Abstract

Introduction: Schizophrenia is a heterogeneous severe mental disorder presenting with different symptom clusters. Obsessive-compulsive symptoms (OCS) frequently occur in substantial proportion of patients with schizophrenia though wide variation in prevalence is noted by different studies. Few studies have found relationship between positive symptoms in schizophrenia and OCS. However there have been a lack of studies in the Indian setup related to this topic. The current study systematically assessed prevalence and clinical profile of schizophrenia patients with obsessive-compulsive symptoms attending a tertiary care centre in South India. Further, the relationship between psychopathology and OCS were also analysed.

Settings and Design: Cross sectional descriptive study carried out in 4 urban ICDS blocks in Kozhikode corporation from July 2012 to June 2013.

Methods and Material: A cross-sectional study design was used to assess 100 consecutively admitted patients satisfying the ICD-10 criteria for schizophrenia. Socio-demographic profile was obtained using semi-structured proforma and severity of schizophrenia symptoms was assessed using PANSS. YBOCS checklist was used to assess and record the obsessive-compulsive symptoms. Patients satisfying checklist for obsessive-compulsive disorder were further assessed by administering YBOCS. Descriptive statistics and Pearson correlation were used to analyse the results.

Statistical analysis used: SPSS v.20

Results: From the current study, prevalence of OCS was 28%, it being more common in males (30%). The most common OCS were aggressive obsessions (20%), with somatic obsessions (14%) being a close second. OCS are present in a significant number of patients with predominantly positive symptoms (p=0.001).

Conclusions: The patients with schizophrenia exhibited a high prevalence of obsessive-compulsive symptoms in their clinical presentation. OCS seems to have a strong association with positive symptoms among psychopathology in these patients.

Key-words: Prevalence, obsessive-compulsive symptoms, schizophrenia

Introduction:

Schizophrenia is a chronic severe mental illness encompassing a wide spectrum of disorders within it.(1) Even though, the patients with schizophrenia can present in the clinical setting with different symptom clusters other than typical of schizophrenia like positive and negative symptoms, usually less attention is given to additional non-schizophrenia psychopathologies like obsessive-compulsive disorder (OCD) and anxiety disorder.(2, 3) As compared to positive, negative and cognitive symptoms, Obsessive-compulsive symptoms are not considered as primary features of schizophrenia. Obsessive-compulsive symptoms (OCS) frequently occur in a substantial proportion of patients in schizophrenia though a wide variation in prevalence is noted. According to studies done in the various parts of the world, the prevalence has been found to be as low as 1.1% to as high as 50%(4) whereas according to studies in the Indian setup, the prevalence has been found to range from 10.57%(5) to 24%. (6) Epidemiological studies estimate that 12% of schizophrenia patients also fulfil the criteria for obsessive-compulsive disorder (OCD) and that every fourth patient reports obsessive, distressing, intrusive thoughts and related compulsions. (7)

The points providing basis for relationship between schizophrenia and OCD are frequent comorbidities between the two conditions, initiation or exacerbation of OCS in patients with schizophrenia treated with atypical antipsychotics and subsequent development of schizophrenia or psychotic symptoms in patients with a prior
primary diagnosis of OCD. (8) During the past decade, an increasing body of evidence showed that the existence of comorbid OCSs in schizophrenia patients is associated with high subjective burden of disease, poorer social and vocational function, greater service utilization (4) and heightened levels of anxiety and depression (9) and that these additional impairments may contribute to a poor overall prognosis. (10)

A recent meta-analysis by Cunill et al reported more severe global positive and negative symptoms in the presence of OCS. (11) Certain studies investigating the relationship between obsessive-compulsive symptoms and negative and positive symptoms in schizophrenia found patients with OCS having more of positive symptoms. (12)

Many studies have been done in western countries in this regard but very few studies exist in Indian literature with respect to prevalence of OCS in schizophrenia patients and their correlation with other symptoms of schizophrenia. Hence, this study was aimed to systematically assess the prevalence and clinical profile of obsessive compulsive symptoms in patients with schizophrenia attending a tertiary care hospital in Chennai.

