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Original Article

Obsessive Compulsive Disorder and Bipolar Disorder Comorbidity: A Comparative Study

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Abstract

Objective: One of the difficult comorbidity of Obsessive-Compulsive disorder (OCD) to manage is bipolar disorder (BD). Results of previous studies on OCD-BD comorbidity may have been affected by different clinical definitions of OCD-BD, small or different sample sizes, different thresholds for including BD patients and different accuracies in OCD diagnosing. We tried to reduce limitations of previous studies and hypothesized that the OCD-BD group is a unique category and can be associated with greater levels of severity, episodic course of illness, more hostility and suicidal behaviors and different dimensions of OC symptoms.
Method: We compared 44 OCD-BD patients with 94 OCD patients who had completed at least a 24-month follow-up period. Clinical interviews and rating scales, and obtaining information from clinical charts were used to assess the patients. Life chartings of OCD and BD course were made for each patient and were categorized into four groups based on the clinical course of OCD.
Results: OCD-BD was characterized by a more continuous course, higher dysfunction, suicide and hostility scores. OC aggressive symptoms, having first-degree relatives with OCD and comorbidity of any anxiety disorders were associated with a reduction in odds of belonging to the OCD-BD group.
Conclusion: OCD-BD can be considered a unique category with greater morbidity and a more episodic course of OCD. Further research is recommended for exploring potential biological, social and psychological factors along with OCD-BD comorbidity.

Key words: *Bipolar Disorder; Comorbidity; Obsessive-Compulsive Disorder*

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The hallmarks of Obsessive Compulsive Disorder (OCD) are excessive, anxiety eliciting thoughts and compulsive behaviors that are generally recognized as baseless (1). OCD affects approximately 2% of the population and is associated with personal, interpersonal, occupational and social impairments (2). Comorbidity means presence of two or more psychiatric disorders in one person. It can be seen in the clinical course of all psychiatric disorders (3). Comorbidity can affect the clinical course and treatment outcome of all comorbid psychiatric disorders (4). Psychiatric comorbidity is common in OCD (5). One of the difficult types of comorbidity to manage is Bipolar Disorder (BD) (6). BD affects 1% of the population. Its main characteristic feature is mood and emotional instability (7). Previous clinical studies have reported prevalence of OCD-BD comorbidity to be between 3% to 24% (8, 9). These differences may be related to the samples in the studies, different instruments used in evaluations and degree of expertise among the evaluators (10). So far, several studies have been conducted on OCD-BD comorbidity. They have focused on various aspects of this comorbidity like the clinical course of OCD-BD (11), heredity in OCD-BD comorbidity (12), OCD-BD treatment (6), OCD-BD in adolescents and children (13, 14), other comorbid psychiatric disorders (15) and OCD symptom dimensions (16). Amerio and colleagues believed that in OCD patients, there is an important minor comorbid OCD-BD that may represent true OCD separate from BD with OC symptoms that improve or worsen during episodes of mood disorder without being related to them (8).

Although recent studies, the majority of which are case-control hospital-based studies, investigated the comorbidity of OCD-BD, the topic is inadequately studied and the relationship between OCD and BD remains indefinite and unclear. Considering Amerio and colleagues' meta-analysis (17), results of the previous studies might have been affected by over-estimation of OCD-BD. While some researches have focused on patients with a primary diagnosis of BD with OCD comorbidity (17, 18), this research has focused on OCD-BD comorbidity in patients with principle diagnosis of OCD. The primary aim of our study was to clarify the impact of BD comorbidity on phenomenology and clinical features of OCD patients.

