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Binge Eating Disorder in Bipolar I Disorder: Prevalence, Childhood Trauma, and Clinical Correlates

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ABSTRACT

Introduction: Bipolar I disorder (BD-I) frequently co-occurs with eating disorders, particularly binge eating disorder (BED), which may adversely affect the clinical course, including recurrence risk and functional impairment. Research exploring the specific association between BED and childhood trauma (CT) in BD-I remains limited. This study aimed to investigate the prevalence of BED among euthymic BD-I patients and to examine its associations with CT and clinical characteristics.

Methods: This cross-sectional study recruited 150 euthymic BD-I patients diagnosed according to DSM-5 criteria. Sociodemographic data, illness-related variables, psychiatric comorbidities, and medication use were collected. Binge eating disorder was assessed through the Structured Clinical Interview for DSM-5 (SCID-5) and validated eating disorder scales. Childhood trauma was evaluated using the Childhood Trauma Questionnaire (CTQ). Statistical analyses included group comparisons and multivariate logistic regression.

Results: Binge eating disorder prevalence in the sample was 19.3%. Female sex, higher body weight, and elevated body mass index were significantly associated with BED. Compared to patients without BED, those with BED reported higher rates of psychotic episodes, rapid cycling, and suicide attempts. Childhood trauma questionnaire total scores, particularly physical abuse subscale scores, were significantly higher in the BED group. Logistic regression analysis revealed that female sex, a history of physical abuse, and higher eating disorder scale scores were independent predictors of BED.

Conclusions: Our findings indicate that BED constitutes a distinct and clinically consequential profile in euthymic BD-I patients, one that is strongly shaped by both increased illness severity and CT. This relationship underlines the necessity of integrating systematic assessments of eating pathology and trauma exposure into the standard clinical evaluation of BD-I patients to ensure timely recognition and the delivery of effective, precision-based therapeutic interventions.

Keywords: Binge eating disorder, bipolar disorder, childhood trauma, eating disorder

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INTRODUCTION

Bipolar disorder (BD) is a chronic psychiatric illness that persists throughout life and is characterized by periodic fluctuations in energy levels and mood. Bipolar disorder has a lifetime prevalence exceeding 1% worldwide and represents a major risk factor for functional impairment, cognitive deterioration, and suicide-related mortality in young adults (1). Individuals with BD are likely to have notably higher, a lifetime psychiatric comorbidity than those without BD (2). These comorbidities include anxiety disorders, alcohol and substance use disorders, eating disorders (ED), impulse control disorders, attention deficit hyperactivity disorder (ADHD), and personality disorders (3).

Highlights

- **Binge eating disorder was found in 19.3% of patients with bipolar I disorder.**
- **Childhood trauma, especially physical abuse, is strongly linked to binge eating.**
- **BED is associated with rapid cycling, psychotic episodes, and suicide attempts.**

Bipolar disorder may be accompanied by changes in appetite, eating behavior and weight, depending on the mood episodes. While decreased appetite and weight loss are commonly observed during depressive and manic episodes, increased appetite and weight gain may be seen in atypical depression. Furthermore, the prevalence of ED in individuals diagnosed with BD and the incidence of BD comorbidity in individuals diagnosed with ED are noteworthy (4). Previous studies have reported that the lifetime prevalence of at least one ED comorbidity in individuals with BD ranges from 6% to 27%. The most common of these comorbidities is binge eating disorder (BED), followed by bulimia nervosa (BN) and anorexia nervosa (AN) (5).

Bipolar disorder patients with an ED comorbidity may exhibit abnormal weight gain, more frequent depressive episodes, and increased risk of

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suicide, along with a higher incidence of other psychiatric disorders (6). Childhood trauma (CT) is an important psychosocial risk factor and studies suggest that it may be a non-specific but strong risk factor associated with BD. The fact that BD is often manifested in the pre-adolescent period suggests that it may be related to CT (7). In particular, sexual abuse during childhood has been identified as an important but non-specific factor in the development of ED, while emotional and physical neglect/abuse has also been reported to have a similar effect (8,9).

