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Original article

Psychiatric comorbidity in patients with obsessive-compulsive disorder

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Abstract

Background: Obsessive-compulsive disorder (OCD) is a debilitating heterogenous psychiatric disorder which is often comorbid with other psychiatric disorders.

Objectives: To identify the psychiatric comorbidities in patients with OCD.

Methods: This cross-sectional study was based on a survey conducted on 105 DSM-5 diagnosed OCD patients. The patients were older than 18 years and enrolled from the Inpatient and Outpatient Psychiatry Departments of NIMH and BSMMU, Dhaka in between December 2018 to December 2019. Psychiatric comorbidities and OCD severity were measured by the SCID-I CV and DUOCS (Dhaka University Obsessive Compulsive Scale). Data analysis was done by SPSS 25.

Results: The study observed that 92.4% of the respondents had comorbid psychiatric disorders, with the mean DUOCS score of 42.3. A larger proportion of OCD patients had comorbidity like panic disorder, generalized anxiety disorder and hypoactive sexual desire disorder, with the figures of around 40% for each. This study also found that around one-third of OCD patients had comorbidities like social phobia, secondary insomnia, dysthymic disorder, undifferentiated somatoform disorder, agoraphobia and major depressive disorder. Less than 20% of the OCD patients had comorbid conditions such as hypochondriasis, tic disorder, body dysmorphic disorder, hypomania, bipolar II disorder, non-alcohol substance use disorder, dhat syndrome, acrophobia, etc.

Conclusions: This study provides essential information about the proportion of psychiatric comorbidities in patients with OCD. It is recommended that psychiatric comorbidities should be taken into consideration while planning for OCD management.

Declaration of interest: None

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Keywords: OCD; psychiatric comorbidity; SCID-I CV; DUOCS

Introduction

Obsessive-compulsive disorder (OCD) is a chronic heterogenous psychiatric disorder with various severe symptoms.[1] It is characterized by obsessive thoughts (intrusive, anxiety provoking) and compulsive acts (repetitive behaviors).[2] The neurological abnormalities lies in the cortical (prefrontal)–striatal–thalamic circuitry.[3] In 2018, WHO declared it as one of the most disabling psychiatric disorders. A survey conducted in United States found that lifetime prevalence of OCD was 2.3%.[4] The National Mental Health Survey of Bangladesh conducted in 2018-19 found that the prevalence of OCD in Bangladeshi adult population is 0.7%.

Some community based [4,5,6,7] and clinical studies [8,9,10,11] found that OCD is frequently comorbid with other psychiatric disorders. The longer duration of illness leads to more obsessive-compulsive symptom (OCS) severity.[7] A study suggests that comorbidity of mood and anxiety disorders are often associated with the increase in illness severity.[12] More severe OCD cases in the community cause severe impairment in work, home, social functioning [4] as well as in the quality of life.[13]

In a study on US adults with OCD, Ruscio et al. found that OCD was associated with following disorders: anxiety (75.8%), mood (63.3%), impulse control (55.9%) and substance use (38.6%).[4] In Bangladesh, Algin et al. found that OCD had 16.2% comorbid psychiatric disorders, in which more males had anxiety disorders and more females had depressive disorders.[14] In another study, Uddin MZ found that depression and anxiety were comorbid in 63.5% and 33%[15] OCD cases, respectively. Several anxiety, depression and OCD related conditions remain significantly more common in OCD cases than in control

relatives, suggesting an etiological link.[16] Presence of a comorbid condition with OCD influences treatment decisions[17] and may shed light on the pathogenesis of OCD.[18] This study was in line with few studies[14,15] that investigated the psychiatric comorbidities among adult OCD patients in Bangladesh. However, this study was different from those studies in the sense that the researcher further explored the pattern and proportion of psychiatric comorbidities among patients with OCD in Bangladesh as well as the association between severity of OCD and psychiatric comorbidities.

