

FREQUENCY OF OBSESSIONS IN SCHIZOPHRENIA CROSS-SECTIONAL STUDY IN TERTIARY TECHING CARE HOSPITALS QUETTA BALOCHISTAN

Dr, Sardar Muhmmad Zahir⁽¹⁾ Prof Dr, Ghulam Rasool⁽²⁾

Dr, Hazrat Ali Khan⁽³⁾ Dr, Syed Mir Usman Shah⁽⁴⁾ Dr Naseeb
Ullah⁽⁵⁾ Sana Ullah kakar⁽⁶⁾

ABSTRACT

Introduction: Patients suffering from schizophrenia comorbid with obsessions receive only anti-psychotics, if anti-obsessional treatment is added then there will be a good response to the treatment. Knowing the frequency of obsessions in these patients in our setup, For better results, it may be possible to optimise individualised pharmacological and psychological treatment treatments.

Objective: To determine the frequency of obsessions among schizophrenic patients in psychiatry department of a tertiary care hospital.

Methods: After taking informed consent, detailed history, mental status examination, general physical examination and complete systematic examination was carried out on all the patients.

questionnaire was given to the patients to know the obsessions.

SPSS-10 was used to generate different frequency tables.

Results: 163 adult patients of either gender who were diagnosed cases of schizophrenia according to the 10th version of the International Classification of Diseases (ICD-10) were included in the study. Over all frequency of obsessions in schizophrenic patients was found to be 11.04% (n=18) in our setup. In male patients, frequency of obsessions was found to be 13.18% (n=12) and it was 08.33% (n=06) in females.

Conclusions: Frequency of obsessions in patients diagnosed with schizophrenia was found to be 11.04% in our setup. Males showed a slightly higher frequency than females. Our results are in concordance with the already published results.

KEY WORDS

Shizophrenia, Obsessions, Obsessive compulsive disorders

INTRODUCTION

A severe mental disorder called schizophrenia is characterised by profound distortions in ideas, feelings, and perceptions. Patients

with schizophrenia place a heavy load on the mental health care system due to long-term impairment, social dysfunction, frequent hospitalisation, substance addiction, and generally low compliance (Zafar et al., 2008). If anti-obsessional medications are combined with neuroleptics when treating people with schizophrenia and obsessive-compulsive disorder together, the results are better (Khan et al., 2004).

Schizophrenia patients experienced obsessive compulsive (OC) symptoms may present with a range of clinical manifestations, such as contamination, sexual, religious, violent, or somatic themes, with or without compulsions to clean, check, hoard, repeat, or organise early medical professionals like Westphal (Hudak & Rasmussen, 2022), Kraepelin (1919), Stengel (1945), OC phenomena were regarded by & Bleuler (1958) as either a prodrome or a crucial component of the schizophrenia disorder.

Westphal Hudak & Rasmussen, (2022) stated that the OC syndrome was hypothesised to be a prodrome and variation of schizophrenia in 1878, and Bleuler, (1958) believed that certain

patients with persistent obsessional symptoms were actually schizophrenic. Stengel (1945) proposed that adaptive defence mechanisms may interplay between neurotic OC symptoms and psychotic reactions as the condition progressed. The incidence rates of comorbid OC symptoms were found to be 1.1% and 3.5%, respectively, in early studies by Jaherresis and Rosen. They came to the conclusion that patients with OC schizophrenia tended to have a more favourable prognosis and clinical course. Early research that suggested OC schizophrenia patients had a low prevalence rate and a benign clinical outcome has recently come under scrutiny. Numerous epidemiological and clinical investigations, including a statewide, multicenter Epidemiological Catchment Area (ECA) research, have used this new theory to determine that schizophrenia has an OCD comorbidity rate of 12.2%, and schizophreniform illness has an OCD comorbidity rate of 1.3% (Karno et al., 1988). Schizophrenia often manifests its symptoms in young adulthood, with a lifetime frequency of 0.3-0.7% worldwide (Picchioni et al., 2017).