A meta-analysis by Molendijk et al. reported that individuals diagnosed with ED reported a higher incidence of all types of CT compared to healthy controls (10). Supporting this, other studies have emphasized that emotional abuse, sexual abuse, and physical neglect are significant risk factors in the development of an eating psychopathology (11). Emerging evidence indicates that the co-occurrence of BD, BED, and CT may be explained by shared pathophysiological and psychosocial mechanisms. CT, particularly emotional and physical abuse, disrupts stress-response systems such as the hypothalamic–pituitary–adrenal (HPA) axis, leading to impaired emotion regulation and increased vulnerability to mood dysregulation. These alterations are also associated with maladaptive eating behaviors, whereby binge eating may serve as a maladaptive affect-regulation strategy (12). In individuals with BD, trauma-related vulnerabilities may further interact with deficits in emotion regulation and reward processing, increasing the risk of BE symptoms. Thus, CT may function as a common upstream risk factor contributing to a bidirectional relationship between mood instability and dysregulated eating behaviors.

A relationship between BD and ED is supported well in the literature; however, to our knowledge, studies that specifically address the relationship between Type I BD (BD-I) and BED in the context of CT are limited. Considering the effects of BED comorbidity on the clinical course and treatment process of BD-I and a potential association with CT, we hypothesized that the association may have important implications for the prognosis of BD-I. The current study is among the first in the literature to examine the prevalence of BED among euthymic BD-I patients diagnosed according to DSM-5 diagnostic criteria. It is also among the first to examine holistically the relationship between BED, CT, and the clinical characteristics of BD. Our data on the clinical effects of BED in the pathology of BD-I may contribute to a better understanding of this relationship.

METHODS

The current study was designed with a cross-sectional, descriptive design. The research protocol was approved by the Ethics Committee of Bakırköy Training and Research Hospital, on October 6, 2020, under the protocol number 468. The study was carried out between December 1 st, 2020, and May 3rd, 2021. The study participants included patients diagnosed with BD-I according to DSM-5 diagnostic criteria and in remission for the last 6 months, and were followed up at the Psychiatry Outpatient Clinics and Community Mental Health Centers of the relevant hospital. A total of 150 patients who met the inclusion criteria and agreed to participate in the study were included in the sample. Participants were aged 18–65 years, with a DSM-5 diagnosis of BD-I, no history of relapse or hospitalization in the past six months, and were in a euthymic state [Young Mania Rating Scale (YMRS) <7, Beck Depression Inventory (BDI) <7, Positive and Negative Syndrome Scale (PANSS) sub scores ≤3]. Individuals with a history of substance abuse, diagnosed with a psychiatric disorder other than BD (except specific phobia), with mental retardation, severe neurological disease, or under the influence of substances, individuals with a history of psychosurgery, undergoing restriction of food intake for dieting, fasting, or weight control purposes, or exhibiting psychotic symptoms, low literacy levels, or with a history of brain surgery or head trauma were also excluded from the study. Initially, 157 patients were evaluated, among them 3 were excluded due to not being in remission, 1 due to a diagnosis of mental retardation, and 3 for not providing informed consent. After the purpose of the study was explained in detail to the participants, both written and verbal consent were obtained. All participants underwent a structured clinical interview (SCID-5) that was conducted by the authors of the current study, followed by a Sociodemographic Data Form, PANSS, YMRS, BDI, Beck Anxiety Inventory (BAI), Eating Disorder Examination Questionnaire (EDE-Q), Eating Attitudes Test (EAT), and Childhood Traumas Questionnaire (CTQ). Body Mass Index (BMI) was calculated using the height and weight values measured from the participants. The participants removed their shoes and wore light clothing when these parameters were collected using an electronic scale and height gauge. Waist circumference measurement was not carried out due to social distancing rules related to the COVID-19 pandemic at the time that the data were collected. Data on any chronic diseases and endocrine disorders of the participants were recorded by reviewing patient files and current laboratory results.

Instruments

Sociodemographic Data Form

This form was developed by the authors of the current study and included information such as age, sex, educational status, occupation, marital status, as well as the psychiatric and medical histories of the participants.

