

THE SEVERITY OF PSYCHOPATHOLOGY, SUICIDALITY AND LEVEL OF INSIGHT IN PATIENT OF SCHIZOPHRENIA IN THE STUDY POPULATION

Koushik Nandi¹, Amitava Dan², Sandip Dutta³, Utpal Barman⁴

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Corresponding Author:
Dr. Utpal Barman,
Email: utpalbarman718@gmail.com

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¹Cosultant Psychiatrist, Basirhat District Hospital. West Bengal, India.

²Associate Professor, Department of Psychiatry, Burdwan Medical College & Hospital, West Bengal, India.

³Senior Resident, Department of Psychiatry, Burdwan Medical College & Hospital, West Bengal, India.

⁴Senior Resident, Department of Psychiatry, Jalpaiguri Govt. Medical College & Hospital, West Bengal, India.

Abstract

Background: Relation between psychopathology, insight and suicidality in patients with schizophrenia is very complex. Current study intended to explore this issue. **Materials and Methods:** It was a descriptive and observational study in which 50 new patients with schizophrenia (as per ICD-10, DCR) attending Psychiatry OPD of a tertiary care hospital, fulfilling the study selection criteria were recruited and assessed on Positive and Negative Syndrome Scale of Schizophrenia (PANSS), Schedule for Assessment of Insight (SAI) scale, Beck's Suicidal Ideation (BSI) scale to measure severity of psychopathology, insight and suicidality respectively. **Result:** Out of 50 cases 42 (84%) cases had H/O suicidal attempt(s) in the past. Which is fairly high in number. H/O hospitalization(s) for Psychiatric illness present in 11 (22%) cases. And 39 (78%) cases had no H/O hospitalization(s) for psychiatric illness. Family H/O schizophrenia in cases belongs to 7 (14%) cases. Positive correlation between psychopathology and insight found in this study. Negative correlation between insight and suicidality was detected. **Conclusion:** In this study of people with schizophrenia psychopathology, insight and suicidality systematically examined and correlation found. To get a more accurate idea large scale study which is community based, longitudinal and with some control group is required.

INTRODUCTION

In India, where about 1.1 billion people reside, the prevalence of schizophrenia is about 3/1000 individuals.^[1] It is more common in men, and in terms of age of onset, men tend to be younger by an average of about five years than women when they develop schizophrenia.^[2]

A comprehensive analysis of 51 studies found a strong connection between despair, hopelessness, a history of suicide attempts, and drug usage, among other variables, and subsequent suicide among schizophrenics.^[3] Schizophrenia manifests itself in a variety of ways, from positive to negative symptoms and cognitive impairment. According to a research, hallucinations were the most prevalent positive symptom.^[4] Due to a predisposition for illogical thought and behavior that leads to purposeful acts and psychotic symptoms show as distinct risk factors for suicide.^[5]

The reciprocal relationship between insight and psychopathology,^[6] shows that delusional thinking

and beliefs are linked. Severe delusional diseases, on the other hand, by definition prohibit other explanations in people who are sick, especially when they are at their worst. People with severe disease, by definition, lack insight because they believe in the reality of their psychotic experience and are unable to accept a biological explanation for their condition. As a result, persons with milder types of psychosis will be regarded to have insight if they see sickness inside themselves rather than alternate explanations for their psychotic experiences. As a result, people with good insight will have better clinical outcomes than those with more severe psychotic states who firmly believe in their delusional convictions. People with milder disease will be able to entertain and consider alternative biomedical explanations for their illness, which suggest disease, and will thus have better clinical outcomes than those with more severe psychotic states who firmly believe in their self-deluded convictions.^[7]

This study seeks to identify those risk factors associated with suicidality, the pattern of suicidality, severity of psychopathology and level of insight in patient and association between suicidality, insight and psychopathology in patient of schizophrenia. Hence, this study also takes into account and improves understanding of the problem.

MATERIALS AND METHODS

It was a descriptive and observational study. Among all new patients with schizophrenia (as per ICD-10, DCR version) attending Psychiatry OPD of a tertiary care hospital, we had selected the first case of every week during study period (1 year \approx 52 weeks) of schizophrenia with suicidality (as per M.I.N.I.5.0.0 scale, suicidality sub-domain) and fulfilling the other study selection criteria to recruit for the current study i.e. 50 cases was the sample size for the current study.

