



ARAŞTIRMA / RESEARCH

## Relationship between childhood trauma, dyadic adjustment, and sexual functions in patients with bipolar disorder

Bipolar bozukluğu olan hastalarda çocukluk çağı travması, çift uyumu ve cinsel işlevler arasındaki ilişki

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### Abstract

**Purpose:** This study aimed to investigate the dyadic adjustment and sexual functions in patients with bipolar disorder (BD) during the remission period, and examine the effect of a history of childhood trauma on these.

**Materials and Methods:** This cross-sectional study is consisted of 80 (46 female, 34 male) patients with bipolar disorder-1 and 40 (25 female, 15 male) healthy controls. The Dyadic Adjustment Scale (DAS), Childhood Trauma Questionnaire (CTQ-28), Arizona Sexual Questionnaire (ASEX) were administered to the participants.

**Results:** The patient group showed significantly higher trauma scores in all subscales and total scores of the CTQ-28, and lower scores in the subscales and total score of DAS compared to the control group. 82.5% of bipolar patients and 57.5% of healthy controls were found to have sexual dysfunction (SED). According to the results of linear regression and multiple regression analyses, age and DAS-total score predicted SED, and male gender, absence of SED and CTQ-total score predicted DAS score.

**Conclusion:** Patients with BD have more dyadic problems, sexual dysfunction, and trauma history than healthy controls. Sexual function and dyadic adjustment affect each other in two ways and a history of childhood trauma has a negative effect on both sexual function and dyadic adjustment.

**Keywords:** Bipolar disorder, sexual dysfunction, childhood trauma, dyadic adjustment

### Öz

**Amaç:** Bu çalışmada, remisyon dönemindeki bipolar bozukluk tanılı hastaların çift uyumunun ve cinsel işlevlerinin araştırılması ve çocukluk çağı travması öyküsünün çift uyumuna ve cinsel işlevlere olan etkisinin incelenmesi amaçlanmıştır.

**Gereç ve Yöntem:** Kesitsel tipteki bu çalışma, remisyon döneminde bipolar bozukluğu olan 80 (46 kadın, 34 erkek) hasta ve 40 (25 kadın, 15 erkek) sağlıklı kontrolden oluşmaktadır. Katılımcılara sosyodemografik veri formu, çiftler uyum ölçeği (ÇUÖ), çocukluk çağı ruhsal travma ölçeği (CTQ-28), Arizona cinsel yaşantılar ölçeği (ASYÖ) uygulanmıştır.

**Bulgular:** Hasta grubunda kontrol grubuna göre CTQ-28'in tüm alt ölçeklerinde ve toplam puanlarında istatistiksel olarak anlamlı derecede yüksek, ÇUÖ alt ölçek ve toplam puanlarında ise istatistiksel olarak anlamlı daha düşük puanlar saptandı. Bipolar bozukluk tanılı hastaların %82,5'inde ve sağlıklı kontrollerin %57,5'inde cinsel işlev bozukluğu saptandı. Lineer regresyon analizi sonuçlarına göre yaş ve ÇUÖ-toplam puanı cinsel işlev bozukluğunu yordamaktadır.

**Sonuç:** Bipolar bozukluk tanılı hastalarda sağlıklı kontrollere göre daha fazla çift sorunu, cinsel işlev bozukluğu ve travma öyküsü bulunmaktadır. Cinsel işlev ve çift uyumu karşılıklı olarak birbirini etkilemektedir. Çocukluk çağı travma öyküsü hem cinsel yaşamı hem de çift uyumunu olumsuz yönde etkilemektedir.

**Anahtar kelimeler:** Bipolar bozukluk, cinsel işlev bozukluğu, çocukluk çağı travması, çift uyumu

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## INTRODUCTION

Marital adjustment is defined as the state in which the partners share a general sense of happiness, satisfaction, cohesion, and consensus with each other's matters and their marriage<sup>1</sup>. Better marital adjustment is considered as a component of social well-being. Individuals' physical and mental health, life satisfaction, and economic standing can be negatively impacted by strained marriage<sup>2</sup>. However, dyadic adjustment is a term that covers both marital satisfaction and happiness, and is a comprehensive conceptualization of marriage quality<sup>3</sup>.