Young Mania Rating Scale (YMRS)

Developed by Young et al. (1978), the YMRS is an 11-item, interviewer-administered tool that measures manic symptoms (13). The Turkish validity and reliability study for this scale was conducted by Karadağ et al. (14).

Beck Depression Inventory (BDI)

Developed by Beck et al. (1961), the BDI is a 21-item self-report scale that measures the severity of depressive symptoms (15). The Turkish validity and reliability study of this scale was conducted by Hisli (16).

Beck Anxiety Inventory (BAI)

Developed by Beck et al. (1988), the BAI is a 21-item self-report scale that measures an individual's anxiety level (17). The Turkish validity study of this scale was conducted by Ulusoy et al. (18).

Structured Clinical Interview for DSM-5 (SCID-5)

This clinical diagnostic tool, applied by a professional interviewer, is a structured clinical interview scale that investigates the disorders in DSM-5 using diagnostic criteria (19). Its adaptation to the Turkish was carried out by Elbir et al. (20).

Positive and Negative Syndrome Scale (PANSS)

Developed by Kay et al., the PANSS is a 30-item semi-structured scale that measures positive, negative, and general psychopathology symptoms (21). The Turkish validity study of the scale was conducted by Kostakoğlu et al. (22).

Eating Disorder Examination Questionnaire (EDE-Q)

Developed by Fairburn and Beglin (1994), the EDEQ scale consists of five subscales and assesses attitudes and behavior related to eating disorders (23). The EDE-Q consists of four core subscales: Restraint assesses restrictive eating behaviors, dietary rules, and efforts to control food intake. Eating concern evaluates preoccupation with food, guilt about eating, and distress related to eating behavior. Shape

concern measures dissatisfaction, preoccupation, and overvaluation of body shape. Weight concern assesses concerns about weight, desire to lose weight, and fear of weight gain. Additionally, the EDE-Q provides a global total score, reflecting overall ED psychopathology. The Turkish validity study of this scale was conducted by Yücel et al. (24).

Eating Attitudes Test (EAT)

Developed by Garner and Garfinkel, the EAT is a 40-item, self-report, Likert-type test that assesses pathologies in eating behavior (25). The Turkish validity study for this scale was conducted by Savaşır and Erol (26). The EAT is widely used to identify abnormal eating attitudes and screen for possible ED. The commonly accepted cut-off score is 30, and EAT ≥30 indicates clinically significant disordered-eating symptoms and an elevated risk for an ED diagnosis.

Childhood Trauma Questionnaire (CTQ)

Developed by Bernstein, the CTQ is a 28-item scale with five subscales that assesses traumatic experiences during childhood (27). Childhood trauma questionnaire consists of 5 subscales: emotional neglect, physical neglect, emotional abuse, physical abuse and sexual abuse; and 28 Likert type items each scored from 1 to 5 points. This scale was adapted to the Turkish by Şar et al. (28).

Statistical Analysis

Data were analyzed using IBM Statistical Package for Social Sciences (SPSS) program and Jamovi 1.0.7.0 software. The normality of the distribution of the variables was assessed using the Kolmogorov-Smirnov test. Descriptive statistics included means, standard deviations, and frequencies. The Chi-square and Fisher Exact tests were applied for comparing categorical data between independent groups. Student T-test or Mann-Whitney U test were used for continuous data, depending on the distribution. Pearson or Spearman tests were used for correlation analyses. Factors affecting the presence of BED were examined using multivariate logistic regression analysis. The level of statistical significance was set at $p<0.05$.

RESULTS

Among the 150 participants, 29 (19.3%) were diagnosed with BED according to the DSM-5 diagnostic criteria, SCID-5, and clinical evaluation. No significant difference was found in age, age at disease onset, or disease duration between the BED (+) and BED (–) groups ($p>0.05$). However, the proportion of female patients in the BED (+) group was significantly higher than in the BED (–) group ($p<0.05$). Weight, maximum weight, and BMI values were significantly higher in the BED (+) group compared to the BED (–) group ($p<0.05$) while the difference in height did not reach statistical significance. The prevalence lifelong diet was significantly higher in the BED (+) group compared to the BED (–) group ($p<0.05$). The educational status, employment status, marital status and prevalence of additional medical conditions were similar between the BED (+) and BED (–) groups ($p>0.05$) (Table 1).

