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Research Article

Suicidality among patients with Schizophrenia and Bipolar Disorder: A Comparative Analysis

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ABSTRACT

Schizophrenia and Bipolar disorders are chronic mental health conditions that can result from genetic, social and psychological factors. Both these disorders lead to functional impairment and poor treatment compliance leading to overlapping neuropsychological deficits which are linked to high suicidality including both suicidal ideation and attempt. Suicidal ideation comes before suicide and therefore for healthcare professionals, understanding suicidal ideation is important as it is a risk factor for suicide and both the patients with schizophrenia and bipolar disorder do not live independently, have unstable relationships with family and friends along with lower level of overall life satisfaction which can lead to functional impairment, suicidal ideation and behavior. The present study is descriptive and comparative. It includes 50 schizophrenic patients and 50 bipolar patients from private hospitals in Punjab, India. The study measured suicidal ideation with Beck Scale for Suicidal Ideation having 21 items. The results showed a high prevalence of suicidal ideation in both disorders with a significant difference of p-value= 0.01*. The study also indicated the significant association of gender, age range and educational level with suicidal ideation in bipolar patients as compared to schizophrenic patients suggesting that sociodemographic variables play an important role towards the risk of suicidal ideation.

Keywords: Schizophrenia, Bipolar disorders, Suicidality

INTRODUCTION

Schizophrenia disorder is prevalent in one in 300 people or 24 million people globally as per World Health Organization (2022) and according to the World Mental Health Survey Initiative, Bipolar disorder was present in 40 million people worldwide in 2019 (Merikangas et al., 2011). Schizophrenia disorder is characterized by severe behavioral problems and perceptual disturbances including delusions, hallucinations, aberrant behavior and negative symptoms on the other hand, Bipolar disorder is characterized by severe disturbances in mood categorized into manic and depressive phases leading to behavioral, emotional and social problems (ICD-10). It is well-documented that Schizophrenia and Bipolar disorder are chronic mental health conditions that can result from a combination of genetic, psychological and social components or due to one component independently (Kurtz et al., 2018). An increasing amount of research points towards potential shared genetic vulnerabilities between Schizophrenia and Bipolar disorder and it may negatively affect functional outcomes, social performance and treatment compliance which may present equivalent or overlapping europsychological deficits (Tolman and Kurtz, 2012; Ancin et al.,2013). Neuropsychological or cognitive deficit is also closely related to high suicide rates in various studies of patients with suicidality including both suicide attempts and suicidal ideation (Pu et al., 2017; Verma et al., 2016). According to National Crime Record Bureau (NCRB), 164033 individuals committed suicide in India in 2021, a rise of 7.2% from the year 2020. The high suicide rates are linked with mood disorders followed by Schizophrenia. But the majority of suicidality research to date has been on successfully attempted or accomplished suicide in both Schizophrenia and Bipolar disorders. However, in Suicidality, Suicidal ideation and preparation are crucial elements in a process of suicide marked

by underlying severity. Suicidal ideation comes before planning, which may end in an attempt ultimately leading to death. Presence of suicidal ideation is in a "waxing and waning manner" and over time has noticeably changed intensity and characteristics (Harmer et al., 2020). For healthcare professionals, understanding suicidal ideation is important as it is a risk factor for suicide and suicide is one of the major significant factors for early mortality rates in schizophrenia and bipolar disorders there is little information on suicidal ideation among patients with Schizophrenia and Bipolar disorders (Laursen et al., 2014). The treatment choices for schizophrenia and bipolar disorders have significant improvement in the past decades but still, the statistics of suicide have not decreased at a significant level. One of the reasons for this could be that previous research focuses on earlier suicidal ideation and attempt rather than assessing the recent suicidal ideation because for suicide risk prevention recent suicidal ideation will be more useful. Suicidal ideation is a major risk factor for suicide and both the patients with schizophrenia and bipolar disorder do not live independently, has unstable relationships with family and friends along with lower level of overall life satisfaction which can lead to functional impairment, suicidal ideation and behavior. Therefore, this study focuses on assessing the prevalence of suicidal ideation among patients with schizophrenia and bipolar disorder with less severity in order to achieve homogeneous results. This study also aims to compare the different socio-demographic variables associated with suicidal ideation among patients with schizophrenia and bipolar disorder.

METHODOLOGY

Research Design:
The present study will be based on descriptive and comparative research design to measure suicidality among patients with Schizophrenia and Bipolar disorder.

