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Investigation of the comorbidity of dissociative disorders in patients with bipolar disorder

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ABSTRACT

Objectives: The aim of this study was to investigate the comorbidity of dissociative disorders in patients with bipolar disorder.

Methods: Fifty-one patients who are diagnosed with bipolar disorder in euthymic state and forty-nine healty controls were included in the study. The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I), Structured Clinical Interview for DSM-IV Dissociative Disorders (SCID-D), Dissociative Experiences Scale (DES) and Childhood Trauma Questionnaire (CTQ-28) were administered to all participants with a sociodemographic form.

Results: Mean DES and CTQ-28 total scores were statistically higher in patients group than control group ($p < 0.001$ and $p < 0.001$, respectively). Emotional abuse, emotional neglect, physical abuse, physical neglect and sexual abuse subscale scores of CTQ-28 were higher in patients group than healthy controls group ($p = 0.002$, $p < 0.001$, $p = 0.005$, $p < 0.001$ and $p < 0.021$, respectively). The rate of any dissociative disorder comorbidity was 35.4% in patients with bipolar disorder. The most frequent dissociative disorder in patient with bipolar disorder was depersonalization disorder (17.6%). There was a positive correlation between DES score and number of suicidal attempts (r = 0.284). Negative correlations were found between DES score and age of disease onset, and CTQ-28 total score and age of disease onset (r = -0.332 and r = -0.291).

Conclusion: Our results have shown that dissociative disorders may be frequently accompanied in patients with bipolar disorder. Dissociation and childhood traumatic events can be related with clinical features in patients with bipolar disorder.

Keywords: childhood trauma, dissociation, bipolar disorder

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Traumatic experiences during childhood are frequently emphasized in the aetiology of bipolar disorder as well as many other psychiatric disorders. In bipolar patients with a history of childhood trauma, studies have shown that the age of disease onset age is earlier, the number of affective episodes is higher, the rate of rapid cycling is increased and psychotic symptoms as well as suicide attempts are more

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common [1-8].

Dissociation, which is characterized with changes in or deterioration of the normal integrative functions of memory, identity and consciousness, manifests in many psychiatric disorders. Some studies have demonstrated dissociative symptoms to be present in psychotic disorders such as schizophrenia, anxiety disorders and in borderline personality disorders and that there is a relationship between childhood traumatic experiences and dissociative symptoms. It seems that the comorbidity of dissociative disorder is related with poor prognostic features in other psychiatric disorders [9, 10]. However, it is notable that the dissociative disorders in bipolar disorders have been less evaluated in literature [11, 12].

We hypothesized that dissociative disorders may be accompanied in patients with bipolar disorders frequently, and comorbidity of dissociative disorders is related with poor clinical features in patients with bipolar disorder. The primary aim of this study was to investigate the comorbidity rate of dissociative disorders in patients with bipolar disorder. The second aim of the study was to investigate the relationship between dissociation and childhood traumas, and clinical features in patients with bipolar disorder.

METHODS

This study included 51 bipolar patients in a euthymic state, who had previously been diagnosed according to the DSM-IV-TR diagnostic criteria, who were being followed at Şişli Hamidiye Etfal Training and Research Hospital Psychiatry Outpatient Clinic, and 49 healthy volunteers with no psychiatric diagnosis. The research protocol was approved by the Şişli Hamidiye Etfal Education and Research Hospital Ethics Committee. Each study participant signed an informed consent form that was approved by the ethics committee. The research was carried out in accordance with the World Medical Association Code of Ethics for Medical Research Involving Human Subjects Declaration of Helsinki Good Clinical Practice Guidelines.

Patients

The patient group of this study were volunteer euthymic individuals between the ages 18-65, at least primary school graduates, had no severe neurologic and internal diseases, had no current other Axis-I diagnosis, did not have coexisting schizophrenia or any other psychotic disorder, had no alcohol or substance addiction or abuse and had been diagnosed as bipolar according to the DSM-IV diagnostic criteria. Excluding criteria for the patient group included those younger than 18 years and older than 65 years of age, illiterate individuals, those with severe neurologic or internal disease and those with alcohol or substance abuse or addiction.