The psychiatric and clinical variables are summarized in Table 2. No significant differences were found in the number of manic, hypomanic, and depressive episodes, as well as BDI, BAI, and PANSS scores ($p>0.05$) between the BED (+) and BED (–) groups. The history of psychotic symptoms, rapid cycling, and suicide attempts were significantly higher in BED (+) patients compared to BED (–) patients ($p <0.05$). No significant difference was found in the use of mood stabilizers, antipsychotics, long-acting antipsychotics and antidepressants between the BED (+) and BED (–) groups ($p>0.05$). Moreover, no significant difference was found in peripartum onset, catatonia, seasonality, hospitalization rate and number of hospitalizations between the BED (+) and BED (–) groups ($p>0.05$) (Table 2)

Table 1. Sociodemographic and clinical characteristics of the study participants

		BED (+) (n=29)	BED (-) (n=121)	p
Age		41.5±11.1	42.1±10.0	0.815 χ^2
Age at onset of disease		22.6±8.0	24.3±8.0	0.139 χ^2
Duration of disease		18.9±10.3	18.0±8.9	0.655 χ^2
Sex (Female)		25 (%86.2)	70 (%57.9)	**0.004** χ^2
Height (cm)		164.3±8.0	166.7±8.8	0.144 χ^2
Weight (kg)		90.3±19.2	82.5±15.2	**0.019** χ^2
Maximum weight (kg)		96.6±18.3	88.5±17.2	**0.029** χ^2
BMI (kg/m²)		33.6±7.5	29.7±5.1	**0.018** χ^2
Education	Primary school	9 (%31.0)	38 (%31.4)	0.160 χ^2
	Middle School	6 (%20.7)	25 (%20.7)	
	High School	3 (%10.3)	32 (%26.4)	
	Higher	11 (%37.9)	26 (%21.5)	
Work	Employed	11 (%37.9)	51 (%42.1)	0.679 χ^2
	Unemployed	18 (%62.1)	70 (%57.9)	
Marital status	Unmarried	10 (%34.5)	39 (%32.2)	0.972 χ^2
	Married	14 (%48.3)	60 (%49.6)	
	Widowed/Divorced/ Separated	5 (%17.2)	22 (%18.2)	
Lifelong Dieting	Yes	20 (%69.0)	50(%41.3)	**0.007** χ^2
	No	9 (%31.0)	71 (%58.7)	

χ^2: Chi square test (Fischer test); n: number of participants; BMI: body mass index; BED: binge eating disorder; BED (+): with binge eating disorder; BED (-): without binge eating disorder.

Eating attitudes test scores were significantly higher in the BED (+) group compared to the BED (–) group ($p<0.05$). Furthermore, the proportion of patients with disordered eating attitudes was significantly higher in the BED (+) group compared to the BED (–) group ($p<0.05$). In addition, EDE-Q total and subscale scores were significantly higher in BED (+) patients ($p<0.001$). The emotional abuse, physical abuse, sexual abuse, emotional neglect, and total scores on the CTQ were significantly higher in the BED (+) group compared to the BED (–) group ($p<0.05$). However, no significant difference was found in the physical neglect scores on the CTQ between the two groups ($p>0.05$) (Table 3).

A univariate model indicated that sex, emotional abuse, physical abuse, total EDE-Q, disordered eating, psychotic symptoms, rapid cycling, and suicidal behavior had a significant effect ($p<0.05$). In the multivariate regression model, sex, physical abuse, and EDE-Q total score were found to have a significant and independent effect in distinguishing between BED (+) and BED (–) groups ($p<0.05$) (Table 4).