Considering results from previous studies, we proposed that the results may have been affected by different definitions of OCD-BD, small or different sample sizes, different thresholds for including patients with BD to study and different accuracies in diagnosing OCD. The definition of OCD-BD comorbidity used in this study was based on accurate definitions provided in review articles published by Amerio and colleagues (7, 8). Therefore, we expected that some people who have previously been diagnosed with this type of comorbidity would not be included in our study. Therefore, achieving new and different results is not far off. Patients would be included in this study if they were not in their BD episodes and were experiencing frustrating OC symptoms. Importantly, we had the opportunity to follow our patients and their course of illness for a relatively long period of time. Patients were evaluated at least every 3 months by expert clinicians with multiple interviews. The information was obtained from multiple sources. In previous studies, there were only two episodic and non-episodic courses for obsessive-compulsive disorder. We considered the clinical course of OCD in a spectrum. One end of the spectrum was episodic and the other end was continuous, and intermediate forms were classified with a tendency toward one end of the spectrum. We hypothesized that the OCD-BD group is a unique category and would be associated with greater levels of severity, episodic course of illness, poor response to treatment, more hostility and suicidal behaviors along with different dimensions of OC symptoms.

Materials and Methods

Participants

This was a cross-sectional comparative clinical study. Participants of this study were recruited from an outpatient psychiatry clinic at Guilan University of Medical Sciences (GUMS) in Rasht, capital of Guilan province in northern Iran. Patients with primary diagnosis of OCD-BD (n = 44) and OCD (n = 94), according to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (18, 19), who completed at least a 24-month follow-up period were included in the study. The Yale–Brown Obsessive Compulsive scale (Y-BOCS) (20, 21) was equal or greater than sixteen at time of admission. Participants were excluded if they had diagnosis of any psychotic disorders (except for psychotic BD patients), psychiatric disorders due to other medical conditions, mental retardation or moderate to severe substance (alcohol, stimulants, opioids, cannabis) use disorder. A written informed consent was acquired from all participants after a complete explanation of the study. This study was authorized by the Guilan University of Medical Sciences ethics committee (ir.gums.rec.1396.124).

Assessments

All assessments were performed by a psychiatrist (MK) and a clinical psychologist (MKA) working at GUMS who had at least 16 year of experience treating patients with OCD as well as research experience. MK diagnosed and treated patients with OCD and OCD-BD and classified them into groups. Diagnosis of BD and OCD and other clinical features (including course of OCD) were approved by the first and third authors reaching a consensus.

Socio-demographic and clinical variables were collected from review of each patient's medical records and their immediate family members. Additional clinical

information was collected through interviews with other informants and/or physicians who had treated the patient previously.

The Y-BOCS, the Clinical Global Impression-severity scales (CGI-I, CGI-S) (22), Global Assessment of Functioning Scale (GAFS) (23), hostility and suicidality scales of Brief Psychiatric Rating Scales (BPRS) (24) and OCD section of Family Interview for Genetics Studies (FIGS) (25) were administered to all patients to obtain clinical data and a profile of OC symptoms and their severity. CGI-I and FIGS were the only instruments administered at time of final clinical evaluation. The remaining instruments were administered at time of inclusion and in all follow-up visits and at the final evaluation in the study.

Life chartings of OCD and BD course were made for each patient. Determination of OCD course was based on definitions used in previous OCD studies with some modifications (26-28). We suggested that dividing the clinical course into two (episodic, non-episodic) groups may not represent all clinical probabilities. We classified the course of illness into four groups. Chronic course was defined as persistent symptoms for most of the course, causing significant distress and functional impairment and episodic course was defined as clear evidence of remissions and recurrence. We also considered two intermediate courses. In the first intermediate course (FIC), total time of remissions was not more than 25% and in the second intermediate course (SIC); the total time of remissions was more than 25% but less than 50% of course of illness. In the episodic course, total time of remissions was more than 50% of course of illness. During remission periods, symptoms were either subclinical or absent (for three months). During recurrence periods, symptoms caused significant distress and functional impairment and were severe enough to seek treatment or change of treatment (YBOCS score should be ≥ 16). Patients with OCD-BD were assessed when they were not in their manic or depressive episodes.