Bipolar disorder (BD) is a severe chronic mental disorder that affects approximately 2% of the general population. Cyclic mood swings are the core symptoms of this disorder and may cause major problems in the life of individuals<sup>4</sup>. However, during the remission period of BD, residual symptoms may be present and this may cause severe psychosocial, and occupational problems and difficulties in marital relationships. Those who live with and care for them face several difficulties and problems when they live with patients with BD<sup>5-6</sup>. Marital strife, separation, and divorce are more common among people with mental diseases. When compared to those with schizophrenia, a higher percentage of BD patients get married<sup>7</sup>, but BD also causes problems in their marriage. According to quantitative data, divorce and separation are two to three times more probable in people with BD than in general population<sup>8</sup>. Moreover, poor marital adjustment can lead to relapses in BD.

Sexual activity has a significant effect on the life satisfaction of people with mental illnesses. The importance of sexual compatibility and fulfillment with mutual enjoyment in a happy marriage partnership cannot be overstated<sup>9</sup>. Due to the side effects of drug treatment, especially antipsychotics that are used for BD, sexual dysfunctions are seen in patients with BD<sup>10</sup>. Regarding treatment adherence and prognosis, sexual dysfunction has a negative impact on BD. Furthermore, sexual dysfunction can exacerbate some conditions or cause a delay in therapy response. Although sexual issues and marital adjustment problems are widespread in people with BD, research on this topic is limited. According to studies comparing sexual functions in individuals with BD and healthy controls, the prevalence of sexual dysfunction in individuals with BD is much

higher than in healthy controls<sup>11,12</sup>. In a recent study examining dyadic adjustment and sexual function in patients with BD during the euthymic period, sexual function problems were found in half of the patient group. Moreover, sexual functions were found effective on dyadic adjustment of patients with BD<sup>13</sup>.

Childhood trauma is linked with severe clinical characteristic of BD<sup>14</sup>. Garino et al. found that 51% of a group of 100 individuals with BD had experienced severe childhood abuse, with emotional abuse being the most common type of trauma. According to that study, the various types of traumas were intertwined, with one-third of bipolar patients have been exposed to two or more types of trauma<sup>15</sup>. In comparison to those who had not, patients with BD who had suffered childhood trauma had significantly lower global functioning in adulthood. It has been showed that childhood trauma history is related with poor marital and sexual satisfaction<sup>15</sup>. This is the first study that investigated the impact of childhood trauma history on dyadic adjustment and sexual satisfaction in patients with BD. In this study, our hypothesis was patient with BD have lower dyadic adjustment and higher sexual dysfunctions compared to healthy control group and childhood trauma history has negative impact on dyadic adjustment and sexual functions.

## MATERIALS AND METHODS

### Study participants

This study was conducted on outpatients with BD-1 who were admitted to the Psychiatric Unit of Erenkoy Training and Research Hospital for Mental Health and Neurological Diseases between February 2021 and August 2021. 80 outpatient (46 women, 34 men) who met Diagnostic and Statistical Manual of Mental Disorders -DSM-5 criteria for BD-1 were admitted to study. The participants had been in remission period for at least 2 months (Young Mania Rating Scale  $\leq 12$  and Hamilton Depression Rating Scale  $-17 \leq 7$ ). The participants were evaluated by two psychiatry specialists. 40 healthy controls (25 women, 15 men), with no history of psychiatric illness were selected from hospital workers. The inclusion criteria for both groups were being married and having a regular sexual life. The exclusion criteria for both groups were illiteracy, having cognitive impairment, mental retardation, preexisting disorder for sexual functions, and comorbid psychiatric disorder (i.e.;

substance use disorder, personality disorder). Thus, 29 patients were excluded from the study.

The Dyadic Adjustment Scale (DAS), Childhood Trauma Questionnaire (CTQ-28), Arizona Sexual Questionnaire (ASEX) were applied to the participants. Approval for the study was granted by the Erenkoy Research and Training Hospital for Mental Health and Neurological diseases Ethical Committee with approval number 4, dated January 25, 2021, and written informed consent was obtained from the patients. The study was conducted ethical standards specified in the 1964 Helsinki Declaration.

## Measures

### Sociodemographic data form

This form consists of demographic features including age, gender, education, employment, duration of marriage and illness.