Methods

A cross-sectional study was conducted in both the Outpatient and Inpatient Departments of National Institute of Mental Health (NIMH) and Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka in between December 2018 to December 2019. A total of 105 OCD patients aged 18 years and above who fulfilled the inclusion and exclusion criteria were conveniently selected for the study. OCD patients were diagnosed using DSM-5 criteria. After selection, a clear explanation was given to the respondents about the study procedures and an informed written consent was taken. A pretested sociodemographic questionnaire was used for identifying sociodemographic information, Structured Clinical Interview for DSM-IV Axis I Disorders clinician version (SCID-I) for identifying comorbid psychiatric disorders and Dhaka University Obsessive Compulsive Scale (DUOCS) was used to see the association between OCD severity and comorbid psychiatric disorders, which is a validated scale in context of Bangladesh for measuring OCD severity. Data were collected by face-to-face interview using paper and pencil as instruments and checked and rechecked for omissions, inconsistencies, etc. Data were analyzed with Statistical Package for Social Sciences (SPSS) Windows version 25. Association of severity of OCD with comorbid psychiatric disorders were analyzed according to Pearson's chi-square test. All ethical issues were carefully addressed and approval was taken from the Ethical Review Board of NIMH.

Results

Out of 105 respondents, the mean±SD age was 27.8±7.7 years. Most of the respondents (58.1%) were in 18-27 year age group and a higher number of respondents were male (61%) (Table 1).

Table 1: Types of CT scan and sociodemographic characteristics of the patients (N=475)

Characteristic	Frequency (percentage) Or mean(±SD)
Age (year)	27.8(±7.7)
18-27	61 (58.1)
28-37	32 (30.5)
38-47	10 (9.6)
48-57	2 (2.0)
Sex	
Male	64 (61.0)
Female	41 (39.0)
Religion	
Muslim	98 (93.3)
Christian	1 (1.0)
Hindu	6 (5.7)
Education	
Primary	6 (5.7)
Secondary	36 (34.3)
Higher secondary	21 (20.0)
Honors	28 (26.7)
Masters	11 (10.5)
Others	3 (2.9)
Occupation	
Unemployed	14 (13.3)
Business	9 (8.6)
Job	15 (14.3)
Housewife	28 (26.7)
Day laborer	5 (4.8)
Student	31 (29.5)
Others	3 (2.9)
Family type	
Nuclear family	49 (46.7)
Combined family	31 (29.5)
Bachelor	25 (23.8)
Family members	4 (±3)
1(bachelor)	25 (23.8)
2-5	58 (55.1)
6-10	18 (17.2)
≥11	4 (3.9)
Monthly expenditure (BDT)	20614.29 (±15939.38)
0-20,000	68 (65.1)
20,001-40,000	29 (27.7)
40,001-60,000	5 (4.8)
60,001-80,000	2 (1.9)
80,001-100,000	1 (1.0)
Marital status	
Married	43 (41.0)
Unmarried	56 (53.3)
Separated	3 (2.9)
Divorced	3 (2.9)
Residence	
Urban	81 (77.1)
Rural	24 (22.9)

Among the patients, 93.3% were Muslim and many of them completed secondary level education (34.3%). Majority of them were students (29.5%), followed by housewives (26.7%) and 46.7% of the patients came from nuclear families. In respect to the patients' number of family members, the mean±SD of family members was 4±3; and the monthly expense of 65.1% patients were within the range of 0-20000 BDT. Majority of the respondents were unmarried (53.3%) and came from urban background (77.1%) (Table 1).

Table 2: Types and proportion of psychiatric comorbidities in OCD patients (N=105)

Diagnosis	Frequency (percentage)
Number of OCD patients with comorbid psychiatric disorders	97 (92.4)
Panic disorder	44 (41.9)
Generalized anxiety disorder	42 (40.0)
Hypoactive sexual desire disorder	42 (40.0)
Social phobia	39 (37.1)
Secondary insomnia	39 (37.1)
Dysthymic disorder	35 (33.3)
Undifferentiated somatoform disorder	31 (29.5)
Agoraphobia	30 (28.6)
Major depressive disorder	26 (24.8)
Hypochondriasis	19 (18.1)
Tic disorder	17 (16.2)
Body dysmorphic disorder	6 (5.7)
Hypomania	3 (2.9)
Bipolar II disorder	2 (1.9)
Non-alcohol substance use disorder	2 (1.9)
Dhat syndrome	2 (1.9)
Acrophobia	2 (1.9)
Delusional disorder	1 (1.0)
Bipolar I disorder	1 (1.0)
Specific phobia	1 (1.0)
Claustrophobia	1 (1.0)

In this study, 92.4% of OCD patients had comorbid psychiatric disorders. The most common comorbid conditions were panic disorder (41.9%), GAD (40%), hypoactive sexual desire disorder (40%), social phobia (37.1%), secondary insomnia (37.1%), dysthymic disorder (33%), undifferentiated somatoform disorder (29.5%), agoraphobia (28.6%), major depressive disorder (24.8%), hypochondriasis (18.1%) and tic disorder (16.2%) (Table 2).

