

ORIGINAL RESEARCH

A study on obsessive-compulsive symptoms in patients with schizophrenia

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ABSTRACT

Background: Obsessive compulsive (OC) symptoms have been well documented in the course of schizophrenia, their effect on its symptom profile is uncertain and clinical implications of this comorbidity are unclear. With this background the present study was undertaken to examine the presence of OC symptoms in schizophrenia. **Objectives:** 1. To know the presence of obsessive-compulsive symptoms in schizophrenia. 2. To know the type and severity of obsessive-compulsive symptoms in patients with schizophrenia. 3. To study the association between socio-demographic and phenomenological factors of the patients of schizophrenia with obsessive compulsive symptoms. **Materials & Methods:** 100 patients diagnosed with schizophrenia according to ICD-10 criteria were assessed using PANSS and Y-BOCS symptom checklist and Scale. Socio-demographic and clinical information was collected using specially designed proforma. Data collected was analysed using descriptive statistics and chi-square test for significance. **Results:** In present study, 21% of schizophrenia patients were found to have co-morbid OC symptoms. Most frequently reported OC symptoms among schizophrenia patients were aggressive obsessions and miscellaneous compulsions. OC symptoms of moderate severity were more frequently encountered among these patients. Majority of such patients presented with mixed obsessional thoughts and acts. Schizo-obsessive patients were observed to have younger age of onset of psychosis, longer duration of illness and positive family history of mental illness. Majority of schizo-obsessive patients were found to be suffering from undifferentiated or paranoid subtypes of schizophrenia with higher PANSS positive symptom subscale score. **Conclusion:** Co-morbid OC symptoms are seen in a significant proportion of schizophrenia patients. Types of obsessions and compulsions experienced by patients with schizophrenia are similar to those found in classical obsessive-compulsive disorder. OC symptoms represent a clinically meaningful dimension of psychopathology in schizophrenia and clinician awareness of the possible co-occurrence of schizophrenia and OCD is clearly warranted.

Keywords: Schizophrenia; Obsessive-compulsive disorder; Comorbidity; Psychopathology

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INTRODUCTION

Obsessive-compulsive (OC) symptoms, in contrast to positive, negative and cognitive symptoms, have not been considered as primary features of schizophrenia. When clinical presentations and neurobiological pathways underlying schizophrenia and obsessive-compulsive disorder (OCD) are assessed, findings clearly reveal converging trajectories. Influential German psychiatrist Emil Kraepelin and Swiss psychiatrist Paul Eugen Bleuler held different views regarding interrelationship of obsessive-compulsive phenomenon and schizophrenia. Kraepelin did not consider OC symptoms a psychopathological component of the disease, whereas Bleuler considered OC symptoms a possible feature of the prodromal phase of schizophrenia, with chronic

obsessions as an actual manifestation of the disorder. Alfred Gordon, the American psychiatrist primarily focused on psychopathological relationship between obsessive and delusional phenomena and suggested that obsessions and delusions represent a continuum of related disorders. In patients with schizophrenia, OC symptoms may clinically present as obsessions with contamination, religious, sexual, somatic or aggressive themes with or without accompanying compulsions such as checking, cleaning, repeating, hoarding or arranging. The significance of OC symptoms in patients with schizophrenia is poorly understood, it is still unclear whether these OC symptoms are part of persistent schizophrenic psychosis or whether they represent a distinct symptom cluster that resembles OCD. The effect of

OCD on schizophrenia symptom profile is uncertain and clinical implications of this comorbidity are unclear. Research evidence suggests that OC symptoms are seen in a significant number of patients with schizophrenia and indicate a poor prognosis. Dorsolateral prefrontal cortex circuit is implicated in schizophrenia and cortico-striatal-thalamic-cortex circuit is implicated in OCD.

Both disorders involve predominantly serotonergic and dopaminergic neurotransmitter systems. Parallel cortical-subcortical pathways and similar anatomical structures have been documented for both the illnesses, suggesting the possibility that a common functional aberration can lead to the co-occurrence of OCD and schizophrenia.

MATERIALS AND METHODS

The institutional ethical committee clearance was obtained. In each case, before collection of information, the design and nature of this clinical study was explained to the patients and their significant relatives. Informed consent in English and/or in local language was obtained from each

patient/relative who was included in the study. All patients were first examined by consultant psychiatrist to clinically confirm diagnosis of schizophrenia using ICD-10 criteria. Using a specially designed proforma, investigator then collected socio-demographic information, brief history and did physical examination and mental status examination. Subsequently each patient was administered following scales:

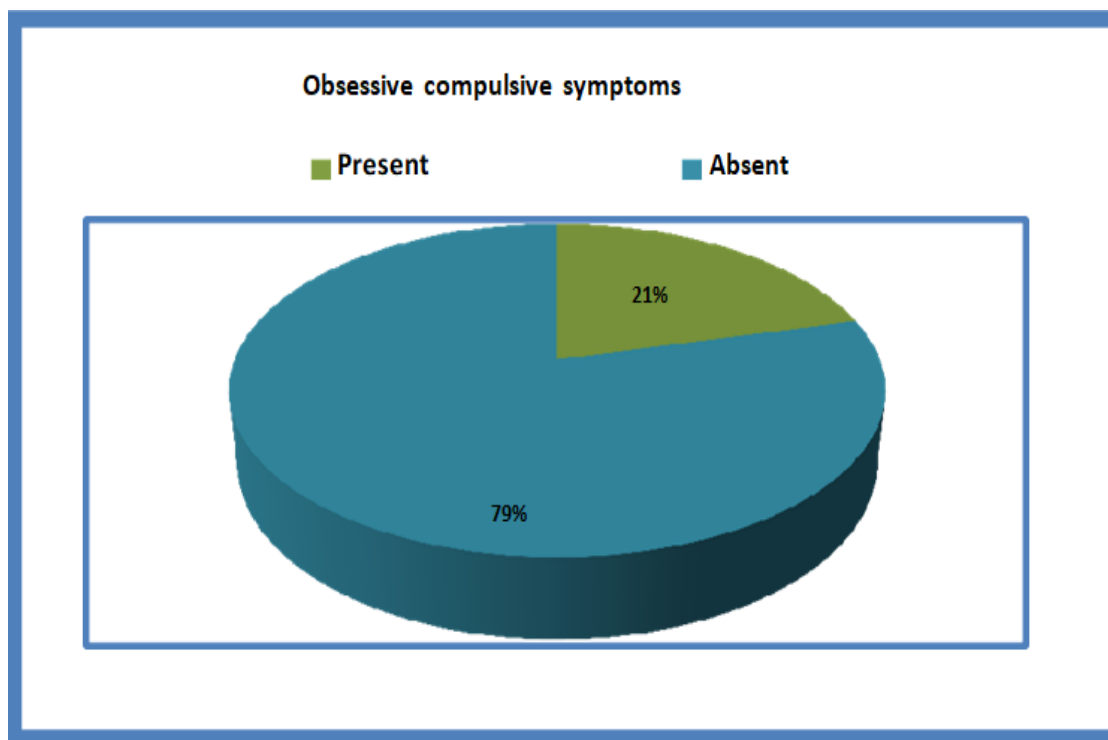
- PANSS (Positive and negative syndrome scale)
- Y-BOCS (Yale-Brown obsessive compulsive scale) symptom checklist
- Y-BOCS severity scale.

Linda Porto et al. studied 50 long-term patients with chronic schizophrenia for occurrence of OC symptoms and found that 46% patients reported clinically significant OC symptoms on basis of this sample size came to be 93, so we take 100 people in study. The occurrence, type, severity of OC symptoms in patients with schizophrenia and the association between socio-demographic and phenomenological factors in such patients was analysed by using proper statistical tools.

RESULTS

Table1- Occurrence of obsessive-compulsive symptoms in schizophrenia patients.

Obsessive compulsivesymptoms	Frequency(n=100)	Percent (%)
Present	21	21.0
Absent	79	79.0
Total	100	100.0



Graph 1- Occurrence of obsessive-compulsive symptoms in schizophrenia patients

In this study, 21% of schizophrenia patients were found to have co-morbid obsessive-compulsive symptoms.

Table 2- Types of obsessions identified by Y-BOCS symptom checklist.

Types of Obsessions	Frequency	Percent (%)
Aggressive Obsessions	11	27.5
Contamination Obsessions	8	20
Sexual Obsessions	6	15
Religious Obsessions	4	10
Miscellaneous Obsessions	7	17.5
Somatic Obsessions	1	2.5
Need for symmetry Obsessions	3	7.5

Table 3- Types of compulsions identified by Y-BOCS symptom checklist

Types of Compulsions	Frequency	Percent (%)
Cleaning/Washing Compulsions	8	27.5
Checking Compulsions	5	17.2
Repeating Compulsions	3	10.3
Miscellaneous Compulsions	10	34.4
Counting Compulsions	1	3.4
Ordering/Arranging Compulsions	2	6.8

Table-4 Distribution of study participants according to age of onset of schizophrenia and presence of OC symptoms

Age of onset of schizophrenia (years)	Obsessive compulsive symptoms				Total	
	Present		Absent			
	Count	%	Count	%	Count	%
10-20	8	26.70%	22	73.30%	30	30%
20-30	8	17.00%	39	83.00%	47	47%
30-40	4	23.50%	13	76.50%	17	17%
40-50	1	16.70%	5	83.30%	6	6%
Total	21	21.00%	79	79.00%	100	100%