### Dyadic Adjustment Scale (DAS)

This scale was developed by Spainer et al. in 1976 to assess the level of dyadic adjustments among partners<sup>16</sup>. The Cronbach alpha was 0.96 in that study. This scale is a self-report and consists of 32-items. It has four subscales: dyadic satisfaction (DS), dyadic cohesion, dyadic consensus and affectional expression. The total score ranges from 0 to 151 points. The higher scores mean better dyadic adjustment. Turkish validity and reliability of DAS was performed by Fisiloglu et al. in 1997 and Cronbach's alpha was 0.90<sup>17</sup>.

### Childhood Trauma Questionnaire-28 (CTQ-28)

CTQ-28 was developed by Bernstein et al. in 2003<sup>18</sup>. CTQ-28 is a 5-point Likert-type scale (ranging from never true to often true) and consists of 28 items. The scale is self-report and includes five subscales of trauma: physical neglect, physical abuse, emotional abuse, and sexual abuse. Higher scores obtained from the scale indicate the frequency of experiencing that type of abuse. The validity and reliability of the Turkish version of CTQ-28 was conducted by Şar et al and Cronbach's alpha was 0.81<sup>19</sup>.

### Arizona Sexual Experiences Scale (ASEX)

This self-report scale was developed by McGahuey et al. and Turkish validation and reliability was done by Soykan et al<sup>20,21</sup>. In this study, the internal consistency and reliability of the scale were found to be high with 0.89-0.90 Cronbach's  $\alpha$  values, and it was found to be valid for distinguishing sexual dysfunction. The scale,

which has a separate male and female form, is filled by the patients. The scale was created to assess five core aspects of sexual functions: sexual desire, arousal, penile erection/vaginal lubrication, ability to achieve orgasm, and satisfaction from orgasm. The six-point Likert-type scale's score range, which consists of five items, and a higher total score indicates sexual dysfunction. The cut-off point for sexual dysfunction (SED) is  $\geq 11$ .

## Statistical analysis

The IBM Statistical Package SPSS 23.0 was used for statistical analyses. Descriptive statistics were given as mean, standard deviation, frequency, and percentage. Kolmogorov-Smirnov test was used to determine the normality assumption of the variables. The Chi-square test or Fisher's exact test was used to compare categorical variables in different groups. Independent samples t-test and Pearson correlation analysis were applied for the variables with normal distribution. Relationships between DAS total score and subscales, CTQ total score and subscales, and ASEX were evaluated by Pearson correlation analysis. Participants with an ASEX score of 11 and above were converted into categorical data as the group with sexual dysfunction (SED), and those below 10 as the group without sexual dysfunction (No SED). CTQ and DAS scores according to SED status were compared with Independent samples t-test.

Logistic regression analysis was performed to determine the predicting factors for categorical variables (SED vs. No SED), and multiple linear regression analysis was carried out for continuous variables (DAS-Total). For the multivariate analysis, the possible factors identified with univariable analyses and the factors that were determined to be associated with the dependent variable in the literature were entered into regression analyses to determine predictors of SED and DAS scores.

A %5 type-1 error level was used to infer statistical significance. In order to detect an effect size of Cohen's  $d = 0.619$  with 80% power G\*power suggests we would need 42 participants per group (N = 84) in an independent samples t-test according to the sexual dysfunction in the reference research (13).

## RESULTS

A total of 120 participants, 80 patients, and 40 healthy controls, were included in our study. A comparison of the demographic characteristics of the participants

was shown in Table 1. There was no significant difference between the patient and control groups in terms of gender ( $p= 0.695$ ), education level ( $p= 0.940$ ), and employment status ( $p= 0.984$ ). It was

determined that the patient group had a higher age ( $p= 0.003$ ), and longer duration of marriage ( $p= 0.033$ ), than the control group.

