and patients with MDD were generally less secure than patients with GAD. Moreover, there was not significant difference between the attachment styles of the patients with GAD and the patients with OCD. On the other hand, results indicated that there was significant difference between the attachment styles of the patients with MDD and the healthy people, and MDD patients were less secure than healthy people. In addition, according to the results of this study, there was significant difference between the attachment styles of both OCD and GAD patients and the healthy people, and it can be inferred that both OCD and GAD patients are less secure than healthy people.

The results of the present study confirmed the results obtained by the previous studies.[7,10] In justifying the mentioned results, it can be said that the child-rearing style plays an important role in the quality of mental health throughout the lifetime.

The nature and the quality of parental responses to the needs of children influence the children's development, and the children's development and their social interactions influence the quality of their adulthood mental health.[5] Rejecting and authoritative style of child-rearing play a determining role in the creation of insecure attachment style by developing negative thoughts about the world as a dangerous place. Hence, Sroufe referred to anxiety as a consequence of developing attachment style.[31]

In the present study, the child anxiety and its related disorders can be widely explained by the attachment style, and the mother's attachment style is believed to have a direct relationship with the child's attachment disorders. Trautman and Rollins concluded that the students with higher scores in the scale of obsessions regard their parents to be more rejecting.[6] In accordance with the present study, Brown et al. studied the relationship between the child-rearing styles, attachment styles and worry in anxious children and found that the ambivalent insecure attachment style has more relationship with worry in comparison to secure attachment style.[15]

Table 6. The comparison of the attachment styles of the patients with generalized anxiety disorder (GAD) and those of the healthy people

Attachment style	Groups		Total
	Patients with GAD	Healthy people	
Secure	10 (52)	15 (74)	25 (50)
Anxious/ambivalent	7 (34)	3 (16)	10 (3.4)
Avoidant	3 (14)	2 (10)	5 (7.1)
Total	20 (100)	20 (100)	40 (100)

GAD: Generalized anxiety disorder

Moreover, Cassidy et al. observed that among the patients with GAD, the experience of lack of affection in childhood was more evident, and this group of children were more vulnerable in the relationship with their mothers in comparison to the subjects in the control group.[32]

Although the influence of mother's sensitive response to the needs of growing child on the formation of secure attachment in children has been proven in many studies, today psychologists believe that both factors of the caregiver response to the child and the child temperament are important and decisive in the formation of secure attachment in children.[33] As an interesting finding, it was shown that the attachment styles in three groups of subjects patients with MDD, OCD, and GAD had a greater difference than those in the healthy group. In fact, it turned out that although patients with MDD were more insecure than those with OCD and those with GAD, difference in the attachment styles of patients and healthy people was much more than the difference between the three patient groups; and this finding is consistent with the beliefs of most scholars that mental disorders, including attachment styles, are disorders characterized by the existence of a kind of biopsychosocial damage caused by mother or mother successor deprivation and the lack of interaction between the child and the mother or caregiver.[34]

Conclusion

Generally, the results of the present study showed that there is a significant difference between the attachment styles of the healthy people and those of the people suffering from MDD, OCD, and GAD. However, there is no significant difference between the attachment styles of the people with OCD and GAD. Although no definite causal conclusions can be made by the results of these kinds of studies, the effects of the attachment styles on the parents and the children should not be disregarded in the etiology of the mental disorders.

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Authors' Contribution

Hossein Dadashzadeh and Shahrokh Amiri developed the original idea and the study design and performed diagnostic evaluations and wrote the manuscript. Tavakol Musazadeh and Mehdi Ebadi Yusefi performed the psychiatric diagnostic evaluations and data analysis. All authors approved the final manuscript.

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This study was approved by the Medical Ethics Committee of Tabriz University of Medical Sciences.

Conflict of Interest

Authors have no conflict of interest.

Ethical Approval

This study was approved by the Regional Medical Ethics Committee of Tabriz University of Medical Sciences under the number 1393.7.30tbzmed.rec.5.4.6988.

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