Clinical evaluation

Each participant who volunteered to participate in this study was asked to fill out a sociodemographics data form, a Childhood Traumatic Questionnaire (CTQ) and a Dissociative Experiences Scale (DES). The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) and Structured Clinical Interview for DSM-IV Dissociative Disorders (SCID-D) was applied by the interviewer to each participant.

SCID-I is a clinical interview structured by First *et al*. [13] for DSM-IV Axis I disorders. The adaptation and reliability studies of SCID-I for Turkey were performed by Çorapçıoğlu *et al*. [14]. SCID-D is a structured clinical interview chart for DSM-IV dissociative disorders developed by Steinberg [15]. It can be used to evaluate the dissociative symptoms and disorders of the subject in various psychiatric diseases. The reliability and validity studies for Turkey have been conducted by Kundakçı *et al*. [16].

DES is a scale consisting of 28 items developed by Bernstein and Putnam [17]. For each item of the scale, subjects give points between 0-100 and the result is obtained by calculating the average of the total scores. Total scores that are higher than 30, are indicative of a dissociative disorder. The reliability and validity studies for Turkey were performed by Yargıç *et al*. [18]. CTQ was developed by Bernstein *et al*. [19]. It is a self- reported quintet Likert type scale. It includes questions for evaluating childhood emotional, physical and sexual abuse and physical and emotional neglect. The reliability and validity studies for Turkey were performed by Şar *et al*. [20].

Statistical Analysis

Statistical analyses of the present study were performed with the SPSS 16.0 program. Descriptive

Table 1. Comparison of the sociodemographic features of the patients and control groups

Variable		Patient Group (n = 51)	Control Group (n = 49)	*p* value
Age (years)		35.1 ± 10.19	37.1 ± 9.1	0.363[1]
Gender	Female	26 (51)	29 (59.2)	0.410[2]
	Male	25 (49)	20 (40.8)	
Education	Primary-Secondary	16 (31.4)	16 (32.7)	0.721[2]
	High	23 (45.1)	18 (36.7)	
	University	12 (23.5)	15 (30.6)	
Maritalstatus	Married	26 (51)	32 (65.3)	0.310[2]
	Single	25 (49)	17 (34.7)	
Smoking	(Have)	22 (43.1)	23 (46.9)	0.702[2]
Alcohol consumption	(Have)	7 (13.7)	14 (28.6)	0.068[2]

Data are shown as mean±standard deviation or number (%). [1]independentsample t test, [2]Chi-square test

statistics were given as frequency, percentage, mean, standard deviation, and minimum-maximum. values. Differences between categorical variables in the groups were analyzed with the Chi-square test. Normality assessment of the continuous variables was performed with Shapiro-Wilk test. Comparisons of the variables that fitted normal distribution were evaluated with the Student's t-test. The correlation between the variables of the patient group was evaluated with the Spearman nonparametric test. Results were evaluated at a $p < 0.05$ level of significance.

RESULTS

There is no difference on age between the patients and controls groups (35.1 ± 10.19 years and 37.1 ± 9.1 years, respectively) ($p = 0.363$). There was no statistically significant difference between the patient and control groups of the study in terms of socio-demographic data (Table 1). The mean age of the disease onset in patients with bipolar disorder was 24.41 ± 4.37 years. The mean number of hospitalization of the patients was 3.39 ± 1.03. The mean number of suicide attempts of the patients was 1.71 ± 0.44.

CTQ-28 total, emotional abuse, emotional neglect, physical abuse, physical neglect and sexual abuse subscale scores were higher in patients group than healthy control group ($p < 0.001$, $p = 0.002$, $p < 0.001$, $p = 0.005$, $p < 0.001$ and $p < 0.021$; respectively). Mean DES score of the patients group was higher than the healthy controls (Table 2).