When examining the relationships between the CTQ and EDE-Q scores, significant positive correlations were observed between the emotional abuse, physical abuse, and sexual abuse subscales and the EDE-Q eating concern, body shape concern, weight concern, and total scores ($p<0.05$). While no significant association was found between the CTQ subscales of emotional abuse, restraint, and physical neglect with most of the EDE-Q scores ($p>0.05$), emotional neglect showed a significant positive correlation only with the eating concern subscale of the EDE-Q. The total

Table 2. Comparison of the clinical characteristics of the study participants

	BED (+) n-% / m ± SD	BED (-) n-% / m ± SD	p
Peripartum	6 (%24.0)	18 (%25.7)	0.945
Catatonic	2 (%6.9)	2 (%1.7)	0.168
Seasonal	17 (%58.6)	62 (%51.2)	0.475
Hospital admission	21 (%72.4)	97 (%80.2)	0.360
Number of hospital admissions	4.1±4.3	3.5±3.0	0.502
History of psychotic episodes	22 (%75.9)	64 (%52.9)	**0.025**
Rapid cycling	5 (%17.2)	6 (%5.0)	**0.023**
History of suicide attempts	15 (%51.7)	34 (%28.1)	**0.015**
Use of long-acting antipsychotics	3 (%10.3)	11 (%9.1)	0.906
Use of antidepressants	0 (%0.0)	1(%0.8)	0.739
Use of mood stabilizers	29 (%100)	114 (%94.2)	0.618
PANSS	0.00±0.00	0.10±0.44	0.223
Number of of manic attack episodes	4.79±3.80	4.05±2.87	0.429
Number of of hypomanic episodes	2.10±4.05	1.96±3.01	0.953
Number of of depression episodes	2.48±2.95	2.19±2.82	0.634
YMRS	0.55±1.18	0.31±0.83	0.316
Beck depression inventory score	0.00±0.00	0.06±0.27	0.223
Beck anxiety inventory score	0.45±1.27	0.24±0.91	0.273

Mann-Whitney U test / Chi square test; YMRS: Young mania rating scale; PANSS: positive and negative syndrome scale; n: number of participants; BED: binge eating disorder; m: mean; SD: standard deviation; BED (+): with binge eating disorder; BED (-): without binge eating disorder.

Table 3. Comparison of the scale scores between the groups

	Variables	BED (+) m ± SD	BED (–) m ± SD	p
EAT	EAT total	16.5±14.1	10.0±4.9	**0.047**
	Patients with disordered eating, n (%)	4 (13.8)	2 (1.7)	**0.003**
EDE-Q	Restraint	5.2±5.6	2.0±4.2	**0.000**
	Eating concern	5.7±4.1	0.6±1.7	**0.000**
	Body shape concern	21.4±12.5	8.2±9.7	**0.000**
	Weight concern	11.9±5.7	5.6±5.5	**0.000**
	EDE-Q total	44.2±20.5	16.3±17.6	**0.000**
CTQ	Emotional abuse	9.14±5.49	6.58±2.69	**0.017**
	Physical abuse	8.45±3.22	6.67±1.65	**0.000**
	Physical neglect	8.86±3.09	7.95±2.04	0.249
	Sexual abuse	8.07±3.28	6.95±2.48	**0.009**
	Emotional neglect	14.5±4.9	12.3±3.7	**0.022**
	CTQ total	49.0±16.7	40.4±9.6	**0.023**

EAT: eating attitudes test; EDE-Q: eating disorder examination questionnaire; BED: binge eating disorder; CTQ: childhood trauma questionnaire; BED (+): with binge eating disorder; BED (-): without binge eating disorder; m: mean; SD: standard deviation; n: number of participants.

Table 4. Regression analysis of factors that can predict the BED status of the participants

	Univariate model			Multivariate model		
Variables	**OR**	**%95 CI**	**p**	**OR**	**%95 CI**	**p**
Sex	4.540	1.490–13.880	**0.008**	4.750	1.020–14.395	**0.028**
Disordered eating	1.091	1.034–1.152	**0.002**			
Emotional abuse	1.184	1.064–1.316	**0.002**			
Physical abuse	1.362	1.145–1.620	**0.000**	1.420	1.115–1.807	**0.004**
EDE-Q total	1.067	1.042–1.093	**0.000**	1.055	1.029–1.082	**0.000**
Psychotic symptoms	0.357	0.142–0.899	**0.029**			
Rapid cycling	0.250	0.071–0.888	**0.032**			
Suicide attempt	0.365	0.159–0.836	**0.017**			

Logistic regression (forward LR); EAT: eating attitudes test; EDE-Q: eating disorder examination questionnaire; CTQ: childhood trauma questionnaire; OR: odds ratio; CI: confidence interval.