### Subjects and Methods:

This cross-sectional study was conducted at a tertiary care centre in South India. 100 consecutive patients who met the ICD-10 criteria for schizophrenia were included as the participants of this current study. The participants were recruited from the Out-patient and in-patient departments after obtaining an informed written consent from them. Ethical committee approval was obtained before the start of the study.

The participants were in the age group between 18-45 years and gave informed written consent for participating in the study. Patients with history of substance use disorders and mood disorders were excluded from the study. Also patients with history of head injury and neurological disorders like seizures and tics were excluded for the study.

The diagnosis of schizophrenia is ascertained on detailed clinical examination using ICD-10 DCR. Schedules Clinical Assessment Neuropsychiatry (SCAN) was administered to all the participants of the study to include only patients with schizophrenia or patients with schizophrenia and co-morbid obsessive-compulsive disorder (OCD) and to rule out other co-morbid mental disorders.

Semi-structured proforma was used to collect information regarding socio-demographic characteristics and other related clinical information regarding the study participants. Positive And Negative Syndrome Scale (PANSS) was employed for assessing the severity psychopathology symptoms in schizophrenia.

Yale-Brown Obsessive Compulsive Scale symptom checklist (CY-BOCS) was administered for all the participants to assess the presence of obsessive-compulsive symptoms (OCS) and to record the type of obsessive-compulsive symptoms present in them. If the patients with schizophrenia satisfied the criteria for OCD by Y-BOCS checklist, they were further evaluated by administering Yale-Brown Obsessive Compulsive Scale (Y-BOCS) for detecting the severity of OCD in them.

Mean and standard deviation were used for the quantitative variables while the categorical variables were calculated as frequencies and percentages. Pearson correlation was used to assess the relationship among the obsessive-compulsive, positive and negative symptoms in patients with schizophrenia.
Results:

The demographic profile of the 100 participants of the current study is described in Table no. 1. In the study, the mean age of patients was 35.82yrs ± 7.64. Nearly two-third of the patients were female(60%). Most of the patients were educated up to secondary level and were married, unemployed, belonging to lower middle class, residing in urban areas(63%) and following Hinduism(76%).

The prevalence of Obsessive-Compulsive symptoms(OCS) in schizophrenia patients attending a tertiary care centre was 28%, while the prevalence of patients satisfying the criteria for obsessive-compulsive disorder(OCD) was 14%. (Table no. 2)

Table no. 3 describes the age-wise distribution of OCS in patients with schizophrenia. It was found that the prevalence of OCS was more in the middle age group of 36 – 45 years than the younger age group population. The most common OCS was found to be aggressive obsessions(20%) and among the aggressive obsessions, fear of harming self or others by not being careful enough and blurtting out obscenities was found in greater number of people. (Table no. 4) Somatic obsessions like excessive concern with illness or body parts or appearance were also seen in 14% of patients. Around 16% also had miscellaneous obsessions like need to know or remember, fear of making mistakes, intrusive images and superstitious fears.

In the present study, comparison between the schizophrenia patients with and without OCS were made with respect to demographic variables and illness characteristics and it is represented in Table no. 5. The analysis showed that these two groups were not statistically different in the compared variable. Comparison between PANSS and OCS was done using Pearson correlation. (Table no. 6) Significant association was found between OCS and positive symptoms(p=0.001),

<table>
<thead>
<tr>
<th>AGE</th>
<th>OCS POSITIVE</th>
<th>OCS NEGATIVE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>N 4</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>%</td>
<td>28.57</td>
<td>71.43</td>
<td></td>
</tr>
<tr>
<td>26-35</td>
<td>N 7</td>
<td>28</td>
<td>35</td>
</tr>
<tr>
<td>%</td>
<td>20</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>36-45</td>
<td>N 17</td>
<td>34</td>
<td>51</td>
</tr>
<tr>
<td>%</td>
<td>33.33</td>
<td>66.67</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Table showing age-wise distribution of OCS in patients with schizophrenia.

<table>
<thead>
<tr>
<th>OCS</th>
<th>Positive(%)</th>
<th>Negative(%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCS</td>
<td>28</td>
<td>72</td>
<td>100</td>
</tr>
<tr>
<td>OCD</td>
<td>14</td>
<td>86</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2: Prevalence of OCS and OCD in patients with schizophrenia.