P=0.76

Table 5- Distribution of study participants according to duration of schizophrenia and presence of OC symptoms

Duration of illness (years)	Obsessive compulsive symptoms				Total	
	Present		Absent			
	Count	%	Count	%	Count	%
<1	0	0%	8	100.00%	8	8%
1-3	6	17.10%	29	82.90%	35	35%
3-5	4	23.50%	13	76.50%	17	17%
5-10	4	22.20%	14	77.80%	18	18%
10-15	6	40.00%	9	60.00%	15	15%
>15	1	14.30%	6	85.70%	7	7%
Total	21	21.00%	79	79.00%	100	100%

P=0.31

Table-6- PANSS composite scale score and presence of OC symptoms

PANSS composite scale score (Positive symptoms score -negative symptoms score)	Obsessive compulsive symptoms				Total	
	Present		Absent			
	Count	%	Count	%	Count	%
Positive type (>0)	15	25.90%	43	74.10%	58	58%
Negative type (<0)	6	14.30%	36	85.70%	42	42%
Total	21	21.00%	79	79.00%	100	100%

P=0.22

Table 7- PANSS composite scale score and OC symptom severity

Age (years)	Obsessive compulsive symptoms				Total	
	Present		Absent			
	Count	%	Count	%	Count	%
18-25	6	16.20%	31	83.80%	37	37%
26-30	7	30.40%	16	69.60%	23	23%
31-35	1	6.70%	14	93.30%	15	15%
36-40	1	14.30%	6	85.70%	7	7%
41-45	2	28.60%	5	71.40%	7	7%
46-50	2	66.70%	1	33.30%	3	3%
51-55	2	40.00%	3	60.00%	5	5%
56-60	0	0%	3	100.00%	3	3%
Total	21	21.0%	79	79.00%	100	100%

P=0.21

In this study, as identified by Y-BOCS score, 10 schizophrenia patients were found to have moderate OC symptoms. Severe OC symptoms were found in 7 and 1 patient reported extreme OC symptoms. Out of 21 schizophrenia patients having OC symptoms, 18 were found to have mixed obsessional thoughts and acts. Only 3 patients reported predominantly obsessional thoughts or ruminations.

In this study, 66.70% of schizophrenia patients in 46-50 years age group had OC symptoms, followed by 40% in 51-55 age group, 30.40% in 26-30 age group, 28.60% in 41-45 age group and 16.20% in 18-25 age group respectively. In this study, 26.30% female patients and 17.70% male patients reported OC symptoms. However, this was not statistically significant. In this study, 26.70% of patients who had onset of schizophrenia in the age group of 10-20 years were found to have OC symptoms at the time of assessment.

DISCUSSION

1. Out of 100 schizophrenia patients included in the study, 21% were found to have co-morbid OC symptoms.
2. Most frequently reported OC symptoms among schizophrenia patients were aggressive obsessions and miscellaneous compulsions.
3. OC symptoms of moderate severity were more frequently encountered among schizo-obsessive patients.
4. Majority of patients having schizo-obsessive disorder presented with mixed obsessional thoughts and acts.
5. Schizo-obsessive patients were observed to have younger age of onset of psychosis, longer duration of illness and positive family history of mental illness.
6. Majority of schizo-obsessive patients were found to be suffering from undifferentiated or paranoid subtypes of schizophrenia with higher PANSS positive symptom subscale score.

A) OBSESIVE COMPILSIVE SYMPTOMS IN SCHIZOPHRENIA

In the present study, obsessive compulsive symptoms were detected in 21% patients suffering from schizophrenia. In India, Jaydeokar et al did a study to determine the prevalence of OC symptoms among chronic schizophrenic patients. The study revealed that 26.7% of chronic schizophrenic patients had significant OC symptoms. In another study done by Michael Poyurovsky et al 68 patients suffering from schizophrenia were evaluated for comorbid OCD and it was reported that 16 of the patients (23.5%) met the DSM-IV criteria for OCD. Matthew Byerly et al assessed the frequency of OC symptoms among outpatients with schizophrenia and schizoaffective disorder. They reported 30% of patients exhibited two or more OC symptoms and 19% had at least moderate OC symptoms (YBOCS score >16). Twenty-three percent met full DSM-IV criteria for OCD.

B) CHARECTERSTICS OF OBSESSIONS AND COMPULSIONS IN SCHIZOPHRENIA

In the present study, we examined the type of obsessions reported by schizophrenia patients. As identified by Y-BOCS symptom checklist, most frequently reported obsessions among schizophrenia patients were of aggressive themes followed by contamination obsessions, miscellaneous obsessions, sexual, religious, need for symmetry and somatic obsessions in that order. As identified by Y-BOCS symptom checklist, most frequently reported compulsions were- miscellaneous compulsions followed by cleaning/washing compulsions. Other types of compulsions reported were checking, repeating, ordering/arranging and counting compulsions in that order. Miscellaneous compulsions include- mental rituals (other than checking/counting), excessive list making, need to tell/ask/confess, need to touch/tap/rub and rituals involving blinking or staring. Our findings suggest that obsessions and compulsions experienced by patients with schizophrenia are phenomenologically similar to typical OCD symptoms.

