

# Psychiatric Comorbidity in Obsessive Compulsive Disorder: Severity of Anxiety and Depression

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**Abstract:** *Background: This study was designed to assess the co-occurrence of other psychiatric disorder (Axis-I comorbidities) in patients with obsessive-compulsive disorder (OCD) and severity of anxiety and depression. Setting and Design: Cross-sectional study at OCD clinic in department of psychiatry in tertiary health care center. Material and Method: The study included 100 patients attending psychiatric OPD at tertiary care center of Rajasthan, India who were clinically screened for obsessive compulsive symptoms. The patients, suggestive of suffering from OCD, were thoroughly evaluated for the diagnosis by using ICD-10 criteria for the OCD. All the participants were subjected to Hamilton anxiety (HAM-A) scale and Beck's depression inventory (BDI) for assessing severity of anxiety and depression. Statistical analysis: Commercially available software SPSS version 17. Results: Psychiatric comorbidity in OCD occurred in 70% of patients, Co-occurring disorders were depressive disorders 64%, other anxiety disorders 17%, persons suffering from mixed anxiety & depressive disorder were 22%, substance use disorder (alcohol) 5%, schizophrenia 5%, bipolar affective disorder 2% and tic disorder in 1%. Conclusion: Obsessive compulsive disorder patients had greater risk of higher levels of anxiety, depressive symptoms. In addition to depression and anxiety symptoms higher percentage of OCD patients have a lifetime history of another axis I disorder.*

**Keywords:** Obsession, Compulsion, Anxiety, depression, comorbidity

## 1. Introduction

Obsessive compulsive disorder is a chronic and potentially disabling psychiatric disorder marked by intrusive and disturbing thoughts (obsessions) and repetitive behavior (compulsion) that the person feels to drive. The obsessions include contamination, aggressive thoughts, need for symmetry and taboo thoughts of sex or religion. The themes of compulsion include checking, excessive cleaning or washing, arranging and counting <sup>[1]</sup>. These symptoms can be alienating and time-consuming and often cause severe emotional and financial distress. Life time prevalence of OCD in adult varies from 1.1% to 3.9% and OCD presents itself in 2.7% of general population <sup>[2]</sup>. Although the disorder affects individuals of all age groups, the period of greatest risk is from childhood to middle adulthood. Among adults, men and women equally affected but among adolescents, boys are more commonly affected than girls <sup>[3]</sup>. The onset of OCD is usually in early adulthood with nearly 50% of cases present during adolescence; onset after age of 40 years is unusual.

OCD is a chronic illness, so higher percentage of patients has a lifetime history of another axis I disorder. Anxiety disorders and depression are the common comorbid conditions reported in most studies of OCD. In the Epidemiological Catchment Area (ECA) study, two third of patients with OCD had a comorbid psychiatric illness <sup>[4]</sup>. The most common concurrent psychiatric disorders were major depression, social phobia, generalized anxiety disorder, simple phobia, panic disorder, eating disorder, tic disorders and Tourette's syndrome.

In addition to anxiety and depressive disorders, a fascinating group of conditions called obsessive-compulsive spectrum disorders are also found to be highly comorbid with OCD. These include Tourette's syndrome and other tic disorders,

Hypochondriasis, body dysmorphic disorder, trichotillomania, and eating disorders <sup>[5]</sup>.

**Major depressive disorder:** Depression is the most common comorbid disorder in OCD. With the available studies it can be concluded that out of every four OCD patients one will be suffering from depression at any given point of time.

**Anxiety disorders:** Comorbidity of OCD with anxiety disorders is quite high, ranging from 25-60%. Conversely, studies in primary anxiety disorders have showed comorbid OCD in 11-14% of the patients.

### 1.1 Aims and Objectives

1. To study psychiatric comorbidity associated with OCD
2. To study severity of anxiety and depression

## 2. Material and Method

### 2.1 Sample

Above study was cleared by institutional ethical committee. Study comprised of cross sectional study design where 100 patients attending Psychiatric OPD and those who were admitted in the Psychiatric ward, at tertiary care center of Rajasthan, India were clinically screened for obsessive compulsive symptoms. The patients, suggestive of suffering from OCD, were thoroughly evaluated for the diagnosis of OCD by using ICD-10 criteria for the OCD and the diagnosis of obsessive and compulsive disorder confirmed by Consultant Psychiatrist, constituted the sample of study. All patients with the diagnosis of OCD were explained about the procedure, its purpose and were assured of confidentiality of the information.