**Table-1. Comparison of the demographic characteristics of the participants**

		Patients (n=80)	Controls (n=40)	t. $\chi^2$	<i>p</i>
Age		38.7±9.4	33.7±6.8	2.99	0.003
Gender (female)		46 (57.5)	25 (62.5)	-	0.695
Education	Primary	34 (42.5)	17 (42.5)	0.123	0.940
	Secondary	28 (35.0)	15 (37.5)		
	Bachelor	18 (22.5)	8 (20.0)		
Employment	Unemployed	15 (18.8)	8 (20.0)	0.157	0.984
	Housewife	24 (30.0)	12 (30.0)		
	Civil servant-Worker	38 (47.5)	18 (45.0)		
	Retired	3 (3.8)	2 (5.0)		
Duration of Marriage (years)		10.8±8.6	7.5±6.5	2.16	0.033
Duration of Illness		12.4±8.9	-	-	-

The CTQ-28, DAS, and ASEX mean scores of the participants and the comparisons between the two groups are presented in Table 2. The patient group showed statistically significantly higher trauma scores in all subscales and total scores of the CTQ-28 compared to the control group. In the patient group, lower scores were found in the subscales and total score of DAS compared to the control group, and it was shown that the patient group had more distressed

relationships. The sexual functioning of participants was evaluated with ASEX and it was found that there was a significant difference between the mean ASEX scores. When those who scored 11 or higher on ASEX were grouped as sexual dysfunction (SED), it was shown that the patient group (82.5%) had higher SED than the control group (57.5%) ( $\chi^2= 8,69$ ,  $p=0.004$ ).

**Table-2. Comparison of the clinical characteristics of the participants**

		Patients (n=80)	Controls (n=40)	t. $\chi^2$	<i>p</i>
Childhood Trauma Questionnaire	Emotional Abuse	9.7±5.1	7.3±3.1	3.17	<b>0.002</b>
	Physical Abuse	8.2±3.9	5.9±1.4	4.73	<b>&lt;0.001</b>
	Sexual Abuse	8.2±5.1	5.6±1.0	4.49	<b>&lt;0.001</b>
	Emotional Neglect	13.3±4.6	8.4±3.5	6.39	<b>&lt;0.001</b>
	Physical Neglect	9.4±3.3	6.9±2.6	4.24	<b>&lt;0.001</b>
	Total	49.1±15.3	34.2±9.5	6.52	<b>&lt;0.001</b>
Dyadic Adjustment Scale	Consensus	43.9±17.4	52.3±8.8	-3.49	<b>0.001</b>
	Satisfaction	29.0±9.9	36.7±7.9	-4.26	<b>&lt;0.001</b>
	Cohesion	12.9±6.1	16.6±4.3	-3.79	<b>&lt;0.001</b>
	Affectional Expression	8.0±3.2	10.8±1.5	-6.51	<b>&lt;0.001</b>
	Total	94.1±30.7	116.6±19.1	-4.91	<b>&lt;0.001</b>
Arizona Sexual Experiences Scale		15.8±5.5	11.5±3.7	5.01	<b>&lt;0.001</b>

The correlation coefficients between the CTQ-28, DAS, and ASEX scale scores are presented in Table 3. The result of Pearson's product-moment correlation analysis indicated a statistically significant negative association between DAS with CTQ-28 and ASEX (respectively,  $r = -.433, p < 0,01$ ;  $r = -.383, p < 0,01$ ). However, it was found that there was a decrease in sexual functionality with an increase in trauma exposure ( $r = .304, p < 0,01$ ). No significant correlation was found between the participants' age, duration of the marriage, duration of illness, and CTQ-28, DAS, and ASEX scores. The distribution of the relationship between dyadic adjustment and trauma severity according to sexual dysfunction status is shown in Figure-1.

Among the clinical features (ASEX, CTQ-28, DAS) in the patient group, only DAS-Cohesion showed higher scores in males than females ( $p = 0.035$ ). In all participants, it was determined that females had significantly higher scores in the ASEX score between the genders ( $p = 0.048$ ) and there was no significant difference between other clinical features (CTQ-28 and DAS).

A comparison of sexual dysfunction and clinical features is shown in Table 4. Emotional abuse, emotional neglect, and total CTQ-28 score were found to be higher in participants with sexual dysfunction than participants without. In all subscales and total scores of DAS, lower scores were shown in the SED group (Table-4).