Table 3: Distribution of the OCD patients according to the duration of illness (N=103)

Duration (year)	Frequency (percentage)
0-6	59 (57.4)
7-12	27 (26.3)
13-18	9 (8.7)
19-24	5 (4.8)
25-30	3 (2.9)

Note: Two missing samples

The mean±SD of the duration of OCD was 7±6 years, with a minimum duration of 1 month and maximum duration of 27 years. More than 50% of the 103 patients reported that the duration of their illness was less than 6 years (Table 3).

Table 4: Distribution of OCD patients according to illness severity (N=105)

Severity	Frequency (percentage)
Mild (17-23)	8 (7.7)
Moderate (24-40)	35 (33.5)
Severe (41-49)	17 (16.4)
Profound (50-80)	38 (36.9)

Note: Seven (6.7%) patients had less than cut-off score of <17

Among the 103 patients, continuous course of illness was observed in 62.9% patients, fluctuating in 32.4% and episodic in 2.9% of the patients. The mean of total DUOCS score was 42.3 and minimum and maximum scores were 5 and 78, respectively. Among the 98 respondents, majority of the patients (36.9%) had profound illness severity followed by moderate severity in 35% of the patients. There were 7 (6.7%) patients whose OCD severity score was less than cut-off score of 17 (Table 4).

Table 5: Chi-square test between OCD severity and panic disorder (N=105)

Severeity (by DUOCS score)	Panic Disorder		Total	Chi-squared	p-value
	No	Yes			
Below cutoff	6 (9.8%)	1 (2.3%)	7	9.972	0.041
Mild	8 (13.1%)	0 (0.0%)	8		
Moderate	19 (31.2%)	16 (36.4%)	35		
Severe	10 (16.4%)	7 (15.9%)	17		
Profound	18 (29.5%)	20 (45.5%)	38		
Total	61 (100%)	44 (100%)	105		

In this study, association of OCD severity with various psychiatric comorbidities were assessed by chi-square tests. We found that apart from panic disorder (p=.041) (Table 5), other disorders like dysthymic disorder (p=.107), agoraphobia (p=.115), social phobia (p=.085), GAD (p=.122), hypoactive sexual desire disorder (p=.113), secondary insomnia (p=.098) and undifferentiated somatoform disorder (p=.578) had no statistically significant association with severity of OCD.

Discussion

In the present study the age range was between 18-55 years. More than half (58.1%) of the OCD patients were within 18-27 year age group. Another study14 showed that most (45.5%) of the OCD respondents were within 21-30 years age group that is akin to the recent study finding. In a Brazilian study,[19] the age range of respondents were between 9-82 years. Age range in the present study is different because the above mentioned study included patients under 18 years. In the present study, the mean±SD age of the OCD respondents was 27.8±7.7 years. Algin et al. found the mean±SD age was 26.6±9.9 years.[14] In Torresan et al. the mean±SD age was 34.8±12.9 years.[19] The finding of the present study were near similar to these study findings.

In this study, 61% and 39% of the OCD patients were males and females, respectively. So, the male-female ratio was about 1.6:1, which is similar to the finding of Algin et al. where the male-female ratio was about 1.4:1.[14] In a Brazilian study, 56.8% and 43.2% respondents were females and males, respectively[19] which was different from this study. The reason maybe that females are less aware, more stigmatized about psychiatric illnesses and more dependent on males in Bangladesh than the females of the above mentioned country. Among the OCD patients,