## 2.2 Inclusion Criteria

1. Subjects with confirm diagnosis of obsessive compulsive disorder at the time of presentation.
2. Subjects who had given written informed consent
3. Age more than 15 years.

## 2.3 Exclusion Criteria

1. Patients who were found to be suffering from any other major medical or surgical illness.
2. Patients with Cognitive Impairment and Mental Retardation.
3. Patients who were unwilling and uncooperative for psychiatric evaluation.
4. Tools of Study

All the selected patients were interviewed in detail by using following tools for the purpose of meeting the aims & objectives:

1. Semi structured proforma designed especially for the study
2. Hamilton's Anxiety rating scale (by Hamilton M, 1959)
3. Beck's Depression Inventory (by Aaron T Beck, 1961)

## 3. Results

### 3.1 Socio Demographic Variables

The prevalence of obsessive and compulsive disorder is more common in young to middle age (21 to 40 year age group) and Mean age of onset of illness was  $25.13 \pm 9.41$  years. Women had an earlier age of onset ( $24.52 \pm 7.84$  years) than men ( $25.13 \pm 9.41$  years), although this was not statistically significant. Maximum number of patients were educated above secondary level (72%), married (55%) and belongs to urban background (75%) [Table 1].

**Table 1:** Distribution of OCD patients according to sociodemographic profile

Variables	Male (%) N=58	Female (%) N=42	Statistics
<b>Age</b>			
15 – 30 years	30(52%)	25 (60%)	$\chi^2 = 3.894$ P=0.1427
31 – 50 years	23(40%)	17 (40%)	
>50 years	05(8%)	0 (0%)	
<b>Age of onset</b>			
11-20 year	24 (41%)	13 (31%)	$\chi^2 = 4.516$ p>0.05
21-30 years	20 (35%)	20 (48%)	
31-40 years	11 (19%)	6 (14%)	
>40 years	3 (5%)	3 (7%)	
Mean +SD	25.56±10.52	24.52±7.84	
<b>Education</b>			
Illiterate	01(2%)	02(5%)	$\chi^2 = 3.803$ P>0.05
Middle	11(19%)	14(33%)	
Sr. Secondary & Secondary	22(38%)	12(29%)	
Graduate/Post Graduate	24(41%)	14(33%)	
<b>Marital Status</b>			
Married Unmarried	25(43%)	30(71%)	$\chi^2 = 7.902$ P>0.05
Others	30(52%)	11(26%)	
	03(5%)	01(3%)	
<b>Religion</b>			
Hindu	52(90%)	30(71%)	$\chi^2 = 2.821$ P>0.05
Muslim	04(7%)	11(26%)	
Others	02(3%)	01(3%)	
<b>Domicile</b>			
Rural	15(26%)	10(24%)	$\chi^2 = 0.055$ p = 0.8145
Urban	43(74%)	32(76%)	

### 3.2 Psychiatric comorbidities:

[Table 2] shows the Axis I comorbidities in the patients with OCD. Depressive disorder, mix anxiety and depression were most common psychiatric comorbidity (64% and 22%) in patient with OCD followed by Panic disorder in 7% patients, social phobia in 5% patients, generalized anxiety disorder in 5% patients, substance abuse in 5% patients, schizophrenia in 5% patients, Bipolar Affective disorder in 2% patients and tic disorder in 1% patients.

