

Association of Obsessive-Compulsive Symptoms in Patients with other Psychiatric Morbidities in a Tertiary Care Psychiatric Setup of Rawalpindi

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ABSTRACT

Objectives: To determine the association of Obsessive-Compulsive Symptoms (OCS) among patients with various psychiatric morbidities at a tertiary care psychiatric setup in Rawalpindi

Study Design: Cross sectional analytical study

Place and Duration of Study: Armed Forces Institute of Mental Health, Rawalpindi, Pakistan Dec 2024 to May 2025.

Methodology: Total three hundred and thirty-six patients of 18–60 years diagnosed with various psychiatric disorders, diagnosed using International Classification of Disease version 10 (ICD-10) criteria were included. Obsessive-Compulsive Symptoms (OCS) were assessed using the Obsessive-Compulsive Inventory-Revised (OCI-R), a validated self-report questionnaire commonly used to measure the severity and type of OCS. Data collection involved face-to-face interviews using a semi-structured proforma.

Results: Total three hundred and thirty-six patients were included with mean age 34.7 ± 10.6 years. Obsessive-compulsive symptoms (OCS) were identified in 108(32.1%) with 49(45.4%) experiencing mild symptoms, 37(34.3%) moderate and 22(20.3%) severe symptoms. The mean OCS severity scores differed significantly between psychiatric groups ($p < 0.001$). Gender, residence, marital status, and clinical psychiatric diagnosis showed statistically significant associations.

Conclusion: OCS are prevalent in psychiatric populations, particularly with depressive and anxiety disorders and screening for OCS is crucial for timely intervention and improved outcomes.

Keywords: Anxiety disorders, Bipolar disorder, Depressive disorder, Obsessive-compulsive symptoms, Psychiatric morbidity

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INTRODUCTION

Obsessive-Compulsive Symptoms (OCS) are commonly observed in a variety of psychiatric disorders, including schizophrenia, bipolar disorder, depressive disorders, anxiety disorders and schizoaffective disorder.¹ Recent research has indicated that OCS is present in a substantial proportion of patients diagnosed with schizophrenia. A study conducted in a tertiary care center in Pakistan found that OCS occurred in 25.7% of schizophrenia patients, underscoring the importance of recognizing these symptoms for effective management.¹ The estimated prevalence of Obsessive Compulsive Disorder (OCD) in community as current estimate was 15.7% while in the preceding month it was 35%.² These findings highlight the need to consider OCS as a significant factor in the treatment planning for these disorders.

Additionally, OCS often coexists with various

comorbidities, including anxiety, depression, and bipolar disorder, which can worsen the clinical prognosis of affected individuals.³ Consequently, neurobiological models predict an association of OCD with substance use disorders (SUDs).⁵ Schizophrenia and OCD is associated with 13 million years of life lived with disability highlighting the substantial burden of the disease. The proportion of schizophrenia cases has risen at an unsettling rate in Pakistan, as compared to other mental diseases.⁶ OCD is associated with substantial psychiatric co-morbidity. In the Epidemiological Catchment Area (ECA) study, two-thirds of OCD sufferers had a co-morbid psychiatric disorder. Major Depressive Disorder (MDD) (20%–67%), Generalized Anxiety Disorder (GAD) (8%–32%), social phobia (8%–42%), and simple phobia (7%–22%) are the commonly reported co-morbidities.^{7,8}

Given these findings, it is crucial to explore the relationship between OCS and psychiatric morbidities to enhance early detection and treatment. Therefore, exploring the prevalence, impact, and association of OCS in patients with various psychiatric disorders is critical for improving clinical care and patient

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outcomes. This study aims to examine the association of OCS in patients with psychiatric morbidities in a tertiary care psychiatric facility.

METHODOLOGY

This cross-sectional analytical study was conducted at Armed Forces Institute of Mental Health (AFIMH), a Tertiary Care Psychiatry hospital in Rawalpindi over a period of 6 months from December 2024 to May 2025. Ethical permission was taken from ethical review board of AFIMH and granted ethical permission: (ERC/2509 dated 23 Nov 2024). The sample size was calculated using WHO online sample size calculator taking confidence interval 95%, margin of error 5% and reported prevalence of psychiatric illness in Pakistan as 32.28%.⁹ The estimated sample size came out to be 336 patients. Probable simple random sampling technique was performed.