Statistical Analysis

The Shapiro-Wilk test was used to determine normality of the distribution. Continuous variables were compared using the independent t-Test. The Chi-Square/Fisher's exact test was used to compare categorical variables. Adjusted odds ratios (AOR) with 95% confidence intervals (CI) were calculated with logistic regression, which included significant demographic and comorbid psychiatric disorders as confounders. For models that the current score was considered as a predictor, its baseline score was also included in the model. Odds ratio above one represents the odds of belonging to the OCD-BD group. A probability value (P-value) less than 0.05 was considered statistically significant. All statistical analyses were performed using Statistical Package for Social Sciences (SPSS) version 22.0 software.

Results

Table 1 shows the demographic characteristics between the two groups. The results of this study did not show any difference between the groups in terms of age, education, sex, background, marital status and occupation (Table 1). 34 (77.27%) of the patients with BD were BD-I and 10 (22.73%) were BD-II. The mean age of at onset of BD was 25.09 ± 8.55 years. 27 (61.36%) patients with BD had a family history of BD in their first-degree relatives. The mean number of manic, depressive and mixed episodes were 2.32 ± 1.39, 1.77 ± 1.39 and 0.8 ± 1.17, respectively. The mean total number of episodes were 4.89 ± 2.40.

Because prevalence of demographic characteristics and comorbid psychiatric disorders were not significantly different between groups or their prevalence was not enough to be included in the model, the logistic regression models were adjusted only for any anxiety disorder (AD).

Table 2 shows Clinical characteristics of the participants. OC aggressive symptom (P = 0.031, OR = 0.28, CI = 0.06-1.36), having first-degree relatives with OCD (P = 0.004, OR = 0.34, CI = 0.16-0.71) and comorbidity with any AD (P < 0.0001, OR = 0.13, CI = 0.05-0.37), was associated with a reduction in the odds of belonging to the OCD-BD group. Patients with suicidal thoughts (P = 0.014, OR = 2.57, CI = 1.21-5.49) and hostile thoughts (P = 0.001, OR = 11.36, CI = 2.59-49.93) were more likely to be classified into the OCD-BD group. A continuous course (79.78%) was over represented in the patients with OCD. Interestingly, frequency of the continuous course was equal to the episodic course (20.45%) in patients with OCD-BD. The odds of belonging to the OCD-BD group increased by 6.71 times in patients with FIC and increased by 21.40 times in patients with SIC compared to patients with a continuous course (Table 2).

The Current–Baseline (CB) scores show amount of change from the baseline condition. The baseline, current and CB scores of obsessive, compulsive and total Y-BOCS, except for total CB score (P = 0.031, OR = 0.91, CI = 0.83-0.99), were not significantly different between groups. Higher current CGI-S (P = 0.001, OR = 1.69, CI = 1.08-2.63), greater changes in severity scores (P = 0.004, OR = 0.56, CI = 0.36-0.88) and greater changes in functional scores (P = 0.002, OR = 1.10, CI = 1.02-1.18) were associated with increased odds of belonging to the OCD-BD group. On the contrary, greater changes of CGI-I (P = 0.016, OR = 0.56, CI = 0.31-0.99) and higher current scores of GAF (P < 0.0001, OR = 0.94, CI = 0.85-1.03) were associated with decreased odds of belonging to the OCD-BD group (Table 3).

Table 1. Baseline Characteristics of 94 Patients with Obsessive-Compulsive Disorder and 44 Patients with Obsessive Compulsive Disorder-Bipolar Disorder