**Table 2:** Distribution of Other Psychiatric Disorders according to ICD-10 Criteria in Obsessive compulsive Disorder patients

<i>Psychiatric comorbidity</i>	<i>Male (%) N=58</i>	<i>Female (%) N=42</i>	<i>Statistics</i>
Depressive Episode	35 (60%)	29 (69%)	$\chi^2=19.429$ $p<0.05$ Significant
Mixed Anxiety and Depressive Disorder	10 (17%)	12 (29%)	
Panic disorder	3 (5%)	4 (10%)	
Social phobia	4 (7%)	1 (2%)	
Gen. Anxiety Disorder	3 (5%)	2 (5%)	
Substance use disorder	5 (9%)	0 (0%)	
Schizophrenia	4 (7%)	1 (2%)	
Bipolar Affective disorder	1 (2%)	1 (2%)	
TIC Disorder	1 (2%)	0 (0%)	

### 3.3 Severity of Anxiety

In our study it was evident that 61% patients were suffering from mild anxiety, 33% were suffering from moderate and 6% were suffering from severe anxiety [table 3].

**Table 3:** Distribution of OCD Patients according to severity of Anxiety

<i>Score on HAM- A</i>	<i>Male (%) N=58</i>	<i>Female (%) N=42</i>	<i>Statistics</i>
Mild (<17)	0	0	$\chi^2=4.373$ $p>0.05$ NS
Mild-Moderate (18-24)	38 (66%)	23 (55%)	
Moderate-Severe (25-30)	18 (31%)	15 (36%)	
Severe (>30)	2 (3%)	4 (9%)	

HAM-A: Hamilton Anxiety Scale, NS: Not Significant

### 3.4 Severity of depression

On BDI scale 64% of the patient had depressive disorder out of which, mild, moderate and severe depression was found in 10%, 36% & 18% of patients respectively this is evident in [table 4].

**Table 4:** Distribution of OCD Patients according to severity of Depression

<i>Score on BDI</i>	<i>Male (%) N=58</i>	<i>Female (%) N=42</i>	<i>Statistics</i>
Minimal/No Depression (0-9)	23 (40%)	13 (31%)	$\chi^2=4.452$ $p>0.05$ NS
Mild Depression (10-18)	7 (12%)	3 (7%)	
Moderate Depression (19-29)	19 (33%)	17 (40%)	
Severe Depression (>29)	9 (15%)	9 (22%)	

BDI: Back's Depression Inventory, NS: Not Significant

## 4. Discussion

In the present study 100 patients of Obsessive compulsive disorder were studied and the results are as following. Age range of the patients in our study was 15 to 60 years and the mean age of onset was  $25.13 \pm 9.41$  years. The majority of the patients (83%) were below 40 years of age and only 17% were of above 40 years of age. This finding is supported by the study of Chakraborty and Banerji [6] they found 78% of patients were less than 40 years of age. The mean age was  $30.70 \pm 10.77$  years. In our study gender wise distribution showing that 58% patients were male where as 42% were female out of 100 patients. The mean age was higher in males ( $25.56 \pm 10.52$ ) than in females ( $24.52 \pm 7.84$ ). This finding is supported by the study of Girishchandra B.G. and Sumant Khanna [7] they found 68.8% were males and 31.2% were females. Ages of the patients ranged between 12 and 62 years with a mean age of  $29.50 \pm 10$  years. Earlier study by

Elizabeth A. Nelson et al [8] reported that 52% were males and 48% females. The mean age of the OCD patients was 34.73 years (S.D. = 10.70).

In our study it was found that 72% of patients were having education secondary or above class, 25% up to middle and only 3% were illiterate. Sex wise distribution shows that among males 41% were graduate or other degree, 38% were secondary or senior secondary level 19% up to middle and only 2% were illiterate. The respective figures in female patients were 33%, 29%, 33% and 5%. These results also favored by Chakraborty and Banerji [6], Manchanda et al [9] they found that most of OCD patients were educated above middle school level.

In the present study 55% patients were married, 41% unmarried and 4% were either divorced, separated or widow/widower. Sex wise distribution show that among

males 43% were married 52% unmarried and 5% were either divorced, separated or widower. The respective figures in female patients were 71%, 26% and 2%. It is obvious that significantly higher number of OCD females were married as compared to males. Regarding marital status the findings of our study matched with the finding of MA Mathis et al<sup>[10]</sup> in meta-analytic studies found and conclude that male patients are more likely to be single than females.. Previous study by Elizabeth A. Nelson et al<sup>[8]</sup> found that large proportion of the patients was married (40.0%).