The most prevalent dissociative disorder was

Table 2. Comparison of DES and CTQ-28 scales scores betwee the patients and controls group.

Scale	Patient Group (n = 51)	Control Group (n = 49)	*p* value
CTQ-Emotional abuse	7.90 ± 3.36	6.20 ± 1.47	0.002
CTQ-Emotional neglect	10.16 ± 4.17	7.10 ± 2.19	**< 0.001**
CTQ-Physicalabuse	6.67 ± 2.98	5.39 ± 0.95	0.005
CTQ-Physical neglect	7.61 ± 2.85	5.47 ± 0.84	**< 0.001**
CTQ-Sexual abuse	6.59 ± 3.70	5.33 ± 0.85	0.021
CTQ-total	38.92 ± 12.45	29.57 ± 5.07	**< 0.001**
DES	20.73 ± 15.09	7.13 ± 4.54	**< 0.001**

Data are shown as mean±standard deviation. CTQ = Childhood Traumatic Questionnaire, DES = Dissociative Experiences Scale

Table 3. Comorbid dissociative disorders in patients with bipolar disorder (by using SCID-D)

Dissociative Disorders	Data n (%)
Dissociative amnesia	4 (7.8%)
Dissociative fugue	1 (1.9%)
Dissociative idendity disorder	2 (3.9%)
Depersonalization disorder	9 (17.6%)
Dissociative disorder not otherwise specified	8 (15.6%)

depersonalization disorder in patients with bipolar disorder (17.6%). Other comorbid dissociative disorders in patients with bipolar were shown at the Table 3.

There was a positive correlation between DES score and number of suicidal attempt (r = 0.284). A negative relationship was found between DES score and age of the disease (r = -0.332). Emotional neglect score was correlate with number of suicide attempt and age of the disease onset (r = 0.328 and r = -0.333). CTQ-total score was negatively correlate with age of the disease onset (r = -0.291) (Table 4).

DISCUSSION

The primary aim of the present study was to investigate the comorbidity of dissociative disorders in patients with bipolar disorder. The second aim of the study was to investigate the relationship between dissociation and childhood traumatic events, and clinical features of the patients.

Many studies have emphasized the relationship between bipolar disorder and childhood trauma [21-24]. In a study conducted by Garno *et al*. [24], it has been reported that there are at least one type of childhood trauma in almost half of bipolar patients and two or more types in about one third of them. In a study conducted by Leboyer *et al*. [22], bipolar patients and healthy individuals were compared for childhood traumatic experiences. According to their results, while the incidence of at least one type of childhood trauma in bipolar patients was 54.4%, this incidence was found to be 31.9% in healthy individuals [22]. The results of our study are similar to those of other studies in literature. Indeed, according to the results of our study, each CTQ subscale score (emotional abuse, physical abuse, physical neglect, emotional neglect and sexual abuse) was significantly higher in patients with bipolar disorder than in the healthy volunteers. The fact that childhood traumas are seen more frequently in bipolar patients brings to mind the question of how these childhood traumas affect the clinical course. Many studies have shown that there is a relationship between childhood trauma and the early age of disease onset, more suicidal attempts, more psychotic symptoms, higher rates of rapid cycling and more substance abuse in patients with bipolar disorder [6, 23-26]. Leverich *et al*. [26] have indicated that there is a relationship between physical and sexual abuse with early age of disease onset, rapid cycling and increased suicidal attempts in patients with bipolar disorder. Garno *et al*. [24] have found that in bipolar patients with childhood trauma, the age of disease onset was earlier and that patients with a history of sexual abuse were found to have more suicidal attempts. In a study conducted by Brown *et al*. [6], it has been found that the number of hospitalizations is higher in bipolar patients with childhood trauma and alcohol abuse was more in those with a history of sexual and physical abuse. Romero *et al*. [27] have found that there is more suicidal attempts and substance abuse in bipolar patients with