	OCD Mean ± Sd/N (%)	OCD-BD Mean ± Sd/N (%)	P-Value	OR (CI)¶	P-Value
Age	39.18±12.95	43.95±13.31	0.107†	1.03 (0.99-1.05)	
Education	10.82±4.2	10.34± 4.2	0.445†	0.97 (0.89-1.06)	0.522
Sex					
Male	65 (69.14)	31 (70.45)	0.877‡	1.0	
Female	29 (30.8)	13 (29.74)		1.06 (0.49-2.33)	0.877
Background					
Rural	18 (19.14)	15 (34.09)	0.055‡	1.0	
Urban	76 (80.85)	29 (65.90)		0.46 (0.20-1.03)	0.058
Marital status					
Single	20 (21.27)	10 (22.72)	0.979§	1.0	
Married	72 (76.59)	33 (75.0)		0.92 (0.39-2.17)	0.843
Divorced	2 (2.12)	1 (2.27)			
Occupation					
Employed	31 (33.0)	10 (22.70)	0.272§	1.0	
Student	13 (13.80)	4 (9.10)		0.95 (0.25-3.60)	0.944
Homemaker	45 (47.90)	23 (52.30)		1.58 (0.66-3.79)	0.301
Unemployed	5 (5.30)	7 (15.90)		4.34 (1.12-16.76)	0.033

OCD: Obsessive Compulsive Disorder; OCD-BD: Obsessive Compulsive Disorder, Bipolar Disorder; †Independent t-test; ‡Chi-Square test; §Fisher Exact test. ¶logistic regression model.

Table 2. Clinical Characteristics of 94 Patients with Obsessive-Compulsive Disorder and 44 Patients with Obsessive Compulsive Disorder-Bipolar Disorder

	OCD Mean ± Sd/N (%)	OCD -BD Mean ± Sd/N (%)	P-Value	OR (CI) ¶	P-Value
Age at OCD onset (years)	20.20±7.51	19.66±7.95	0.698†	0.99 (0.94-1.04)	0.690
Duration of OCD (years)	19.03±12.94	22.32±12.09	0.158†	1.02 (0.99-1.04)	0.354
Time since baseline assessment (months)	41.67±20.55	61.61±30.91	< 0.0001†	1.03 (1.01-1.05)	< 0.0001
OCD symptoms					
Washing	72 (76.59)	32 (72.27)	0.623‡	0.82 (0.36-1.85)	0.623
Symmetric	31 (32.97)	30 (68.18)	0.892‡	0.95 (0.44-2.04)	0.892
Hoarding	5 (5.31)	0 (0)	0.177§		
Taboo	23 (24.46)	6 (13.63)	0.146‡	0.49 (0.18-1.30)	0.151
Aggressive	17 (18.08)	2 (4.54)	0.031‡	0.28 (0.06-1.36)	0.114
Residual	31 (32.97)	13 (29.54)	0.687‡	0.85 (0.39-1.85)	0.687
OCD Course					
Continuous	75 (79.78)	9 (20.45)	< 0.0001ᶠ	1.0	
Co-Ep1	14 (14.89)	12 (27.27)		6.71 (2.27-19.80)	0.001
Co-Ep2	5 (5.31)	14 (31.81)		21.40 (5.85-78.36)	< 0.0001
Episodic	0 (0)	9 (20.45)			
Comorbidities					

Any AD	45 (47.87)	5 (11.36)	< 0.0001‡	0.13 (0.05-0.37)	< 0.0001
Any OCRD	3 (3.19)	2 (4.54)	0.654§		
Any tic disorder	4 (4.25)	2 (4.54)	1.000§		
Any ICD	12 (12.76)	1 (2.27)	0.061§		
Any ED	5 (5.31)	0 (0)	0.177§		
OCD Family history	67 (71.24)	20 (45.40)	0.003‡	0.34 (0.16-0.71)	0.004
Post-partum onset	4 (4.43)	4 (9.09)	0.266§	2.25 (0.54-9.45)	0.27
Hospitalization	0 (0)	9 (20.54)	< 0.0001§		
Suicidal thoughts	23 (24.5)	20 (45.5)	0.013‡	2.57 (1.21-5.49)	0.014
Hostility	61 (64.9)	42 (95.5)	< 0.0001‡	11.36 (2.59-49.93)	0.001

OCD: Obsessive Compulsive Disorder; OCD-BD: Obsessive Compulsive Disorder-Bipolar Disorder; †Independent t-test; ‡Chi-Square test; §Fisher Exact test. ¶Adjusted logistic regression model controlled for any AD.