Participants:
The present study will include a total sample of 100 patients consisting of 50 schizophrenic and 50 bipolar patients already diagnosed by a psychiatrist in accordance with the ICD-10 or DSM-V diagnostic criteria from private hospitals in Punjab, India.

Inclusion criteria:
- Patients diagnosed with Schizophrenia and Bipolar disorder who are currently symptomatic and on treatment.
- Patients with Schizophrenia and Bipolar disorder were selected with mild to moderate severity.
- Patients from the age group of 18 to <60 belonging from either sex.

Exclusion criteria:
- Patients with any other co-morbid psychiatric illness.
- Patients with any serious co-morbid medical or neurological illness.
- Patients with intellectual disability and epilepsy
- Patients with a history of any substance abuse.

Ethical criteria:
- Before taking part in the study, each patient and their guardians will provide informed written consent.
- The participation will be voluntary and will be kept confidential.
- The research and data collection will be followed in accordance with the ethical standards of the concerned institutional committee.

Sampling technique:
The technique that is used to collect data from patients from private hospitals in Punjab, India is random sampling.

Tools Used :
- **Structured Questionnaire developed by the Researcher**: shall be used for ascertaining the socio-demographic details of the subjects.

- **The Positive and Negative Syndrome Scale by Kay et al. (1987):** It is a standardized 30-item rating scale for evaluation of the severity of symptoms and psychopathology in Schizophrenia patients.

- **Beck Depression Inventory (BDI-II) by Beck et al. (1996):** It is a self-reporting measure consisting of 21 items for evaluating the severity of symptoms. It is designed to measure key symptoms of depression as defined by DSM-V diagnostic criteria.

• **Young Mania Rating Scale (YMRS) by Young et al. (2000):** It is one of the most used rating scales for evaluating the severity of manic symptoms. It consists of 11 items and is based on a subjective assessment of the patient's clinical status over the last 48 hours.

• **Beck Scale for Suicide Ideation by Beck and Steer (1991):** It is a standardized scale that is used to measure the severity of suicidal ideation. It is a self-report version with 21 items.

Data analysis:

• Percentage analysis will be used for assessing the prevalence of Suicidality among patients with Schizophrenia and Bipolar disorder.
• T-tests will be used for comparing the prevalence and socio-demographic variables among patients with Schizophrenia and Bipolar disorder.
• Data analysis will be done with SPSS-22.

RESULTS

Table 1: Percentage analysis showing the prevalence of suicidal ideation.

SEVERITY	SCHIZOPHRENIA DISORDER	BIPOLAR DISORDER
SUICIDAL IDEATION (%)	84%	88%

Table 1 shows the prevalence of suicidal ideation among patients with schizophrenia and bipolar disorder through percentage analysis which is 84% among patients with schizophrenia and 88% among patients with bipolar disorder.

Table 2: Suicidal ideation significance among patients with schizophrenia and bipolar disorder.

Group	**N**	**Mean**	**SD**	**t**	**P**
Schizophrenia Disorder	50	19.76	8.23	1.98	0.01
Bipolar disorder	50	24.08	8.30		

*p-value of <0.01 is significant

Table 2 shows the N, Mean, SD and p-value indicating the difference between suicidal ideation among patients with schizophrenia and bipolar disorder with the use of a t-test that comes out to be statistically significant (0.01).

Table 3: Comparison of socio-demographic variables.

Socio-demographic variables	**Schizophrenia Disorder Mean(SD)**	**Bipolar Disorder Mean(SD)**
Gender		
Male	17.61(7.77)	23.07(6.45)
Female	22.18(9.06)	29.35(3.39)
T	1.99	2.09
p-value	0.03*	0.005**
Age (in years)		
18-30	22.11(6.2)	17.63(7.73)
31 to <60	28.4(4.67)	22.05(6.93)
T	2.14	2.02
p-value	0.10	0.05*
Marital status		
Single/divorced/widow	19.41(8.58)	21.45(9.94)
Married	22.66(5.16)	17.15(8.42)
T	2.06	2.04
p-value	0.26	0.19
Educational Qualification		
Primary and higher secondary	18.37(8.14)	17.22(8.05)
Graduate and above	24.11(6.02)	25.22(5.09)
T	2.09	2.07
p-value	0.04*	0.007*

**p-value <0.005, *p-value <0.01 and <0.05

Table 3 shows the Mean and SD values of the socio-demographic variables of patients with both schizophrenia and bipolar disorder. It also shows the comparison between each socio-demographic variable with the use of a t-test and values of <0.01 and <0.05 are taken as significant and <0.005 as highly significant.