Table4. Correations of DES and CTQ-28 scale scores with clinical features in patients with bipolar disorder

	DES	Emotional Abuse	Emotional Neglect	Physical Abuse	Physical Neglect	Sexual Abuse	CTQ-28 Total
Number of Hospitalization	r=0.148	r=0.139	r=0.106	r=0.002	r=0.048	r=0.155	r=0.097
Number of SuicideAttempt	**r=0.284***	r=0.106	**r=0.328***	r=0.092	r=0.046	r=0.205	r=0.219
Age of Onset	**r=-0.332***	r=-0.264	**r=-0.333***	r=-0.174	r=-0.029	r=-0.240	**r=-0.291***

DES = Dissociative Experiences Scale, CTQ = Childhood Traumatic Questionnaire, *$p < 0.05$

childhood trauma. According to the results of the present study, CTQ-28 total and emotional neglect subscale scores are correlated with early onset of the disease. Additionally, we have found that emotional neglect score was positively correlate with number of suicidal attempt in patients with bipolar disorder. The negative effects of childhood trauma on the clinical course of bipolar disease may be associated with various neurobiological impairments. Indeed, it has been demonstrated that childhood traumas leads to disruptions in the sensitivity of the neuroendocrine stress response and activity of the hypothalamic-pituitary-adrenal axis and damages in the cortical areas such as the hippocampus and amygdala that have an important role in cognitive and emotional functions [4, 28, 29].

There are less studies in literature that investigate the relationship between bipolar disorder and dissociation. In a study conducted by Latalova *et al*. [11], bipolar patients and healthy individuals were compared for level of dissociation. Latalova *et al*. [11] have found that DES score was higher in patients with bipolar disorder than healthy controls. Coryell [30] reported in a case report that multiple personality may occur as an epiphenomenon of the affective disorder or of other illnesses. Steingard and Frankel [31] reported a patient with a diagnosis of bipolar disorder, rapid cycling type, who in fact was experiencing dissociative episodes manifested as psychotic states. We have found that the mean DES score of the patients with bipolar disorder was higher than healthy controls. The most important result of the present study is that dissociative disorders are frequently accompanying to bipolar disorder. According to our results, the most prevalent dissociative disorders that accompanied to bipolar disorder are depersonalization disorder and dissociative disorder not otherwise specified (17.6% and 15.6%, respectively).

According to the results of the previous studies, it can be said that higher levels of dissociation has negatively affect the clinical course of bipolar disorder. Latalova *et al*. [11] have found that there is a relationship between higher levels of dissociation and earlier onset of the disease in patients with bipolar disorder. Spitzer *et al*. [32] have demonstrated lower treatment responses in bipolar patients with high dissociation scores. Bakım *et al*. [33] have found the relationship between higher DES scores and duration hospital stay in patients with bipolar disorder. In our study, we found the age of disorder onset to be earlier and number of suicide attempts to be higher in bipolar patients with high dissociation scores. Consequently, it can be said that the results of the present study have supported the results of previous studies.

Limitations

The present study has some limitations. Firstly, sample size of the present study was relatively smaller. Second limitation of the present study is that the correlation coefficients between our variables were smaller than 0.4. Namely, our results need to confirm with larger sample.

CONCLUSION

In conclusion, dissociative disorders are frequently observed in bipolar patients. In bipolar disorder patients with childhood trauma or high dissociation scores, the onset of the disease may be earlier and the number of suicide attempts may be greater.

Authorship declaration

All authors listed meet the authorship criteria according to the latest guidelines of the International Committee of Medical Journal Editors, and all authors are in agreement with the manuscript.

Conflict of interest

The authors disclosed no conflict of interest during the preparation or publication of this manuscript.

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