Table 3. Longitudinal Clinical Characteristics of 94 Patients with Obsessive-Compulsive Disorder and 44 Patients with Obsessive Compulsive Disorder-Bipolar Disorder

	OCD		OCD -BD		P†	OR (CI) ‡	P
	Mean ±Sd	Median (IQR)	Mean ±Sd	Median (IQR)			
Obsession							
baseline	14.71±1.83	15 (14-16)	14.2±1.76	14.5 (12.3-15.8)	0.900		
current	5.72±1.70	5 (5-7)	6.25±2.35	6 (5-7)	0.216	1.15 (0.96-1.137)	0.142
Current-baseline	9.00±2.22	9 (7-11)	8.23±2.14	8 (7-10)	0.074	0.85 (0.72-1.01)	0.059
Compulsion							
baseline	13.79±2.18	14 (12-15)	13.14±2.06	13 (12-15)	0.072		
current	5.59±1.80	5 (4-7)	5.70±2.13	5 (4-7)	0.839	1.03 (0.86-1.24)	0.738
Current-baseline	8.22±2.26	8 (6-10)	7.43±2.30	8 (6-9)	0.124	0.86 (0.73-1.01)	0.062
Total							
baseline	28.61±3.74	29 (26-31)	27.43±3.13	27 (25-30)	0.061		
current	12.04±8.50	10 (9-13)	11.73±4.11	11.5 (9-14)	0.686	0.99 (0.94-1.05)	0.817
Current-baseline	17.43±4.27	17.5 (17.5-20)	15.73±4.06	16 (13-19)	0.059	0.91 (0.83-0.99)	0.031
CGI.S							
baseline	6.28±0.63	6 (6-7)	6.30±0.63	6 (6-7)	1.000		
current	2.70±0.92	3 (2-3)	3.18±0.82	3 (3-4)	0.001	1.69 (1.08-2.63)	0.021
Current-baseline	3.57±0.92	4 (3-4)	3.11±0.87	3 (3-4)	0.004	0.56 (0.36-0.88)	0.011
CGI.I							
	2.18±0.67	2 (2-3)	1.86±0.70	2 (1-2)	0.016	0.56 (0.31-0.99)	0.048
GAF							
baseline	57.14±5.16	56 (53-60)	49.39±4.62	50 (46-52)	< 0.0001		
current	75.56±5.27	76 (73-78)	71.16±6.10	73 (65.8-75)	< 0.0001	0.94 (0.85-1.03)	0.185
Current-baseline	18.39±5.60	18 (14.8-23)	21.80±5.94	23 (18.5-24)	0.002	1.10 (1.02-1.18)	0.010

OCD: Obsessive Compulsive Disorder; OCD-BD: Obsessive Compulsive Disorder-Bipolar Disorder; † Mann-Whitney U test; ‡Adjusted logistic regression model controlled for any AD.

Discussion

Our main hypothesis was that OCD-BD may be a distinct clinical subtype with unique clinical characteristics. In this study, we compared symptom characteristics and clinical features of patients with a main diagnosis of OCD with and without comorbid BD who were recruited from the outpatient psychiatry clinic and were evaluated at least every 3 months by expert clinicians in their natural course of illness. Patients were evaluated with multiple interviews, and information was obtained at different times from multiple sources. The sample size for our study and the long follow-up period allowed for a more comprehensive investigation.

The time since the baseline assessment in patients with OCD-BD was significantly higher than patients with OCD which provided enough time to observe any important changes or to do any necessary evaluations. This was also one of the strengths of our study. Obviously, the periodic nature of the disorders can be identified better over a longer period of time.