Table 5. Correlation of the EDE-Q Scores and CTQ scores of the participants with their clinical characteristics

Variables	EDE-Q				
	Restraint	Eating concern	Body shape concern	Weight concern	EDE-Q total
Emotional abuse	0.146 (p=0.074)	0.267 (**p=0.001**)	0.205 (**p=0.012**)	0.172 (**p=0.036**)	0.215 (**p=0.008**)
Physical abuse	0.242 (**p=0.003**)	0.379 (**p=0.000**)	0.241 (**p=0.003**)	0.229 (**p=0.007**)	0.217 (**p=0.007**)
Physical neglect	0.078 (p=0.340)	0.179 (p=0.052)	0.068 (p=0.409)	0.075 (p=0.362)	0.093 (p=0.259)
Sexual abuse	0.245 (**p=0.003**)	0.311 (**p=0.000**)	0.315 (**p=0.000**)	0.252 (**p=0.002**)	0.324 (**p=0.000**)
Emotional neglect	0.092 (p=0.262)	0.223 (**p=0.006**)	0.117 (p=0.155)	0.106 (p=0.198)	0.139 (p=0.089)
CTQ-total	0.155 (p=0.058)	0.286 (**p=0.000**)	0.208 (**p=0.011**)	0.180 (**p=0.027**)	0.230 (**p=0.005**)
BMI (kg/m2)	0.156 (p=0.057)	0.154 (p=0.060)	0.345 (**p=0.000**)	0.352 (**p=0.000**)	0.357 (**p=0.000**)
Age at disease onset	0.005 (p=0.951)	-0.068 (p=0.405)	0.029 (p=0.721)	0.028 (p=0.734)	0.003 (p=0.976)
Total number of episodes	0.079 (p=0.334)	0.106 (p=0.195)	0.149 (p=0.069)	0.087 (p=0.289)	0.135 (p=0.099)
Mania	0.001 (p=0.991)	0.050 (p=0.547)	0.130 (p=0.114)	0.103 (p=0.210)	0.114 (p=0.166)
Depression	0.163 (**p=0.046**)	0.101 (p=0.217)	0.184 (**p=0.024**)	0.162 (**p=0.048**)	0.177 (**p=0.030**)
Hypomania	-0.017 (p=0.841)	-0.081 (p=0.327)	-0.070 (p=0.396)	-0.095 (p=0.246)	-0.073 (p=0.373)
Suicide attempts	0.100 (p=0.503)	-0.144 (p=0.072)	0.032 (p=0.632)	0.022 (p=0.823)	0.053 (p=0.722)
EAT	0.163 (**p=0.046**)	0.211 (**p=0.009**)	0.078 (p=0.341)	0.051 (p=0.533)	0.100 (p=0.222)

Spearman correlation; EDE-Q: eating disorder examination questionnaire; CTQ: childhood trauma questionnaire; BMI: body mass index; EAT: eating attitudes test.

score of the CTQ showed a significant positive correlation with the EDE-Q eating concern, body shape concern, weight concern, and total scores, but showed no relationship with restraint (p>0.05). Body mass index showed a significant positive correlation with EDE-Q body shape concern, weight concern, and total score; however, no significant relationship was identified with restraint and eating concern. Age at disease onset, total number of episodes, number of manic and hypomanic episodes, and number of suicide attempts did not show a significant relationship with the EDE-Q scores (p>0.05). The number of depressive episodes showed a significant positive correlation with EDE-Q restraint, body shape concern, weight concern, and total score, but no relationship was found with eating concern (p<0.05). The EAT scores showed a significant positive correlation only with EDE-Q restraint and eating concern scores; no significant relationship was found with the other subscales or total scores (p>0.05) (Table 5).