Inclusion Criteria

1. With diagnosis of schizophrenia, fulfilling criteria of code F20 as per ICD-10. DCR version.
2. Those are suicidal, with score 1 or more as per suicidality sub-domain of M.I.N.I.5.0.0 scale.
3. Giving informed consent for participating in the study.
4. Age between 18 to 59 years.

Exclusion Criteria

1. With major psychiatric illness other than schizophrenia
2. With mental retardation
3. With known organic disorder or chronic major physical illness
4. Psychologically and/or physically too unstable and not fit for psychological assessment

Study Tools and Variables

1. The ICD-10 Classification of Mental and Behavioural Disorders, Diagnostic Criteria for Research (DCR): To diagnose schizophrenia (code F20 of ICD-10-DCR).
2. Schedule for Assessment of Insight (SAI): To assess level of insight.
3. Positive and Negative Syndrome Scale of Schizophrenia (PANSS): To assess the psychopathology
4. Beck's Suicidal Ideation (BSI) scale: To assess the suicidality.

Methodology

50 new cases with schizophrenia (as per ICD-10, DCR version) attending Psychiatry OPD of a tertiary care hospital, who was suicidal (as per M.I.N.I.5.0.0 scale, suicidality sub-domain) was recruited for the current study. All 50 patients were assessed on Positive and Negative Syndrome Scale of Schizophrenia (PANSS), Schedule for Assessment of Insight (SAI) scale, Beck's Suicidal Ideation (BSI) scale to measure severity of psychopathology, level of insight, and pattern of suicidality respectively. Data was collected and analyzed by appropriate statistical methods to examine the relation of suicidality with psychopathology, insight.

RESULTS

We have found maximum number of the cases i.e. 21(42%) belongs 20-30 years of age group. 17 (34%) cases belongs to 31-40 years of age group, another 6(12%) cases found in 41-50 & 51-59 years of age group respectively.

Table 1: Age distribution (N=50)

Age in Year	No of Cases	Percentage
20 – 30	21	42
31 – 40	17	34
41 – 50	06	12
51 – 59	06	12
Total	50	100

Table 2: Sex distribution (N=50)

Sex	No of Cases	Percentage
Male	22	44
Female	28	56
Total	50	100

Sex distribution among study population we have found, Female were predominantly higher than male cases. Male were 22 (44%) & Female were 28 (56%) respectively.

Table 3: Age at onset & duration of the disease (N=50)

Type of family	Mean	SD
Age at onset of schizophrenia	20.02	± 5.27
Duration of schizophrenia	7.67	6.63

The mean duration of Age at onset of schizophrenia was 20.02 years and Mean duration of schizophrenia was 7.67 years respectively.

Table 4: Life-time suicidal attempt(s) (N=50)

H/O suicidal attempt(s)	No of cases	Percentage
Yes	42	84.0
No	08	16.0
Total	50	100

Out of 50 cases 42 (84%) cases had H/O suicidal attempt(s) in their life-time.

Table 5: PANSS Positive Sub-scale scores (N=50)

Descriptive Statistics					
Positive Sub-scale items	N	Minimum	Maximum	Mean	Std. Deviation
P1	50	4.00	6.00	5.160	±0.680
P2	50	4.00	6.00	4.620	±0.752
P3	50	1.00	6.00	4.200	±1.665
P4	50	1.00	5.00	4.040	±1.087
P5	50	1.00	5.00	2.900	±1.359
P6	50	4.00	6.00	5.100	±0.788
P7	50	2.00	6.00	4.060	±1.476
Total Positive Sub-scale score	50	23.00	37.00	30.200	±4.531

Mean & SD value of PANSS Total Positive Subscale Score was 30.200±4.531. Maximum patients had 'delusion (P1)' mean score 5.16 followed by 'suspiciousness (P6)' mean score 5.10.