The episodic course has been described as a typical clinical characteristic feature of OCD comorbid with BD (11, 12, 17, 28-31) as well as this study irrespective of the type of study. Considering our definition of OCD-BD, the possibility of including BD patients that experience OC symptoms in their mood instability periods was greatly reduced. Of course, although it is difficult to provide a precise definition for the episodic or continuous course of OCD-BD, we defined the intermediate forms to consider the cases that were not absolutely episodic or continuous. About 52% of patients with OCD-BD had an episodic or a more episodic course. Therefore, considering these definitions, a tendency toward an episodic course was detectable in patients with OCD-BD.

Although a significant percentage of our OCD-BD cases showed a tendency toward an episodic course, approximately equal percentages also experienced a continuous course. There are two potential explanations: Firstly, the findings in our study were obtained over a long period of time. Adequate time for evaluation has provided a good opportunity to observe the real course of the disorder. Secondly, we used a more precise definition of OCD-BD. Therefore, it can be claimed that true OCD cases were selected and included in the study. Obviously, patients with OCD-BD can experience various clinical courses from continuous to episodic. The findings in our study revealed that in OCD-BD comorbidity, OCD may not be secondary to episodes of mood disorder. It also implies that being bipolar has a special effect on OCD and some forms of OCD and BD are psychopathologically related (28).

We compared OC symptoms between groups based on previous studies which showed that different phenotypes of OCD are related to different psychiatric comorbidities (10). Obsessions of symmetry, repeating, counting and ordering/arranging compulsions (16), Taboo obsessions (32) and miscellaneous OC symptoms (33, 34) have been reported significantly more, and checking rituals (33, 34) have been reported significantly less in OCD-BD patients. Youths with OCD-BD also had more hoarding/saving obsessions and compulsions (14, 35). None of the previously reported relationships were repeated in our study. Patients with aggressive thoughts were less likely to be included in the OCD-BD group, which had not been previously reported. Lack of a consistent association between OC symptoms and BD comorbidity could be due to different definitions and the inclusion criteria and study samples. It can be concluded that bipolarity does not have a specific effect on the OC symptoms (28, 36).

Usually, patients with OCD will not require hospitalization except in severe cases or for special purposes. Number of hospitalizations was significantly higher in comorbid cases than in patients with OCD alone, which was in line with findings from previous studies (28, 35, 37). This may worsen the prognosis of the OCD-BD group compared to OCD. Although our study was conducted on outpatients with OCD, there was no effect from the chance of including patients with a history of hospitalization in both groups.

Patients with OCD-BD had more suicidal behavior at time of admission, which remained higher after treatment. Since response to OCD treatment was similar between groups, suicidal behavior should be related to other reasons such as impact of mood instability on the course of illness, episodes of depression or a conservative use of antidepressants in patients with OCD-BD. More research is necessary to discuss the factors influencing greater suicidality in the patients with OCD-BD.

Family response to OCD encompasses a wide range of behaviors such as participating in compulsions or helping the patient to avoid triggers that may precipitate OCD (38). On the other hand, family responses may include interfering with rituals or directly opposing them. Stopping compulsions may be associated with family conflicts and sometimes hostility and aggressive behaviors from the patients (39). One study suggested that caregiver's or family's burden imposed by OCD is either excessive or nearly comparable to that by schizophrenia (40).

Patients with OCD may face more difficulty in their impulse controls, hostility and have additional diagnosis of impulse control disorder (41). It seems that comorbidity of OCD-BD increases hostility. Although the episodic course of OCD-BD in some patients may decrease level of stress, symptoms of BD increase it. Patients with OCD experience more hostility compared to those without OCD (42). Heightened hostility may lead to social isolation, which is associated with poorer OCD prognosis (43). Increased severity of OCD was correlated or even directly associated with higher hostility levels and suspicious thinking in individuals with OCD (42). In our study, current scores of hostility were significantly higher in comorbidity cases, and

hostility significantly predicted OCD-BD group membership. Increased levels of hostility may adversely affect the treatment outcome and quality of life.