93.3% were Muslims as Bangladesh is a Muslim predominant country, where around 90% people are Muslims. In a cross-sectional study of India, almost 90% of respondents were Hindus followed by 7% Muslims and 3% belonged to other religions.[20]
In this study, a high proportion of the OCD patients had completed secondary level of education (34.3%). According to Algin et al., more than half (60%) of the OCD respondents were educated above secondary level.[14] In another study, Verma et al. found that maximum number of respondents were educated above secondary level (72%).[20] These findings are proximate to the present study findings, which may explain why OCD respondents are more concerned about their symptoms.
Among the OCD patients in this study, most of them were employed (56.4%); Torresan et al. found that more than half (53.7%) of the respondents worked outside of home.[19] The present study findings correspond with the above-mentioned international study. These findings indicate that those who are employed, suffer more from this disorder as well as are seeking treatment.
Most of the OCD patients (46.7%) came from nuclear family in the present study which was not identified in other studies. In this study, more than half of the respondents were unmarried (53.3%). Algin et al. found more than half (about 59.3%) of the OCD patients were unmarried[14] which is in the vicinity of the present study finding. In another study, Verma et al. found that more than half (55%) of the respondents were married.[20] In the present study, a substantial proportion of patients were bachelors and students which reflect earlier age of onset pattern in OCD.
A large portion of OCD patients came from urban (77.1%) background in this study. Algin et al. found 70.5% OCD patients came from urban background.[14] Verma et al. found three-fourth (75%) patients were from urban background.[20] These findings indicate that urban people are more concerned about their mental health and also psychiatric disorders are stigmatized in rural areas.
This study identified that 92.4% OCD patients had comorbid DSM-IV axis-I psychiatric disorders. In a study in Bangladesh, the researchers identified 16.3% psychiatric comorbidities among OCD patients.[14] The result was different from this study due to variation of sample size and as they considered more than one comorbidity in each respondent. In a large multi-centred Brazilian study, it was found that 92.1% OCD cases were comorbid with lifetime psychiatric disorders.[21]
In this study, more than one-third of the OCD patients had comorbid panic disorder (41.9%), followed by generalized anxiety disorder (40%), hypoactive sexual desire disorder (40%), social phobia (37.1%), secondary insomnia (37.1%) and dysthymic disorder (33.3%). Torres et al. found that OCD had similar percentage of comorbidities such as social phobia (34.6%), GAD (34.3%), but fewer cases of dysthymic disorder (11.9%) and panic disorder (20.2%)[21] which were different from the present study findings. As people are more focus oriented towards physical symptoms rather than psychological symptoms, somatic or bodily presentation of psychiatric disorders are more common in our subcontinent and it might be a probable cause of highest percentage of panic disorder in this study.
Again, in this study, less than one-third of the patients had comorbid undifferentiated somatoform disorder (29.5%), agoraphobia (28.6%), major depressive disorder (24.8%), hypochondriasis (18.1)% and tic disorder (16.2%). In view of above comorbidities, Torres et al. found hypochondriasis (3.4%), tic disorder (28.4%) and agoraphobia (20.2%)[21] which are near to the present study findings but comorbid MDD (56.4%)[21] showed a discrepancy. As in this study, more than half (56.8%) of the respondents were females. As females are more vulnerable to depression, it might be the probable cause of higher percentage of depression in them.
This study identified a substantial portion (40%) of hypoactive sexual desire disorder as a comorbidity in OCD patients which was also identified in a cross-sectional study[22] in Bangladesh where 16% OCD patients reported decreased sexual desire. This finding is different from the present study because they considered more than one case in each patient. OCD patients are preoccupied with intrusive thoughts and/or compulsive acts, maintains rigid structured life and orderliness which are more time consuming, so there is less chance of sexual fantasy, which is essential for sexual desire and drive; also due to shame, patients feel difficulty in openly discussing this issue. Another important point could be lack of proper sex education in our context.
More than 60% of the patients had continuous course of OCD. In an Austrian study, it was found that more than 60% patients with OCD had a fluctuating (waxing and waning)[23] course which varied from present study. In this study, a large proportion of chronic, treatment resistant and severe OCD patients were included who were referred by psychiatrists, other expert clinicians and general physicians which might be the probable cause of this discrepancy.
In this study, more than three-fourth (85.7%) of the patients had moderate to profound level of OCD (total DUOCS score above 23); the total number of OCD patients with psychiatric comorbidities were 92.4%, indicating more illness severity was associated with more psychiatric comorbidities.
Finally, in this study, association of OCD severity with 8 other psychiatric comorbidities like dysthymic disorder, panic disorder, agoraphobia, social phobia, GAD, hypoactive sexual desire disorder, secondary insomnia and undifferentiated somatoform disorder were analyzed by chi-square test, but only panic disorder had statistically significant association with severity of OCD.
Although optimum precautions were taken, we still had some limitations. The sample size was small, samples were collected conveniently from only two hospitals so the study population may not represent the general population and as information were collected based on memory of the respondents, there remained possible chances of recall bias.

Conclusions

Despite some limitations, this study provided valuable information about psychiatric comorbidities in OCD patients. Among the comorbid psychiatric disorders, panic disorder was found to

have statistically significant association with DUOCS severity. As it was a hospital-based piece meal study, so before drawing any definite conclusion, caution should be taken. The findings of this study can be used in future studies and this study may guide clinicians, patients and policy makers to effectively manage OCD patients with attention given to comorbid anxiety and depressive disorders.

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