The authors carried out the study because patients were suffering from schizophrenia comorbid with obsessions receive only anti-psychotics, if anti-obsessional treatment is added then there will be a good response to the treatment. In the future, particular symptoms could possibly be assessed, and individualised pharmaceutical and psychological treatment strategies will be used to achieve the best results. Schizophrenia is typically characterised by cognitive deficiencies such as attention, memory, and executive function issues as well as favourable signs include delusions or hallucinations, slurred speech, negative symptoms like a flat attitude or terrible speaking, and positive symptoms like hallucinations or delusions. Antipsychotic medications are initially used treat schizophrenia. Medication paired with research-based psychosocial therapy can help patients recover.

EPIDEMIOLOGY OF SHIZOPHRENIA

There are schizophrenia cases everywhere. The prevalence of schizophrenia, or the proportion of people who have it at any particular time, is close to 1% worldwide. Annual incidence is

around 1.5 new cases per 10,000 persons (McGrath et al., 2008). About 1.4 times as many males as women are diagnosed with schizophrenia (Wei et al., 2020), as compared to males, women typically are diagnosed later in life. Additionally, some evidence suggests that men have a worse prognosis (Grossman et al., 2008; Usall et al., 2003).

CO-OCCURRING CONDITIONS

Several mental diseases are more common in those with schizophrenia than in those without the condition, including:

- Depressive conditions
- Obsessive-compulsive disorder, posttraumatic stress disorder, and social anxiety disorder are examples of anxiety disorders.
- Alcoholism and drug addiction are both problems.

Schizophrenia patients are also more likely to develop co-occurring diseases like neurological and metabolic issues.

Compared to the overall population, those with schizophrenia have a significantly higher suicide rate. Over the course of their lifetime, five percent of those who have schizophrenia commit

suicide (Hor & Taylor, 2010). Schizophrenics account for about 10% of all completed suicides (Arsenault-Lapierre et al., 2004; Suominen et al., 2002).

COST

Schizophrenia has a catastrophic financial impact. In 2002, it was projected that schizophrenia cost the US economy \$63 billion overall. This sum accounts for both direct medical expenses and indirect costs from lost production. An individual with chronic schizophrenia typically spends more than \$15,000 per year on health-related expenses, according to a new study looking at US insurance claims.

GENETIC RISK

Research studies on monozygotic twins shown that schizophrenia has a significant genetic component. But schizophrenia is not solely a hereditary disorder. Monozygotic twins, who have identical DNA, would always be consistent with the schizophrenia diagnosis if schizophrenia were solely a hereditary

disorder. The concordance rate would be closer to the 1% rate seen in the general population if schizophrenia were not a genetic disorder. About 40 to 50 percent of concordance has been recorded (Cannon et al., 1998; Cardno et al., 1999; Kringlen, 2000).

ENVIRONMENTAL RISK

OBSTETRICAL COMPLICATIONS

Numerous prenatal issues, together referred to as "obstetrical complications" for research purposes, double the likelihood that schizophrenia may develop later in life (Clarke et al., 2006). Among these prenatal problems are:

- Hemorrhage
- Pre-term labor
- Blood-group incompatibilities
- Fetal hypoxia
- Maternal infection

Although studies indicate that the risk does not seem to be altered by erroneous memories, the accuracy of these data has been questioned because they are based on maternal recall from several

years after childbirth (Buka et al., 2000; Walshe et al., 2011). Additionally, non-recall information from medical records have shown a link between obstetrical problems and the emergence of schizophrenia (Clarke et al., 2006).

INFECTIONS

Potential contributing elements to the development of schizophrenia several infectious diseases have been researched:

- In cohorts born during influenza outbreaks, according to epidemiological research, the prevalence of schizophrenia is rising. (Brown & Derkits, 2010).
- The infants with schizophrenia risk is higher for people who were born in the late winter or early spring. which may be related to more mothers being exposed to the flu virus during the baby's early brain development.
- Studies have shown that high maternal toxoplasma gondii IgG antibodies raise the relative chance that a child would develop schizophrenia is between 60 and 70 percent (Brown et al., 2005; Mortensen et al., 2007;).