Table 6: PANSS Negative Sub-scale scores (N=50)

Descriptive Statistics					
Negative Subscale items	N	Minimum	Maximum	Mean	Std. Deviation
N1	50	1.00	4.00	1.900	±1.111
N2	50	1.00	3.00	2.200	±0.903
N3	50	1.00	2.00	1.440	±0.501
N4	50	1.00	3.00	2.300	±0.646
N5	50	2.00	7.00	5.360	±1.208
N6	50	1.00	5.00	2.920	±0.876
N7	50	1.00	4.00	2.960	±0.879
Total Negative Sub-scale score	50	11.00	25.00	19.080	±3.457

Mean & SD value of PANSS Total Negative Subscale score was 19.080±3.457. In which most patient had 'difficulty in abstract thinking (N5)' with mean score 5.36.

Table 7: PANSS General psychopathology sub-scale scores (N=50)

Descriptive Statistics					
General psychopathology subscale items	N	Minimum	Maximum	Mean	Std. Deviation
G1	50	1.00	5.00	2.360	±1.005
G2	50	2.00	5.00	3.480	±0.838
G3	50	1.00	5.00	2.180	±1.350
G4	50	2.00	5.00	3.280	±1.030
G5	50	1.00	1.00	1.000	±0.000
G6	50	2.00	4.00	2.880	±0.848
G7	50	1.00	1.00	1.000	±0.000
G8	50	1.00	3.00	1.280	±0.701
G9	50	3.00	7.00	5.340	±0.960
G10	50	1.00	4.00	1.920	±0.876
G11	50	1.00	2.00	1.400	±0.494
G12	50	2.00	5.00	3.400	±0.968
G13	50	2.00	5.00	3.120	±1.271
G14	50	2.00	5.00	3.780	±0.953
G15	50	2.00	6.00	4.340	±1.451
G16	50	1.00	5.00	2.860	±0.969
Total General psychopathology Subscale score	50	36.00	52.00	43.6200	±4.902
Total PANSS score	50	70	114		

For the whole sample Total General Psychopathology Sub-scale scores, minimum was 36.00 and maximum was 52.00. The mean & SD value were 43.62 ± 4.90. Among patients maximum number had 'unusual thought content (G9)' with mean 5.34 & SD 0.96.

Table 8: Correlation between PANSS General Psychopathology Sub-scale score and Schedule for Assessment of Insight (SAI) total score (N=50)

Correlations			
		SAI	Psychopathology
SAI	Pearson Correlation	1	.373**
	P Value		.008

	No of Cases	50	50
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 9: Correlation between Schedule for Assessment of Insight (SAI) total score and Beck's Suicidal Ideation (BSI) total score (N=50)

Correlations			
		SAI	BSI
SAI	Pearson Correlation	1	-.314*
	P Value		.027
	No of Cases	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

Table 10: Correlation between PANSS General Psychopathology Sub-scale score & Beck's Suicidal Ideation (BSI) total score (N=50)

Correlations			
		BSI	PANSS General psychopathology
BSI	Pearson Correlation	1	-.322*
	Sig. (2-tailed)		.023
	N	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

Table 9: Correlation between Socio-demographic profile & BSI total score (N=50)

Correlations between Socio-demographic variables & BSI Score											
BSI Score		Age	Sex	Marital Status	Religion	Education	Occupation	Income	Family Income	Family Type	Locality
BSI	Pearson Correlation	.150	-.026	-.180	.187	.381**	-.239	.146	.438**	.341*	.089
	P Value	.298	.857	.210	.194	.006	.095	.312	.001	.015	.539
	No	50	50	50	50	50	50	50	50	50	50

** Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

We have found a positive correlation of Socio-demographic variables such as Education, Family income & Family type with BSI score, factors were .381**, .438 & .341 and p value was 0.006, 0.001 & 0.015 respectively.

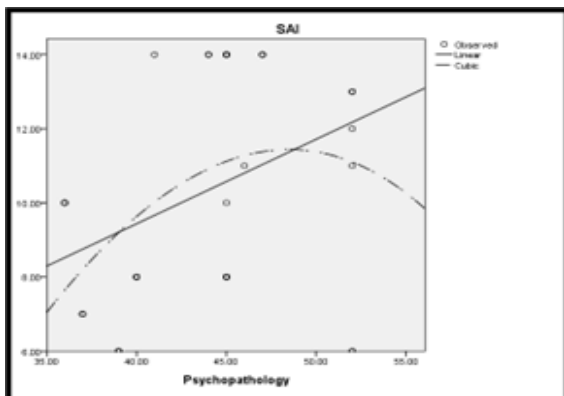


Figure 1: Correlation between PANSS Psychopathology sub-scale score and Schedule for assessment of insight (SAI) total scale score.