DISCUSSIONS

This study aimed to assess the prevalence of suicidal ideation among patients with schizophrenia and bipolar disorder as well as to compare the prevalence of suicidal ideation. It also aims at comparing the socio-demographic variables of patients associated with suicidal ideation to understanding which variables are more likely associated with suicidal ideation in patients with both disorders. For this 50 schizophrenic and 50 bipolar patients were taken from Punjab, India. In the sample, suicidal ideation among patients with schizophrenia and bipolar disorder is highly prevalent that is 84% and 88% respectively. Patients with bipolar disorder have more suicidal ideation as compared to schizophrenic patients and upon comparing both the groups showed a difference at the p-value of 0.01* which is significant which is in accordance with a previous study on US veterans diagnosed with schizophrenia and bipolar disorder also showed that veterans diagnosed with bipolar disorder showed more suicidal ideation (27.8%) as compared to veterans with schizophrenia that is 27.8% and 23.9% (Harvey et al., 2018). At least one in every two patients with bipolar disorder had suicidal ideation at present and a review study of an adolescent patient with bipolar disorder reported that 50% has current suicidal ideation frequencies which is very high and for adults prevalence rates being between 14%-59% indicating earlier age of onset being significant with high suicidal ideation (Hauser et al., 2013). Fang et al. (2019) reported that patients with schizophrenia have more suicidal ideation than the general population and suggested that approximately 15% of patients with schizophrenia had recently experienced suicidal ideation. Based on a comparison between socio-demographic variables of patients with schizophrenia and bipolar disorder, patients diagnosed with bipolar disorder showed a high level of gender difference associated with suicidal ideation at a highly significant p-value of 0.005**, whereas gender difference associated with suicidal ideation in patients among schizophrenia is only significant at a p-value of 0.03*. Earlier studies have also reported similar results that in gender, females with bipolar disorder were strongly correlated with an increased lifetime risk of suicidal ideation even with a considerably small sample size, and being married was also highly related to suicidal ideation (Harvey et al., 2018). Even in schizophrenia studies show gender differences to be significant and more importantly, females have more suicidal ideation than males (Austad et al., 2015). Conejero et al. (2018) suggest that patients in the older age range showed more suicidal ideation as compared to patients with younger age in bipolar disorder which is in accordance with the results of this study which indicated that age ranges significantly affect (p-value=0.05*) suicidal ideation in bipolar patients, however, the difference in the age range of patients with schizophrenia does not show any significant distinction though studies indicated that when diagnosed at a later age, especially from 35-45 years of age with schizophrenia show higher suicidal ideation rates (Mitter et al., 2013). With a 1.1% annual increase in suicide, the only independent risk factor was the age of the commencement of illness (Castelein et al., 2015; Austad et al., 2015; Mitter et al., 2013). The present study did not show any significant difference in marital status associated with suicidal ideation in both disorders. However, marital status has also been found to be significant with p=0.015 (Ayalew et al., 2021). On an educational level, results suggested that suicidal ideation has higher significance (p-value= 0.007*) with the level of education of patients in bipolar patients than with schizophrenic patients where the significance level is 0.04*. Studies show Presence of suicidal ideation in association with educational status was found to be significant with and 0.001 respectively (Popovic et al., 2014). Chong et al (2020) suggested that patients with secondary and tertiary levels of education were associated 5.8 and 9.3 times more with suicidal ideation as compared to patients with only formal education. Higher education contributes towards suicidal ideation because the high level of education is related to a higher sense of loss of oneself which is brought on by illness directly. This signifies that even with a small sample the prevalence of suicidal ideation has been found to be higher and comparison among socio-demographic variables showed significant results indicating that variables such as gender, age range, marital status and educational level play an important role towards the risk of suicidal ideation which is an important preventive factor for risk management of suicide.

LIMITATIONS

One of the major limitations of this study was that the patients with both schizophrenia and bipolar disorder were on treatment and the treatment process was not controlled as well as it did not take into consideration the patients with a high severity of symptoms of schizophrenia and bipolar disorder. It did not focus on clinical risk factors for suicidal ideation among patients with both disorders. It lacked in finding an association between the types of symptoms of both schizophrenia and bipolar disorder with suicidal ideation.

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