INFLAMMATION

Circulating cytokines increase with immune system activation, and elevated cytokine levels have frequently been seen in schizophrenia (Miller et al., 2011). The alteration in blood-brain barrier and local production of cytokines by activated microglia in the CNS may be the causes of psychosis, its exacerbation, or cognitive deficits (Monji et al., 2009). The anti-inflammatory properties of these pharmaceuticals may serve as a partial mediator for the effects of antipsychotic medications (A Kato et al., 2011).

CANNABIS USE

Cannabis use may increase the likelihood that someone will develop psychosis, according to epidemiological studies (Andréasson et al., 1987; Van et al., 2002; Kristensen & Cadenhead, 2007). Retrospective studies' initial findings were equivocal since cannabis usage was possible among those who had psychotic illnesses even before they were given a diagnosis. This would recommend that the use of cannabis considered risk factor for psychosis relatively than the opposite. Subsequently, well-

organized, potential studies involving hundreds of individuals corroborated the theory that the cannabis usage could be a risk factor and that psychosis is the consequence of that risk factor (McGrath et al., 2010).

IMMIGRATION

Studies from several different nations have found that immigrants are more likely than native-born people to suffer schizophrenia. This higher relative risk may rise by a factor of up to four, depending on the study. Additionally, second-generation immigrants appear to be at a higher risk (Werbeloff et al., 2012; Bourque et al., 2011).

DELUSIONS

About 80% of patients with schizophrenia have delusions, which are characterised as a persistent mistaken belief (Andreasen & Flaum, 1991). People with schizophrenia frequently explain their hallucinations with erroneous justifications because their ability to understand their disease may be compromised. Delusions can be broadly divided into weird and non-bizarre types.

- Bizarre illusions have little chance of being real because they are implausible in every way. Their content is not understandable (APA, 2013). Basic notions, such as how a person views time, space, the self, or causation, may be explained in an unexpected manner (Cermolacce et al., 2010). A patient who believes that aliens have built him a lovely body, rather finding a way to get rid of his head in order for his spirit to enter the new body is an example of a weird hallucination.

DEFICIT SCHIZOPHRENIA

People suffering the condition, schizophrenia shows noticeable negative (deficiency) symptoms which appear due to unique subgroup, despite this subtype not being recognised by the DSM-IV-TR (Kirkpatrick et al., 2001). Compared to those with nondeficit schizophrenia, those with deficient delusions with a strong emotional component, such as jealous delusions, are less common in people with schizophrenia (Fenton & McGlashan, 1994; Kirkpatrick et al., 1994; Kirkpatrick et al., 1996). The likelihood

that a deficient person will get well and recover over the course of their sickness is the lowest.

COGNITIVE IMPAIRMENT

Below are descriptions of the schizophrenia appears to have the greatest influence on some cognitive domains (Nuechterlein et al., 2004). It is unclear if these areas represent a number of distinct deficiencies or a generalised deficit that impacts a number of cognitive domains (Gold et al., 2009; Dickinson et al., 2004).

- Processing speed
- Attention
- Working memory
- Verbal learning and memory
- Visual learning and memory
- Reasoning/executive functioning
- Verbal comprehension
- Social cognition

The results of neuropsychological testing among individuals with schizophrenia reflect these abnormalities. Schizophrenia

patients often perform one to two standard deviations worse on cognitive tests than do healthy controls (Gold et al., 2009). An individual's pre-morbid performance was almost certainly above average if they test inside any specific neuropsychological test battery's normal range. When compared to healthy controls of the same age, education, and IQ, schizophrenia patients initially did not appear to have cognitive impairment may actually display a distinct pattern of memory and processing speed abnormalities (Wilk et al., 2005; Palmer et al., 1997).

ASSOCIATED PHYSICAL MANIFESTATIONS

Schizophrenia is accompanied by a number of medical symptoms, such as neurological problems, catatonia, and metabolic issues.