**Table-3. Correlation coefficients of participants' CTQ, DAS and ASEX scores in the patient group.**

	CTQ-EA	CTQ-PA	CTQ-SA	CTQ-EN	CTQ-PN	CTQ-Total	DAS-CON	DAS-SAT	DAS-COH	DAS-AE	DAS-Total
CTQ-PA	.598**										
CTQ-SA	.426**	.336**									
CTQ-EN	.370**	.325**	.009								
CTQ-PN	.315**	.445**	.251*	.516**							
CTQ-Total	.804**	.757**	.619**	.624**	.673**						
DAS-CON	-.342**	-.153	-.332**	-.104	-.132	-.324**					
DAS-SAT	-.413**	-.237*	-.404**	-.189	-.357**	-.464**	.553**				
DAS-COH	-.189	-.045	-.198	-.251*	-.252*	-.271*	.459**	.614**			
DAS-AE	-.307**	-.239*	-.227*	-.209	-.188	-.346**	.679**	.439**	.391**		
DAS-Total	-.403**	-.203	-.384**	-.202	-.269*	-.433**	.912**	.810**	.700**	.717**	
ASEX	.400**	.195	.090	.172	.201	.304**	-.329**	-.307**	-.351**	-.276*	-.383**

\* $p < 0,05$ , \*\* $p < 0,01$ ; CTQ: Childhood Trauma Questionnaire, CTQ-EA: Emotional Abuse, CTQ-PA: Physical Abuse, CTQ-SA: Sexual Abuse, CTQ-EN: Emotional Neglect, CTQ-PN: Physical Neglect, DAS: Dyadic Adjustment Scale, DAS-CON: Consensus, DAS-SAT: Satisfaction, DAS-COH: Cohesion, DAS-AE: Affectional Expression, ASEX: Arizona Sexual Experiences Scale

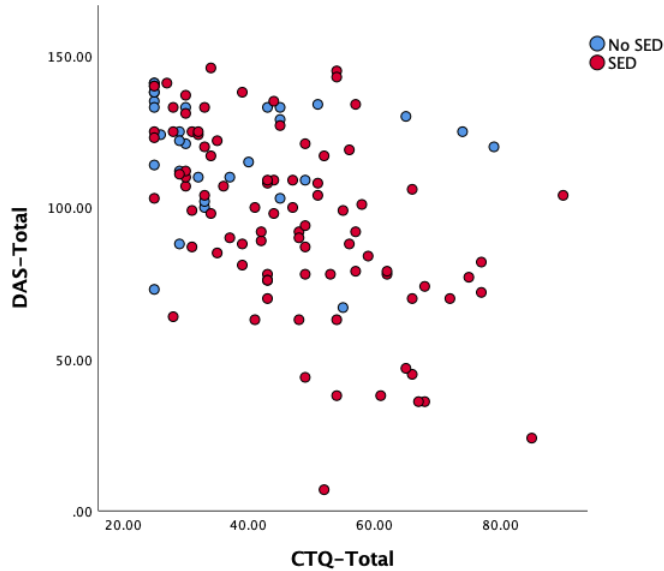


Figure-1. Distribution of DAS and CTQ-28 scores by sexual dysfunction status.

Table-4. Comparison of sexual dysfunction and clinical features of all participants

		SED (n=89)	No SED (n=31)	<i>t</i>	<i>p</i>
Duration of Marriage (years)		9.4±8.2	10.4±8.0	0.57	0.564
Childhood Trauma Questionnaire	Emotional Abuse	9.6±4.8	7.1±3.5	2.98	<b>0.004</b>
	Physical Abuse	7.6±3.4	6.9±3.6	1.02	0.310
	Sexual Abuse	7.6±4.5	6.6±3.9	1.09	0.276
	Emotional Neglect	12.7±4.6	8.8±4.5	4.06	<b>&lt;0.001</b>
	Physical Neglect	8.9±3.1	7.6±3.7	1.93	0.055
	Total	46.6±14.8	37.1±14.8	3.04	<b>0.003</b>
Dyadic Adjustment Scale	Consensus	43.6±15.8	55.7±10.9	4.65	<b>&lt;0.001</b>
	Satisfaction	30.0±10.2	36.1±7.7	3.47	<b>0.001</b>
	Cohesion	13.2±5.7	16.8±5.5	3.05	<b>0.003</b>
	Affectional Expression	8.3±3.1	10.5±2.3	4.08	<b>&lt;0.001</b>
	Total	95.4±29.9	119.2±18.9	5.12	<b>&lt;0.001</b>