Linda Porto et al conducted a study on profile of OC Symptoms in schizophrenia and concluded that the OC symptoms encountered among schizophrenia patients include contamination, aggressive, sexual, religious and miscellaneous obsessions and compulsions.

Tibbo et al in their study reported that schizophrenia patients have OC symptoms similar to non-schizophrenic OCD patients. These OC symptoms include contamination and sexual obsessions, cleaning compulsions and repetitive rituals.

OBSESSIVE COMPULSIVE SEVERITY

In the present study, we examined OC symptoms severity among schizophrenia patients who were found to have co-morbid OC symptoms. As identified by Y-BOCS scale, 48% patients had a Y-BOCS score in the range of 16-23 indicating moderate OC symptoms.

In the study done by Michael Poyurovsky et al, the mean total Y BOCS score of the schizo-obsessive group was 22.8 indicating moderate OC symptoms which is in accordance to our findings. In India, Jaydeokar et al studied OC symptom severity in schizophrenics and reported a mean Y-BOCS score of 19.55 indicating moderate OC symptoms. Findings reported in our study are consistent with this finding. **When findings from these studies are corroborated with our findings, it can be observed that moderate OC symptoms are more frequently encountered among schizo-obsessive patients.**

TYPE OF SCHIZOPHRENIA AND OCD SYMPTOMS

In the present study, according to ICD-10 subtypes of schizophrenia, 25% patients suffering from undifferentiated schizophrenia and 22.60% patients suffering from paranoid schizophrenia reported OC symptoms. OC symptoms were not reported in any other subtype of schizophrenia. These findings are in line with findings reported by Michael Y Hwang et al who reported that even though paranoid subtype of schizophrenia was more prevalent in study population, significantly more patients in the schizo-obsessive group were diagnosed with undifferentiated schizophrenia. Jaydeokar et al also reported a higher incidence of OC symptoms among paranoid schizophrenics as compared to other subtypes, which was statistically significant.

PANSS COMPOSITE SCALE SCORE AND OCD SYMPTOMS

From assessment with the PANSS, we classified schizophrenic patients as predominantly positive or negative type according to the valence of their Composite Scale score (i.e., positive minus negative value above zero being positive and below zero

being negative). In this study, 25.90% patients having positive symptoms predominant schizophrenia were found to have OC symptoms. Among schizophrenia patients with predominant negative symptoms, 14.30% had OC symptoms. This was not found to be statistically significant. 15.5% positive symptoms predominant schizophrenia patients had moderate OC symptoms. Among negative symptoms predominant schizophrenia patients, 4.8% had mild & 4.8% had severe OC symptoms. This was not found to be statistically significant.

In the study conducted by Dost Ongur et al it was reported that mean PANSS positive symptom subscale score was significantly higher for group of schizophrenia patients with most severe OC symptoms when compared to group of schizophrenia patients with no or intermediate OC symptoms.

In the study conducted by Bulent Kayahan et al it was reported that the total score on Y-BOCS was significantly correlated with the total score on PANSS-positive subscale while it was not significantly correlated with negative-PANSS score.

In accordance with these findings, it is observed that OC symptoms in schizophrenia are reported more frequently in patients with severe positive symptoms and severity of OC symptoms is more in such patients.

CONCLUSION

From this study, we may conclude that co-morbid OC symptoms are a relatively frequent finding in schizophrenia. OC symptoms represent a clinically meaningful dimension of psychopathology in schizophrenia and clinician awareness of the possible co-occurrence of schizophrenia and OCD is clearly warranted. Types of obsessions and compulsions experienced by patients with schizophrenia are similar to those found in classical obsessive-compulsive disorder and majority of such patients had moderate severity of mixed obsessional thoughts and acts. OC symptoms were more frequently reported in patients with early age of onset of schizophrenia and longer duration of illness. Family history of mental illness and higher score of positive symptoms was observed among patients with co-morbid schizophrenia and OC symptoms. Maximum number of schizophrenics reporting OC symptoms were suffering from undifferentiated or paranoid schizophrenia.

Additional research is needed to delineate the etiology, genetics, neurobiology, psychopathology and treatment of the subset of schizophrenia patients with OC symptoms.

Further longitudinal studies with larger samples of patients are essential to clarify whether the presence of OC symptoms in schizophrenia represents a comorbidity between the two disorders or a distinct schizo-obsessive subtype of schizophrenia.

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