NEUROLOGICAL DISTURBANCES

Subtle deficits in motor coordination, sensory integration, and sequencing are examples of neurological soft symptoms (Heinrichs & Buchanan, 1988). Right-left confusion, agraphesthesia (the inability to recognise letters or numbers inscribed on the skin,

especially on the palm of the hand), and astereognosia (the inability to recognise familiar things by touch alone) are a few instances of neurological soft symptoms. These generally consistent neurological soft signals, which are seen in schizophrenia, are essentially unrelated to medication (Arango et al., 1999; Bombin et al., 2005; Arango et al., 2000).

A criteria for diagnosing schizophrenia are the existence of characteristic symptoms of the disorder lasting six months without diagnosis of another type that would more accurately describe the presentation (for example, drug use, any other specific medical conditions, and with a psychotic mood disorders).

Characteristic symptoms of schizophrenia:

- Negative symptoms
- Delusions
- Hallucinations
- Disorganised speech
- Disorganised or catatonic behaviour

Unless delusions are strange or if the hallucination includes voices arguing/discussing or a voice commenting, only one of these five A-criteria symptoms must be present in order to meet the diagnostic criteria. If there are prominent negative symptoms, this can be noted as a specifier to the diagnosis (i.e. “With Prominent Negative Symptoms”). However, there is little evidence that these subtypes are particularly stable (Kendler et al., 1988), that they cluster in families (Karno et al., 1988), or that they provide any clinical utility beyond describing someone’s presentation at the time the diagnosis was made.

OBJECTIVES

The objective of the study was to determine the frequency of obsessions among schizophrenic patients in psychiatry Department of a tertiary care hospital.

OPERATIONAL DEFINITIONS

Obsessions are uncontrollable, ego-dystonic ideas, thoughts, or impulses that reoccur repeatedly and cannot be eradicated from consciousness by logic or reason (Law & Martin, 2020). It will be

measures on interview from the patient by a using the DSM-IV-TR, a questionnaire (Table 6) based on the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (Table 7).

Schizophrenia is a mental illness characterised by the breakdown of emotional responsiveness and thinking processes. It frequently presents with auditory hallucinations, odd or paranoid delusions, or disorganised speech and thought, and it is followed by severe social or occupational dysfunction (Martin, 2010). It was measured by applying International Classification of Diseases 10th version (ICD-10)

MATERIALS AND METHODS

STUDY DESIGN:

Descriptive cross-sectional study

SETTING:

Psychiatry Department, Bolan Medical Complex Hospital, Quetta

DURATION:

From 07-02-2012 to 08-08-2012 (six months)

SAMPLE SIZE:

Keeping confidence level of 95%, obsessive symptoms prevalence in Schizophrenia will be 12% (Zafar et al., 2008) and absolute precision required 5% the sample size calculated is 163.

SAMPLE TECHNIQUE:

Non-probability Consecutive Sampling

SAMPLE SELECTION:

INCLUSION CRITERIA:

All the patients suffering from schizophrenia were included in the study.

EXLUSION CRITERIA:

Patients who were not fulfilling the International Classification of Diseases 10th version (ICD-10) for schizophrenia were excluded from the study because inclusion of cases other than schizophrenia could result in introduction of bias in study result.

DATA COLLECTION PROCEDURE:

All the schizophrenic patients reported to Psychiatry

Department of a tertiary care hospital were considered for this study. In Psychiatry ward, after taking informed consent, detailed history, mental status examination, general physical examination and complete systematic examination, International classification of Disease 10th version (ICD-10) (Table 8) was used to select the patients. A questionnaire (Table 6) was given to the patients to know the obsessions. Proforma of the variables is attached as (Table 9).

Questionnaire for the patients to know the obsessions

No.	Questions	Answer
1	Do you frequently have uncomfortable or unsettling ideas, urges, or images in your mind?	Yes
		No
2	Do you believe that no matter how hard you try, you can't get rid of these ideas or images?	Yes
		No
3	Do you struggle to stop yourself from performing repetitive actions like counting, checking on things, washing your hands, rearranging objects, repeating actions until they feel natural, collecting worthless objects, and/or repeating sentences aloud?	Yes
		NO
4	Do you fear that if you don't repeat these actions, think them, or take additional precautions, something horrible might happen?	Yes
		No
5	Do you spend more than an hour per day thinking about the same things?	Yes
		No
6	Do your recurrent thoughts disrupt your daily activities?	Yes
		No

7	Do your constant thoughts affect how you function?	Yes
		No
8	Do your constant thoughts affect how you interact with others?	Yes
		No

DATA ANALYSIS PROCEDURE:

SPSS 10.0 version was used for data analysis. Age of the study subjects was measured by mean and \pm (standard deviation). Male and female ratio was calculated. Frequency of obsessions was calculated and presented in tabular form.