SED: Sexual Dysfunction (ASEX≥11)

To identify the risk factors for the development of SED, a logistic regression analysis was performed and is shown in Table 5. Age, gender, DAS-Total, CTQ-28 Total, and duration of illness are included in the model created. The results of the analysis indicated that the predictors, as a set, significantly predicted SED,  $p < .001$ , Nagelkare  $R^2 = .368$ . Model goodness-of-fit was assured according to the Hosmer-Lemeshow  $\chi^2(8) = 5.23$ ,  $p > .05$ . Analysis

identified that age (odds ratio [OR]: 0.84, 95%CI: 0.75-0.95) and DAS-Total (OR: 0.95, 95%CI: 0.92-0.99) significantly predicted SED.

A multiple linear regression was calculated to predict DAS-Total. A significant regression equation was found ( $F(5,74) = 6.975$ ,  $p < 0.001$ ). It was determined that CTQ-Total ( $p = 0.001$ ), male gender ( $p = 0.029$ ), and absence of SED ( $p = 0.008$ ) significantly predicted higher DAS scores (Table-6).

**Table-5. Logistic regression analysis of factors predicting sexual dysfunction**

	$\beta$ (S.E.)	<i>p</i>	Exp (B)	95%(CI)
Age	-0.16 (0.06)	0.006	0.84	0.75-0.95
Male	1.30 (0.80)	0.102	3.69	0.77-17.76
DAS-Total	-0.42 (0.01)	0.013	0.95	0.92-0.99
CTQ-28-Total	0.01 (0.02)	0.664	1.01	0.96-1.05
Duration of Illness	0.09 (0.06)	0.134	1.09	0.97-1.24

Logistic Regression Analysis Nagelkare  $R^2 = .368$ , Hosmer-Lemeshow  $\chi^2 (8) = 5.23$ ,  $p > .05$ . DAS: Dyadic Adjustment Scale, CTQ: Childhood Trauma Questionnaire, SED: Sexual Dysfunction

**Table-6. Multipl linear regression analysis of predictors of DAS-Total**

	B	Std. Error	$\beta$	t	p
Age	-0.39	0.57	-0.12	-0.68	.489
Gendera	13.75	6.18	0.22	2.22	.029
CTQ-Total	-0.71	0.19	-0.35	-3.61	.001
Duration of Illness	-0.42	0.59	-0.12	-0.71	.475
SEDb	-22.92	8.40	-0.28	-2.72	0.008

Dependent Variable: DAS-Total; a)female group is a reference value, b)No SED is a reference value;  $R = .566$   $R^2 = .320$   $R^2_{adj} = .274$ ,  $F(5,74) = 6,975$ ,  $p < 0.001$  DAS: Dyadic Adjustment Scale, CTQ: Childhood Trauma Questionnaire SED: Sexual dysfunction

## DISCUSSION

The primary finding of this study was; patients with BD-1 had more distressed relationships, sexual dysfunction and higher childhood trauma history than healthy control. This finding is consistent with previous research showing that individuals with BD had an increased risk for marital stress and sexual dysfunction<sup>7,22</sup>. Previous research shows that factors such as severity of symptoms, sexual dysfunction, and the effect of psychotropic medications used to treat BD can all disrupt marital and sexual satisfaction<sup>2,23</sup>.

In our study, all subscales of DAS were found to be lower in the BD group than HC group, which means a severe distress in marital relationship. The rate of SED in the patient group was 82.5% which was quite higher than the results in previous studies. According to a recent study that investigated marital adjustment and sexual function in patients with BD during remission period, %50 of the patient group had reported SED and it was significantly higher than the control group<sup>13</sup>. Similarly, in a 1996 study by Aizenberg et al. reported SED was present in 31.4% of male patients diagnosed with BD who were in remission<sup>24</sup>. The higher rate of SED in our study can be explained by the fact that sexual functions were examined using a scale rather than an interview, and we did not take the psychotropic drugs that may cause SED into account.