Inclusion Criteria: Patients of aged 18-60 years, either gender already diagnosed with psychiatric disorders such as depressive disorder, anxiety disorders, schizophrenia, bipolar disorder, post-traumatic stress disorder (PTSD), and substance use disorders and those who consent to participate in the study were included.

Exclusion Criteria: Patients with severe cognitive impairment or intellectual disabilities, Patients with neurological conditions (e.g., epilepsy, stroke, etc.) and those who did not provide consent were excluded.

All the patients were explained about the study, its purpose and were assured of confidentiality of the information. All the selected patients were interviewed in detail by a consultant psychiatrist with experience of minimum 10 years. Semi structured pro forma designed especially for the study (Figure). A pilot study was conducted earlier on 30 participants to check validity and reliability of questionnaire. Kappa statistics was used and found to be 0.85. All psychiatric diagnoses were made by qualified psychiatrists having experience of 10 years using the International Classification of Diseases, 10th Revision (ICD-10) diagnostic criteria, following clinical evaluation.¹⁰

Data was collected using face to face interview using pencil and paper as instruments checked and rechecked for the omission and inconsistency. Obsessive-Compulsive Symptoms (OCS) were assessed using the Obsessive-Compulsive Inventory-Revised (OCI-R), a validated self-report questionnaire commonly used to measure the severity and type of

OCS. Although the original instrument is in English, we translated it into Urdu to enhance participants' understanding again converted to English during data entry. The OCI-R consists of 18 items rated on a 5-point Likert scale (0-4), yielding a total score range from 0 to 72. Based on total scores, participants were categorized as follows: scores 0-20 were classified as mild, indicating minimal symptoms with little or no functional impairment; scores 21-40 were considered moderate, representing noticeable distress and moderate interference with daily life; and scores 41-72 were defined as severe, indicating significant distress and major disruption in personal, occupational, or social functioning. The study also explored the relationship between OCS severity and co-occurring psychiatric conditions. Findings suggest that higher OCI-R scores were often associated with the presence of additional psychiatric morbidities, highlighting the need for comprehensive mental health evaluations in patients presenting with OCS.

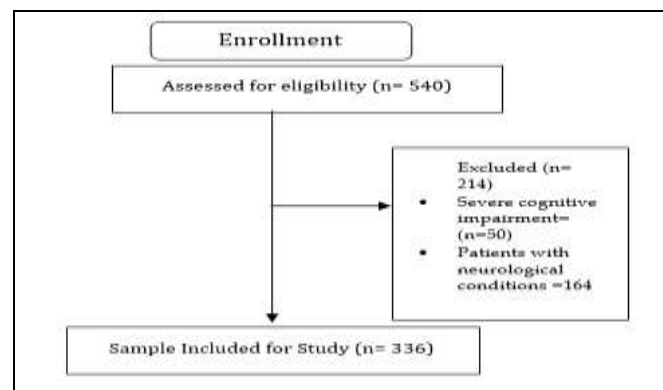


Figure: Patient Flow Diagram

The data were entered into and analyzed using Statistical Package for Social Sciences (SPSS v26.00). Means and standard deviations for continuous variables like age and frequencies with percentages were calculated for categorical variables including gender, resident of, marital status, the frequency and severity of OCS diagnoses. The normality of the data was checked using Kolmogorov-Smirnov test and was found normally distributed. The association between OCS and psychiatric morbidities was assessed using Chi-square test for categorical variables. Multiple logistic regression analysis was done to identify independent predictors of significant OCS including age, gender, resident of, marital and socioeconomic status, as well as clinical psychiatric diagnosis. The p -value of ≤ 0.05 was considered statistically significant.

RESULTS

Three hundred and thirty six patients were included in final analysis with the mean age of 34.7 ± 10.6 years including 144(42.85%) male and 192(57.1%) female. The residency of the participants was also noted, among which 230(68.4%) were urban residents and 106(31.4%) were rural residents, and marital status showed 182(54.2%) were unmarried participants (Table-I).