Fig 1: Prevalence of various OC symptoms found in the study group
general psychopathology symptoms (p=0.008) and total score (p=0.001) whereas there seemed to be no significant association between negative symptoms and OCS.

**Discussion:**

The aim of the present study was to examine the prevalence of Obsessive-compulsive symptoms in patients with schizophrenia and to compare clinical features of patients with and without OCS. We recruited 100 consecutive subjects diagnosed as schizophrenia and detailed evaluation was done assessing for psychopathology and obsessive-compulsive symptoms.

In the present study, we found the prevalence of OCS in schizophrenia to be 28% which is consistent with most of the studies reported earlier though a wide variation in the prevalence of OCS in the world as well in India is seen.(6,13,14) Prevalence of OCD in our study was found to be 14%. Previous studies show the prevalence to be around 8.8%(9) to 19%(8). Our findings are in accord with most of the previous studies.(15,16) Our study findings together with findings from other studies suggest increased prevalence of OCD in schizophrenia as compared to the general population.

Considering the frequency of various obsessive and compulsive symptoms, our study had maximum patients suffering from aggressive obsessions(20%) followed by miscellaneous(16%) and Somatic obsessions(14%). Amongst the compulsive symptoms, cleaning was most common. Comparing with previous studies by Devi et al and Tibbo et al (6,17), we found that contamination related obsessions were more common followed by pathological doubts and aggressive obsessions whereas amongst the compulsions, cleaning was most prevalent followed by miscellaneous and checking.(8,13) Contamination and sexual obsessions were found to be more prevalent in a study by Turkcan et al followed by cleaning compulsions(18). Our study is in accord with most other studies stating cleaning compulsions to be more prevalent in schizophrenics but differs when it comes to obsessions, stating that aggressive obsessions are amongst the most prevalent OCSs found in schizophrenia patients.

Clinical characteristics of schizophrenia patients with and without OCS were compared. No significant difference was found with respect to age of patient, age of onset of illness, duration of illness, duration of untreated psychosis and duration of treatment. Findings are consistent with previous study by Nolfe et al(19) but studies by Hemrom et al(5) and Jaydeokar et al (20) have found that schizophrenic patients with OCS were having significantly longer duration of illness.

Our study found a significant association between OCS and positive and general psychopathology symptoms. Available studies in patients with schizophrenia and co-morbid OC symptoms compared to patients with schizophrenia alone have yielded interesting and contradictory results, the pattern of findings was highly variable; correlations between OCS and various schizophrenic dimensions have often been found(21) Certain studies show a positive correlation between OCS and positive symptoms.(9,12) while certain studies show correlation between OCS and negative symptoms(22).

The increased prevalence of OCS in schizophrenia to-
together with findings from clinical and neurobiological studies have prompted investigators to propose schizo-oedusive as a distinct diagnostic entity. While higher prevalence of OCS in schizophrenia in OCS is well established, the impact of OCS on clinical profile of schizophrenia is inconclusive and many questions must be answered to determine if presence of OCS in schizophrenia warrants a distinct diagnostic entity of 'schizo-oedusive disorder'.(23)

One of the major limitation of the present study is the small sample size of schizophrenia patients with OCS. Other limitations are the cross-sectional study design and recruiting subjects from the hospitalized in-patients. Results of the study should be interpreted with these limitations in the background. Further, medication history of the participants was not included for the study as antipsychotic medications could induce obsessive-compulsive symptoms.(24)

Our findings have important clinical implications. They highlight the importance of assessing OC symptoms in schizophrenia patients owing to the high prevalence of OCS in subjects with schizophrenia. Further studies are needed to evaluate the neurobiology of this comorbidity and prospective studies are required for better understanding of the impact of OCS on the course of schizophrenia.

**Conclusion:**

Prevalence of OCS is high in patients with schizophrenia. The clinical profile of schizophrenia patients with and without OCS is comparable. A significant association exists between the positive symptoms and OCS in patients with schizophrenia. The results of the present study kindles the argument for schizo-oedusive disorder as a separate entity and further research is needed in this regard.

**References:**