Regarding comorbidity, the comorbidity rate of any AD was higher in the OCD group than in the OCD- BD group. Understandably, due to comorbid BD, we did not compare depressive disorders in two groups. Other common psychiatric comorbidities were compared. Patients with comorbid AD were more likely to be included in the OCD group. Mucci and colleagues (15) found higher rates of comorbid AD in patients with OCD-BD which was not in line with our findings and findings in Mahasur and colleagues' study (28).

Patients with OCD had higher rates of OCD in their first-degree relatives in comparison with the OCD-BD group. This is not congruent with results of some studies that have reported no difference (28, 32) or higher rates of OCD (31, 34) in relatives of patients with OCD-BD. Amerio and colleagues, according to results from their review, concluded that compared to patients with BD, comorbid cases were less likely to have a family history of OCD (12). This review was mainly based on studies of BD-OCD in which majority of cases were samples of BD. Therefore, the results of this review were partly congruent with results of this and Mahasur and colleagues' study (28). Different results may be attributed to different sample sizes, of the study population, primary BD subjects or different definitions of OCD-BD in the studies. Further comorbidity studies, especially on patients with a primary diagnosis of OCD, are needed in the future to better understand role of heredity in OCD-BD comorbidity.

Another issue that must be considered regarding OCD-BD comorbidity is impact of BD on treatment outcome and prognosis of OCD. We couldn't find any significant difference in YBOCS total scores, obsessions, and compulsions between groups even after controlling for overall comorbidity levels. This finding suggests that severity of OCD does not increase in the context of comorbidity with BD. This is incongruent with results of previous studies (37, 44) that reported BD is an important factor linked with greater severity of OCD in OCD-BD. The results of the present study showed the negative impact of comorbid BD on functioning and improvement of patients with OCD, which was not related to their response to the OCD component.

Limitation

This study had certain limitations. First, we employed a cross-sectional design with retrospective assessments of the course. The longitudinal or cohort studies could provide more valuable information about the onset and the course of both clinical conditions. Second, the relatively small sample size of the BD subjects limited certain interpretations. Studies with larger samples sizes are recommended. Third, the results of these studies may be influenced by different treatment methods that are used in different treatment centers. Unfortunately, few studies have considered this comorbidity and the studied treatment methods. Multicenter studies with controlled treatment methods are recommended. Fourth, unlike many earlier studies, our sample consisted of adult outpatients with long-standing severe illnesses, relatively high comorbidity rates and longer durations of treatment which may restrict the generalizability of our findings. Given the lower age of onset of both disorders, studies involving the younger age group will be helpful. Fifth, our sample consisted only of treatment seeking patients with OCD, whose results may not be generalizable to all OCD patients. Sixth, our therapeutic focus was on mood stabilization in comorbidity cases. It is important to provide information about the treatment methods used in these patients. Unfortunately, due to publication restrictions, additional information could not be provided. We could not include some OCD patients in this study because of short follow-up durations or cessation of treatment, although this may lead to a better observation of any changes in the course of illness.

Conclusion

The current study showed that OCD-BD may have a more episodic course and presence of comorbid BD may negatively influence general functioning, well-being and finally prognosis of patients with OCD. These results are concordant with the hypothesis that OCD-BD may be a distinct clinical subtype with unique clinical characteristics, supporting the need for further research in this area. Although our data suggest that comorbid BD is responsible for the elevated clinical severity, the possibility of the indirect influence of some factors, such as endophenotypes should be considered. Collectively, there are suggestive pieces of evidence that patients with OCD-BD represent a unique group in terms of symptom presentations and impairment. Although treatment guidelines have been developed for OCD and BD, few studies have considered this comorbidity and the studied methods are not available for treating these patients. Further research is recommended for exploring potential biological, social and psychological factors along with OCD-BD comorbidity.

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Conflict of Interest

None.

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