DISCUSSION

The present investigation focused on the relationship BED and CT in patients with BD-I. The prevalence of BED among euthymic patients with BD-I was 19.3%. Patients in the BED (+) group exhibited significantly higher rates of psychotic episodes, rapid cycling, and suicide attempts compared to those without BED. Additionally, scores for emotional abuse, physical abuse, sexual abuse, emotional neglect, and CTQ were significantly higher in BED (+) BD-I patients. Female sex and exposure to physical abuse emerged as significant determinants of BED in patients with BD-I.

In the current study, the prevalence of BED among euthymic patients with BD-I was found to be 19.3%. This prevalence is significantly higher than what is reported in general population studies, which ranges from 0.7% to 6.6% (29–31). Data on the prevalence of BED among patients with BD who are under psychiatric care are limited, and studies directly examining the relationship between BD-I and BED are particularly scarce. Fornaro et al. reported that the prevalence of BED was 14.2% among 148 female patients diagnosed with BD-I, BD-II, and cyclothymic disorder (32). The higher rate of prevalence of BED in our study can be explained by sample differences and the inclusion of only patients diagnosed with BD-I. Furthermore, the fact that the diagnosis of BED in previous studies was based on self-report or observation rather than structured clinical interviews may also explain this difference. Although the gender distribution of BED remains controversial, the general trend suggests that it is more common among women with a 1.75 times greater prevalence reported among women compared to men (29). The lifetime prevalence of BED according to DSM-IV is estimated to be 2.97% in women and 1.59% in men (33). In the current study, the proportion of females was higher among individuals diagnosed with BED, and female sex was found to be a significant predictor of BED. Moreover, the fact that 63.3% of the sample in the current study was female suggests the use of caution when interpreting our findings.

The mean weight, maximum weight, and BMI were significantly higher in the BED (+) group. This finding is consistent with previous studies reporting higher BMI rates among individuals with BED (34). Obesity is known to be associated with poor prognosis in BD patients (35). Furthermore, we found a significant positive correlation between BMI and EDE-Q body shape concern, weight concern, and total score. These results suggest that BED may be a compensatory behavior that is aimed at regulating mood during depressive episodes (36).

In our study, although all participants were in the euthymic phase, individuals with BED had significantly higher EDE-Q total and subscale scores, indicating more severe eating-related psychopathology. Additionally, the number of depressive episodes showed a significant positive correlation with several EDE-Q dimensions– particularly restraint, body shape concern, and weight concern –suggesting that recurrent depressive symptomatology may reinforce maladaptive eating behaviors over time. Furthermore, the strong association between BED and CT, especially physical and emotional abuse, supports the notion that emotion regulation difficulties may underlie BE behaviors. Individuals with a history of trauma are known to exhibit heightened sensitivity to negative affect, and BE episodes may be used as a short-term strategy

to reduce emotional distress (37). Thus, the positive correlations found between CTQ scores and multiple EDE-Q subscales strengthen the interpretation that BED in BD-I patients may represent an attempt to modulate dysphoric mood states, particularly those emerging during or following depressive episodes.

In the present study, the incidence of psychotic episodes, rapid cycling, and suicide attempts was significantly higher in the BED (+) group. Consistent with this finding, a large-scale study including 717 patients with BD reported a higher prevalence of these clinical features among individuals with comorbid BED (38). Previous research has also shown that clinical characteristics such as earlier age at onset, more frequent mood episodes, comorbid anxiety disorders, and elevated suicidal risk are more commonly observed in BD patients with comorbid eating disorders (3,6,35,39,40). While Fornaro et al. identified a significant association between rapid cycling and BED, they did not observe significant relationships between BED and suicide attempts or psychotic symptoms (32). In contrast, our study found higher rates of psychotic episodes and suicide attempts among patients with bipolar I disorder (BD-I) and comorbid BED. These differences may reflect methodological variability across studies, particularly with respect to diagnostic composition, as Fornaro et al. examined a heterogeneous sample including BD-I, BD-II, and cyclothymic disorder, whereas the present study focused exclusively on BD-I patients. Although causal inferences cannot be drawn, the observed associations suggest a potential bidirectional relationship in which binge-eating behaviors and bipolar symptom severity may mutually influence one another. From a clinical perspective, these findings underscore the importance of routinely screening for BED in patients with BD-I, particularly among those presenting with a more severe clinical course, as the identification and treatment of comorbid binge-eating symptoms may have implications for overall illness management and functional outcomes.