Table-I: Demographics Characteristics of Patients (n=336)

Variables		Results
Age (mean $\pm$ SD)		34.7 $\pm$ 10.6 years
Gender, n(%)	Male	144(42.85%)
	Female	192(57.4%)
Resident, n(%)	Urban	230(68.4%)
	Rural	106(31.4%)
Marital Status, n(%)	Married	154(45.8%)
	Unmarried	182(54.2%)

Obsessive-compulsive symptoms (OCS) were identified in 108(32.1%) out of 336 participants. The OCI-R consists of 18 items rated on a 5-point Likert scale (0-4), yielding a total score range from 0 to 72. Among those exhibiting OCS, the severity varied, with 49(45.4%) experiencing mild symptoms, 37(34.3%) showing moderate symptoms, and 22(20.3%) presenting with severe symptoms, as assessed through clinician-administered evaluations shown in Table II. This distribution suggests that while a significant proportion of patients experienced OCS, the majority had symptoms in the mild to moderate range (Table-II).

Table-II: Frequency of Severity of Ocs In Studied Participants (n=108)

Symptoms	n (%)
Mild	49(45.4%)
Moderate	37(34.3%)
Severe	22(20.3%)

The study population comprised individuals diagnosed with a range of psychiatric disorders, with Depressive Disorder (DD) being the most prevalent, affecting 106(31.5%) of participants. This was followed by Anxiety Disorder (AD), present in 76(22.6%) of cases, and Schizophrenia, accounting for 60(17.9%). Bipolar Affective Disorder (BPAD) was diagnosed in 39(11.6%) of participants, Substance Use Disorder (SUD) was the least common diagnosis, present in 55(16.36%) of the sample. The mean OCS severity scores differed significantly among previously known

psychiatric disease groups ($p < 0.001$). A statistically significant association between OCS and depressive disorders, and anxiety disorders were observed (Table-III).

Table-IV results identified several significant predictors of the presence of OCS symptoms among previously known psychiatric disease groups. Residence, marital status, and clinical psychiatric diagnosis showed statistically significant association with OCS symptoms. Age, gender and socioeconomic status did not demonstrate significant effects.

Table-III: Clinical Diagnosis and Distribution (n=336)

Variables	OCS		p-value
	No (n=336)	Yes (n=108)	
Depressive Disorder (DD)	106(31.5%)	47(44.3%)	<0.001
Anxiety Disorder (AD)	76(22.6%)	30(28.3%)	
Schizophrenia	60(17.9%)	14(13.2%)	
Bipolar Affective Disorder (BPAD)	39(11.6%)	9(6.6%)	
Substance Use Disorder (SUD)	55(16.36%)	8(7.5%)	

DISCUSSION

The present study found a significant association between obsessive-compulsive symptoms (OCS) and both depressive and anxiety disorders. These results support a growing body of literature indicating that OCS are not isolated phenomena but are often intertwined with broader psychopathological profiles. The findings are consistent with those reported by Rana Mozammil Shamsheer Khan *et al.* (2023), who observed that OCS were prevalent among patients with schizophrenia.¹¹ Their study further strengthens the understanding that comorbid OCS can complicate the clinical presentation and course of schizophrenia. However, in contrast to our findings, Ahn Robins *et al.* conducted a large-scale study involving approximately 22,000 patients diagnosed with schizophrenia and other psychotic disorders. In their research, 24% of the patients exhibited OCS, and 11.9% met the diagnostic criteria for obsessive-compulsive disorder.¹² This discrepancy in prevalence may be due to methodological differences, sample characteristics, or variations in clinical thresholds for diagnosing OCS and OCD.

Present study also concluded that substance use was comparatively less prevalent among patients exhibiting OCS. This finding introduces an important clinical dimension, suggesting that individuals with OCS may either have different coping mechanisms or a symptom profile less associated with substance-