We have also found correlation between PANSS General Psychopathology Sub-scale score & SAI total score. Factor was .373** with significant p value - .008.

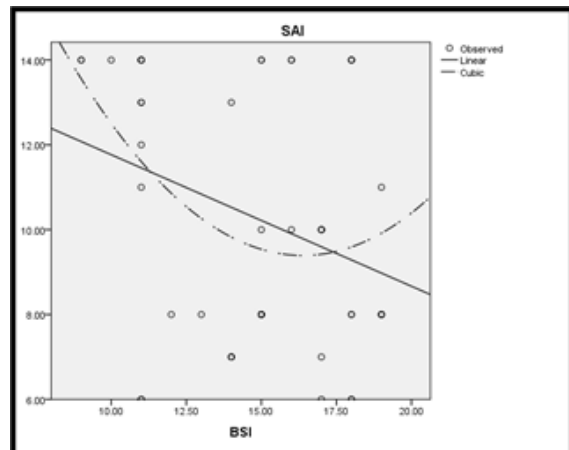


Figure 2: Correlation between Schedule for assessment of insight (SAI) total scale score and BSI total Score.

Correlation between Schedule for assessment of insight (SAI) total score and Beck's Suicidal Ideation (BSI) total score was negatively correlated. Factor was $-.314^*$ and p value 0.027.

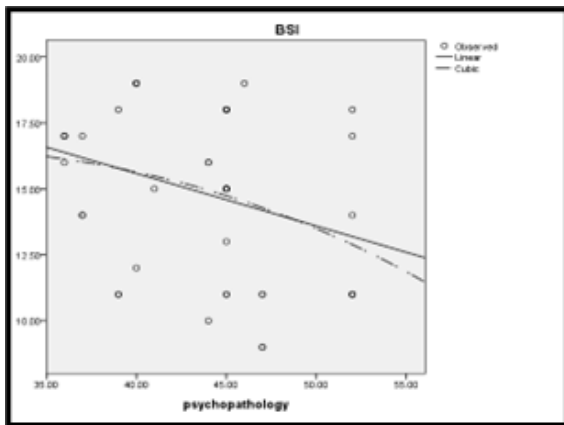


Figure 3: Correlation between General psychopathology sub-scale score & BSI total scale score

PANSS General Psychopathology Sub-scale score & Beck's Suicidal Ideation (BSI) total score was negatively correlated, factor was $-.322^*$ and significant p value was $.023$.

DISCUSSION

Demographical Profile

We have found maximum number of the cases i.e. 21 (42%) belongs 20-30 years of age group. 17 (34%) cases belong to 31-40 years of age group, another 6 (12%) cases found in 41-50 & 51-59 years of age group respectively. Female were predominantly higher than male cases. Male were 22 (44%) & Female were 28 (56%) respectively.

Shanthi J. et al.,[8] found the majority of the sample were young adults (mean age 29.5 years; SD 7.2), male ($n = 72$; 55%), lived in rural areas ($n = 105$; 80.2%) and were literate ($n = 100$; 76.3%). The average age of onset of illness was 27.8 years (SD 6.85) with a mean duration of 95.5 weeks (SD 134.2). 16 (12.2%) were voluntary patients while the rest ($n = 115$; 87.8%) had involuntary status.

Association between insight and psychopathology in patient of schizophrenia in the study population.

Schedule for Assessment of Insight (SAI) scales cores, distribution among study population. Minimum score was 6 and maximum score was 14. Mean total score was 10.260 SD was ± 3.002 .

In our study insight was comparatively high among patient with schizophrenia. which may be explained by 1) Patient suffering from schizophrenia do not come first in a tertiary care hospital for treatment, they first take medical help from private clinic, primary or secondary tier hospital. Most of them was on antipsychotic medication and few of them was on psychotherapy too, when they 1st time visited the tertiary care hospital. 2) This study is a single visit cross sectional study. So, the result of insight is not that reliable to come to a conclusion about one's insight about the disease which is a chronic one. A longitudinal study or cross-sectional study, where insight was measured in multiple times was a better alternative. 3) socio-cultural

background of the patient who live in joint family of rural background where family support is much more have better insight than those live in urban area and nuclear family.