The prevalence of BED in BD patients was reported to vary according to the episode phases in some studies. For example, in a study comparing the quiescent and active periods, the BED prevalence rate was 16% in patients with subthreshold mood disorder, while it was 5% in quiescent individuals (4). BED was observed in 18.6% of BD patients (40), compared to 9.18% of major depressive disorder patients (41). These findings suggest that mood swings may affect eating behaviors. However, since the current study only included patients in the euthymic phase, it was not possible to evaluate episodic differences. Thus, studies examining the frequency of BED in different episodes of BD are needed.

Evaluation of the relationship between psychopharmacological treatments and the incidence of BED revealed no significant difference in the use of antidepressants, mood stabilizers, or antipsychotic medications between BED (+) and BED (-) patients. However, some antipsychotics, such as olanzapine and clozapine have been reported to worsen ED (42). Nevertheless, findings regarding the effects of these drugs on ED are conflicting. Although medications such as lithium, olanzapine, and risperidone may be effective in the treatment of certain EDs (43,44), this effect is thought to depend on individual differences and the dose used (45). The absence of a significant relationship between the use of medications and BED among the BED (+) patients in the current study suggests that weight gain accompanying BED is directly related to BED itself, rather than to the use of medications.

Childhood trauma is known to play an important role in the development of BED. We observed that emotional abuse, physical abuse, sexual abuse, emotional neglect, and total CTQ scores were significantly higher among the BED (+) BD-I patients compared to the BED (-) patients. In particular, a positive correlation was found between physical abuse score and total and subscale scores of the EDE-Q. Grilo et al. reported that 83% of individuals diagnosed with BED reported at least one type of CT while 36% reported physical abuse (46). Several other studies have similarly demonstrated a strong relationship between CT and ED (10,11,47,48). One of the most notable findings of the current study was the significant positive correlation between physical abuse and both the total and subscale scores of the EDE-Q. This relationship suggests that individuals with a history of physical abuse tend to exhibit more pronounced ED psychopathology, including elevated concerns about eating, body shape, weight, and increased restrictive behaviors. Physical abuse during childhood has been shown to disrupt emotional regulation, stress response systems, and the development of adaptive coping mechanisms (12). As a result, maladaptive behaviors such as binge eating may emerge as strategies for emotional relief or affect modulation.

In conclusion, the current study examined the prevalence of BED among BD-I patients during the euthymic period and the associated clinical, psychopathological, and traumatic factors. Our findings suggest that BED is significantly more prevalent among BD-I patients than in the general population and that the presence of BED is associated with increased body weight and BMI, impaired eating attitudes, more frequent psychotic episodes, rapid cycling, and suicide attempts. Furthermore, physical and emotional abuse were more frequently observed in patients diagnosed with BED. These results emphasize that BED is an important comorbidity that can worsen the clinical course of BD and highlight the importance of systematically monitoring eating behaviors during the clincial assessment of patients with BD. However, the inclusion of only BD-I patients in the euthymic phase in the current study limits the examination of the relationship between BED and episodic variations. Furthermore, the cross-sectional design does not allow for the determination of causal relationships. Therefore, longitudinal studies with larger samples, encompassing different mood episode phases and incorporating assessments of emotion dysregulation, are needed to more clearly elucidate the nature and direction of the relationship among BED, CT and BD.

Ethics Committee Approval: The study protocol was approved by the Ethics Committee of the Bakirkoy Training and Research Hospital (October 6th, 2020, protocol number 468).

Informed Consent: Informed consent was obtained for experimentation with human subjects, and all the ethical procedures were performed.

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