One of the main results of our study is a significant negative association between DAS and CTQ-28, and ASEX scores. This can also be interpreted that an increase in trauma history and sexual dysfunction is related to lower dyadic adjustment. Moreover, an increase in trauma history is related to sexual dysfunction. Clinical literature suggests that trauma survivors frequently experience interpersonal issues such as marital problems, sexual dysfunction, communication difficulties, and intimacy issues<sup>25</sup>. Trauma can have a profound impact on an individual's sense of safety, and ability to trust others, all of which are considered essential for healthy sexual functioning. It has been reported that women who have experienced childhood abuse have higher rates of sexual dysfunction than their non-abused peers. The most common sexual concerns reported by women with abuse histories are issues with sexual desire and sexual arousal<sup>26</sup>. Namli et al. investigated sexual dysfunction among patients with BD by using the Golombok Rust Inventory of Sexual Dysfunction (GRISS). According to this study, bipolar patients had higher GRISS scores than HC. Communication, satisfaction, and orgasm disorder were found to be higher in female bipolar patients, while infrequency, impotence and premature ejaculation problems were found to be more common in male bipolar patients<sup>13</sup>. Ghormode et al. investigated sexual dysfunction among patients with severe mental illness and they reported that those with bipolar disorder differed significantly only for ability to reach orgasm<sup>27</sup>.

However, it has also been reported that couples where one partner has bipolar disorder are less satisfied sexually than are couples without psychiatric disease<sup>28</sup>. According to our results, among all participants, females had significantly higher scores on the ASEX score between the genders. Similar to our study, Keklik et al investigated the relationship between metabolic syndrome and sexual function in 148 bipolar patients using ASEX, and it has been reported that half of the patients showed sexual dysfunctions.

Trauma and its symptoms have an impact on both the individual and their spouse. Nelson et al. investigated the effects of trauma in couples and the results showed that couples with a history of childhood trauma in one or both partners reported lower marital satisfaction and family cohesion than couples with no trauma history<sup>29</sup>. However, it has been reported that a history of childhood trauma also predicts quality of life and interpersonal problems in individuals with BD<sup>30</sup>. Few studies have been published investigating family adjustment in patients with BD. In a study conducted by Frank et al., it was reported that the marriage adjustment of 16 bipolar patients in remission and their partners was similar to that of a control group<sup>31</sup>. In our study, the total score and all the subscales of DAS were significantly lower in the patient group compared to the HC group. The history of trauma in the patient group was significantly higher than that of the control group. This may have caused less marital adjustment and a higher incidence of sexual dysfunction in our study when compared to other studies. When we compared all participants according to whether they had SED or not, higher emotional abuse and emotion neglect scores and total CTQ-28 scores were found in individuals with SED. Lutfey et al., examined the association of trauma with female SED. According to the results of that study, childhood emotional abuse, adult sexual and emotional abuse were found related with sexual dysfunction<sup>32</sup>. The adjustment of the partners to each other is an important factor influencing sexual functions. Dyadic cohesion, consensus, satisfaction, and affectional expression scores were also lower in the group with SED as expected.

According to the logistic regression analysis, age and DAS-total score predicted SED. This result can be interpreted that lower DAS scores and lower age predicts presence of SED. Moreover, according to the multiple linear regression analysis, male gender,

absence of SED and CTQ-total score predicted DAS, which can be interpreted that less childhood trauma history, male gender, and absence of SED predicts higher DAS scores. When we consider all results, it is very important to understand the relationship between sexual functions and dyadic adjustment. It is thought that when dyadic adjustment is defective sexual function suffers, or when sexual function suffers dyadic adjustment suffers as well.

This study has certain limitations. One of the limitations is the study's preliminary nature, which resulted in a relatively small sample size. The second, type of study is cross-sectional, which does not provide evidence for causality. Third, we use self-report scales. We could not conduct a diagnostic examination for sexual dysfunction. Fourth, we could not evaluate the drug treatment of patient group which is also effective on sexual function.

In conclusion, patients with BD have more marital problems, sexual dysfunction and trauma history than healthy controls. Sexual function and dyadic adjustment affect each other in two ways and a history of childhood trauma has a negative effect on both conditions. Due to these problems are infrequently discussed with clinicians, clinicians should be aware of marital, sexual problems and trauma history of the bipolar patients when treating them.

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