RESULTS

DEMOGRAPHY OF THE SELECTED POPULATION

163 adult patients of either gender who were diagnosed cases of schizophrenia as per our operational definition and who reported to Psychiatry Department of a tertiary care hospital were included in the study. In Psychiatry ward, after taking informed consent, detailed history, mental status examination, general physical examination and complete systematic examination was carried out on all the patients. A questionnaire (Table 6) was given

to the patients to know the obsessions. 91 patients (55.8 %) were male with the mean age of 39.21 years \pm 14.06 Standard Deviation (SD) and 72 (44.2%) were female with mean age of 40.91 years \pm 18.53 SD. Cumulative mean age was 39.96 years \pm 18.53 SD. Demographic results are shown in table 10.

Table 1: Demographic profile of study population

	Number (Percentage)	Mean Age \pm SD (years)
Male	91 (55.8 %)	39.21 \pm 14.06
Females	72 (44.2%)	40.91 \pm 18.53
Total	163 (100%)	39.96 \pm 18.53

FREQUENCY OF OBSESSIONS IN STUDY POPULATION

Out of total 163 patients selected for the study, there were 18 (11.04%) patients who were diagnosed as having obsessions as per our operational definition. In 91 (100%) male patients, frequency of obsessions was found to be 12 (13.18%). In 72 (100%) female

patients, frequency of obsessions was found to be 06 (08.33%).

These results are shown in table 11.

Table 2: Frequency of obsessions

Gender	Total	Frequency of Obsession	Percentage
Male	91	12	13.18%
Female	72	06	08.33%
Total	163	18	11.04%

DISCUSSION

A severe mental disorder called schizophrenia is characterised by profound distortions in ideas, feelings, and perceptions. Patients with schizophrenia place a heavy load on the mental health care system due to long-term impairment, social dysfunction, frequent hospitalisation, substance addiction, and generally low compliance (Khan et al., 2004). If anti-obsessional medications are combined with neuroleptics for the schizophrenia treatment co-occurring with that of obsessive-compulsive disorder, the results are better (Cunill et al., 2009). Over the past 100 years, a variety of ways have been

used to define obsessive-compulsive symptoms as a component of schizophrenia. Contamination, as well as sexual, religious, violent, or somatic themes, may be symptoms of OCD, along with or without compulsions including cleaning, checking, hoarding, repating, and arranging.

REFERENCES

1. A Kato, T., Monji, A., Mizoguchi, Y., Hashioka, S., Horikawa, H., Seki, Y., ... & Kanba, S. (2011). Anti-Inflammatory properties of antipsychotics via microglia modulations: are antipsychotics a 'fire extinguisher' in the brain of schizophrenia?. *Mini reviews in medicinal chemistry*, 11(7), 565-574.
2. A.P.A., American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. Washington, DC: American Psychiatric Association; 1995. Text Revision (DSM-IV-TR).
3. Adler, L. E., Hoffer, L. D., Wiser, A., & Freedman, R. (1993). Normalization of auditory physiology by cigarette smoking in schizophrenic patients. *The American journal of psychiatry*, 150(12), 1856-1861.
4. Akhondzadeh, S., Tabatabaee, M., Amini, H., Abhari, S. A. A., Abbasi, S. H., & Behnam, B. (2007). Celecoxib as adjunctive therapy in schizophrenia: a double-blind, randomized and placebo-controlled trial. *Schizophrenia research*, 90(1-3), 179-185.
5. Alonso, P., Menchon, J. M., Pifarre, J., Mataix-Cols, D., Torres, L., Salgado, P., & Vallejo, J. (2001). Long-term

follow-up and predictors of clinical outcome in obsessive-compulsive patients treated with serotonin reuptake inhibitors and behavioral therapy. *Journal of Clinical Psychiatry*, 62(7), 535-544.