Most of the patients in our study were Hindu (88%) by religion, Muslim were 10% and 2% were others religion (1sikh & 1 Christian). The present study also reflected finding of a previous study conducted by Manchanda et al<sup>[9]</sup> they found out of 30 patients 26 were Hindu, 3Muslim and 1Sikh. The high occurrence of OCD patients in Hindus in our study is accordance with the Hindu Muslim population in our country.

In this study it was found that 75% of patients belonged to urban area, whereas 25% of belonged to rural area. Sex wise distribution shows that among males 74% belonged to urban and 26% to rural background. The respective figures in female patients were 76% and 24%. The findings of our study matched with the studies done by Fatemeh Assarian et al<sup>[11]</sup> they found that the majorities of patients with OCD were from urban regions. These finding of our study might be due to the fact that urban people had easy approach, more awareness, were relatively well informed about psychiatric services.

In our study psychiatric comorbidity in OCD patients were assessed by applying ICD-10 criteria. It was evident that 70% of patients were found to be suffered from various psychiatric disorders, depressive disorders were found in 64% of patients, other anxiety disorders were found in 17% of patients (panic disorder in 7%; social phobia & generalized anxiety disorder in 5% each), persons suffering from mixed anxiety & depressive disorder were 22%, substance use disorder (alcohol) in 5% of patients, schizophrenia in 5%, bipolar affective disorder in 2% & tic disorder in 1%. In our study 39% of OCD patients with comorbid depression had another psychiatric comorbidity also. Gender wise distribution shows statistically significant difference. Substance (alcohol) use disorder and tic disorder were found only in male patients (9% and 2%). The results of our study supported by earlier study by Rahman and Kamal<sup>[12]</sup> they found Co-morbid psychiatric disorder in 80% of the patients. Sixty percent of the patients had depression as co-morbid psychiatric disorders. Anxiety disorders were observed with 15% of cases. Our findings are also supported by finding of Rasmussen & Tsuang<sup>[13]</sup> Most of the OCD patients had concomitant or lifetime histories of a major depressive disorder or another anxiety disorder (panic disorder, special and social phobia and generalized disorder).

Severity of anxiety among OCD patients was assessed by administering Hamilton's anxiety rating scale. It is evident that 61% patients were suffering from mild anxiety (HAM-A score18-24), 33% were suffering from moderate (HAM-A score25-30) and 6% were severe anxiety (HAM-A score

>30). Gender wise distribution shows that moderate and severe anxiety was more in female patients (36% and 9%) than in male (31% and 3%) but the difference was statistically not significant difference. The present study also reflected finding of a previous study by Rasmussen and Eisen<sup>[14]</sup>, Overbeek T et al<sup>[15]</sup>, Ruscio et al<sup>[16]</sup>, they found that anxiety is common among OCD patients and severity was slightly high in females than males.

Severity of depression among OCD patients was assessed by administering Beck's Depression Inventory. It was evident that 64% of the patient had depressive disorder out of which, mild (BDI score 10-18), moderate (BDI score 19-29) and severe (BDI score >29) depression was found in 10%, 36% and 18% of patients respectively. Gender wise distribution shows that moderate and severe depression was more in female patients (40% and 22%) than in males (33% and 15%). The results of our study were concordant with previous study done by Ruscio et al<sup>[16]</sup>, who found comorbid depression among 63.3% of OCD patients. Previous study Juang and Chia<sup>[17]</sup> also found that the 41.5% of OCD patients had depressive disorders, 8% met the criteria for major depressive disorder. The present study also reflected finding of a previous study by Storch EA et al<sup>[18]</sup> they found that females with OCD had more severe depression than males.

## 5. Conclusion

In the current study, we investigated the axis-I disorders as well as severity of anxiety and depression among patients suffering from OCD. Depression and anxiety are highly comorbid conditions in the patients with OCD other than Bipolar disorder, phobia, trichotillomania, panic disorder etc. As a clinician we should focus and treat these comorbid conditions as well as we should psychoeducate the patients about the nature of condition and available treatment options.

## 6. Limitations and Future Directions

The major limitation of this study is its small sample size hence information cannot be generalized. It's a cross-sectional study, longitudinal and prospective studies with larger sample size from different centre may be studied to explore various psychiatric morbidity in different population.

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