Table-IV: Logistic Regression Analysis Showing Predictors of OCS symptoms

Variables	Study Parameter			Univariate Logistic Regression			Multivariate Logistic Regression		
	OCD Symptoms Present (n=109)	OCD Symptoms Absent (n=227)	p-value	p-value	OR	95% CI for OR	p-value	aOR	95% CI for aOR
Age in years									
Median(IQR)	40.00(21.0)	29.00(22.0)	0.577	Not Performed					
Gender									
Male	51(46.7%)	93(40.9%)	0.347	Not Performed					
Female	58(53.3%)	134(59.1%)							
Resident of									
Rural	48(44%)	58(25.6%)	0.001	0.001	0.436	0.269 – 0.706	0.002	0.462	0.28 – 0.760
Urban	61(56%)	169(74.4%)							
Married or not									
Yes	60(55.1%)	94(41.4%)	0.02	0.019	1.733	1.093 – 2.746	0.099	1.503	0.927 – 2.436
No	49(44.9%)	133(58.6%)							
Socioeconomic Status									
Upper	52(47.7%)	119(52.4%)	0.456	Not Performed					
Middle	36(33%)	60(26.4%)							
Lower	21(19.3%)	48(21.2%)							
Clinical Psychiatric diagnosis									
Depressive Disorder	47(43.1%)	59(25.9%)	<0.001	<0.001	1.479	1.238 – 1.767	<0.0001	1.426	1.194 – 1.704
Anxiety Disorder	31(28.4%)	45(19.8%)							
Schizophrenia	14(12.8%)	46(20.3%)							
Bipolar Affective Disorder	9(8.2%)	30(13.2%)							
Substance Use Disorder	8(7.3%)	47(20.7%)							

related behaviors. Furthermore, it was observed that health-related OCS such as contamination fears, hoarding tendencies, and fear of causing harm was more severe in nature, indicating a specific symptom dimension within the broader OCS spectrum.¹³ Additionally, the study noted a notable presence of schizophrenia in patients who exhibited OCS, a result that echoes findings from Deborah Ahn Robins et al., who reported that both OCS and OCD are frequently observed in patients with schizophrenia, schizoaffective disorder, and bipolar disorder. These comorbid symptoms are often associated with more severe psychiatric manifestations and may complicate diagnosis and treatment.¹²

From a demographic standpoint, the present study found a predominance of female patients in the sample with OCS. This observation, however, stands in contrast to findings by Das et al., who reported that 61% of OCD patients in their study were female.¹⁴ The difference in gender distribution may be due to regional, cultural, or population-specific factors that influence help-seeking behavior and diagnostic reporting. Moreover, some studies have highlighted that certain antipsychotic medications may worsen OCS in patients with schizophrenia. These findings

raise critical questions regarding the choice of pharmacotherapy in such cases and emphasize the need for individualized treatment planning.^{15,16} On the other hand, the present study does not align with findings by Perugi *et al.* (2002), who found that individuals diagnosed with both bipolar disorder and OCD are more likely to experience additional anxiety-related disorders such as agoraphobia and panic disorder.¹⁷ Lastly, the literature suggests that schizophrenia and OCD share several features, such as comparable gender distribution and early onset, particularly in males. OCS can appear across all stages of life—from adolescence to old age—among patients with schizophrenia, indicating the enduring nature of these symptoms.¹⁸

LIMITATIONS OF STUDY

The cross-sectional design limits the ability to infer causality between obsessive-compulsive symptoms and other psychiatric morbidities. The sample was drawn from a single tertiary care psychiatric setup in Rawalpindi, which may not be representative of the broader population, reducing the generalizability of findings. Additionally, reliance on self-reported data and clinical interviews may introduce reporting bias or diagnostic inaccuracies. Comorbid conditions might have been underreported or misclassified. The study also did not account for the

duration or severity of psychiatric illnesses, which could influence the association with obsessive-compulsive symptoms. Further longitudinal, multi-center studies are recommended.

CONCLUSION

OCS was identified in 32.1% of participants, with the majority experiencing mild to moderate symptoms. Depressive disorders and anxiety disorders emerged as significant predictors of OCS, emphasizing the need for clinicians to routinely assess for OCS in patients with these diagnoses. These findings support the growing evidence that OCS frequently coexists with mood and anxiety disorders, potentially complicating clinical presentations and impacting treatment outcomes. Early identification and integrated management of OCS in psychiatric populations could improve patient prognosis and quality of life, underscoring the importance of screening for obsessive-compulsive symptoms in routine psychiatric assessments.

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Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

HI & AS: Data acquisition, data analysis, critical review, approval of the final version to be published.

AA & AU Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

AK & MK: Conception, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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