6. Amador, X. F., Kirkpatrick, B., Buchanan, R. W., Carpenter, W. T., Marcinko, L., & Yale, S. A. (1999). Stability of the diagnosis of deficit syndrome in schizophrenia. *American Journal of Psychiatry*, 156(4), 637-639.
7. Amminger, G. P., Schäfer, M. R., Papageorgiou, K., Klier, C. M., Cotton, S. M., Harrigan, S. M., ... & Berger, G. E. (2010). Long-chain ω -3 fatty acids for indicated prevention of psychotic disorders: a randomized, placebo-controlled trial. *Archives of general psychiatry*, 67(2), 146-154.
8. Andreasen, N. C., & Flaum, M. (1991). Schizophrenia: the characteristic symptoms. *Schizophrenia bulletin*, 17(1), 27-49.
9. Andreasen, N. C., & Olsen, S. (1982). Negative v positive schizophrenia: Definition and validation. *Archives of general psychiatry*, 39(7), 789-794.
10. Andreasen, N. C., Carpenter Jr, W. T., Kane, J. M., Lasser, R. A., Marder, S. R., & Weinberger, D. R. (2005). Remission in schizophrenia: proposed criteria and rationale for consensus. *American Journal of Psychiatry*, 162(3), 441-449.
11. Andréasson, S., Engström, A., Allebeck, P., & Rydberg, U. (1987). Cannabis and schizophrenia a longitudinal study of Swedish conscripts. *The Lancet*, 330(8574), 1483-1486.
12. APA, A. P. A. (2013). *Diagnostic and statistical manual of mental disorders*. The American Psychiatric Association.
13. Arango, C., Bartko, J. J., Gold, J. M., & Buchanan, R. W. (1999). Prediction of neuropsychological performance by

- neurological signs in schizophrenia. *American Journal of Psychiatry*, 156(9), 1349-1357.
14. Arango, C., Kirkpatrick, B., & Buchanan, R. W. (2000). Neurological signs and the heterogeneity of schizophrenia. *American Journal of Psychiatry*, 157(4), 560-565.
15. Arsenault-Lapierre, G., Kim, C., & Turecki, G. (2004). Psychiatric diagnoses in 3275 suicides: a meta-analysis. *BMC psychiatry*, 4, 1-11.
16. Avila, M. T., Sherr, J. D., Hong, E., Myers, C. S., & Thaker, G. K. (2003). Effects of nicotine on leading saccades during smooth pursuit eye movements in smokers and nonsmokers with schizophrenia. *Neuropsychopharmacology*, 28(12), 2184-2191.
17. Baxter, L. R., Schwartz, J. M., Bergman, K. S., Szuba, M. P., Guze, B. H., Mazziotta, J. C., ... & Phelps, M. E. (1992). Caudate glucose metabolic rate changes with both drug and behavior therapy for obsessive-compulsive disorder. *Archives of general psychiatry*, 49(9), 681-689.
18. Bellack, A. S. (2006). Scientific and consumer models of recovery in schizophrenia: concordance, contrasts, and implications.
19. Benros, M. E., Nielsen, P. R., Nordentoft, M., Eaton, W. W., Dalton, S. O., & Mortensen, P. B. (2011). Autoimmune diseases and severe infections as risk factors for schizophrenia: a 30-year population-based register study. *American Journal of Psychiatry*, 168(12), 1303-1310.
20. Berman, I., Merson, A., Viegner, B., Losonczy, M. F., Pappas, D., & Green, A. I. (1998). Obsessions and compulsions as a distinct cluster of symptoms in schizophrenia: a neuropsychological study. *The Journal of nervous and mental disease*, 186(3), 150-156.

21. Karno, M., Golding, J. M., Sorenson, S. B., & Burnam, M. A. (1988). The epidemiology of obsessive-compulsive disorder in five US communities. *Archives of general psychiatry*, 45(12), 1094-1099.