Hou et al.,^[9] reported that patients on clozapine were more likely than their peers on other agents to have better insight. Mattia et al, using databases from over 14 drug trials, found that second-generation antipsychotic medications were linked with improvements in insight in schizophrenia. Cognitive behavior therapy for psychosis (CBT-p) has been linked with improvements relative to treatment as usual in two separate trials. A brief culturally adapted version of CBT-p was also linked with improvements in insight. Drake et al. found that cognitive therapy which followed cognitive remediation was linked to greater improvements in clinical insight in psychosis. Motivational interviewing and mindfulness-based interventions have also been linked to improved insight relative to treatment as usual.

The association between psychopathology and suicidality in patients of schizophrenia in the study population.

We found there was no Correlation between PANSS positive subscale Score and Beck's Suicidal Ideation (BSI) total scale score. Factor was $-.097$ and p value $-.502$ respectively.

There was no correlation between PANSS negative sub-scale Score and Beck's Suicidal Ideation (BSI) total scale score. Factor found $-.187$ and p value was 0.192 .

PANSS General Psychopathology Sub-scale score & Beck's Suicidal Ideation (BSI) total score was negatively correlate, factor was $-.322^*$ and significant p value was $.023$.

PANSS Total scale Score and Beck's Suicidal Ideation (BSI) total scale score in between negatively correlate. Factor was $-.297^*$ and significant p value 0.036 .

If the psychopathology is less patients suffers from underlying depression for understanding the disease proper. They are more prone to develop suicidality. Studies by Amador et. al examined the relationship between suicidal behaviour and various aspects of insight in 218 patients with schizophrenia. Patients were assessed with the Scale to Assess Unawareness of Mental Disorder and an instrument that measured multiple aspects of psychopathology, including suicidal behaviour. Schizophrenia patients with recurrent suicidal thoughts and behaviour were generally more aware of their negative symptoms and delusions than were non-suicidal patients. Contrary to expectations, general awareness of having a mental disorder did not predict suicidal behaviour. The notion that insight may be associated with greater suicidality was partially supported. The so-called "insight paradox" posits that among patients with schizophrenia higher levels of insight are associated with increased levels of depression, which is one of the major cause of suicidality. The lifetime risk of suicide is significantly higher in

patients with schizophrenia than in the general population. It has been suggested that insight and psychopathology is an important risk factor for suicidality in schizophrenia, but only in the presence of feelings of hopelessness and demoralization more generally.^[10]

Benedict et al,^[11] Backward logistic regression (LR) method using multiple logistic regression was further performed to control for confounder effects and to determine the significant factors that predicted suicidality. The selection of significant variables based on a univariate analysis resulted in a 41.5% of explained variation on suicidal thoughts ($R^2 = 0.415$). The prevalence of suicide attempt is high in chronic schizophrenia patients. Its risk factors include some demographic and clinical variables. Moreover, suicide attempters experienced stronger personal distress, suggesting that stronger empathy may be a risk factor of suicide.^[12]

A principal component analysis of the PANSS items revealed five components: disinhibition, withdrawal, anxiety and guilt, reality distortion, and disorganization. Two logistic regression analyses showed that suicide ideation or attempt was significantly related to depression, anxiety, guilt, gender, age, and number of previous hospitalizations. Compared to patients with suicide ideation, attempters were more depressed, had a higher number of previous hospitalizations, and lower education.^[13]

Based on our study, a key step towards suicide prevention involves the management of modifiable risk factors. A further study may also be conducted to review the role of medications, their potential side effects and quality of life in patients with regard to suicidality.

Limitations of the Study

1. There is less number of study sample.
2. The absence of a control group limits our study so far comparison is concerned.
3. We have conducted the study in a tertiary care hospital on the patients attending for treatment. These patients may not be representative of all the patients in the community, particularly those who have no access to mental health care.
4. Most of the sample of our study had exposure to health care set up (Private or Government) and was on treatment from outside but was visited first time in our hospital as new patient.

CONCLUSION

In this study, a small series of schizophrenic patients was studied to identify demographic and clinical attributes associated with suicidal behaviour among individuals with these disorders. Prevention of suicide in schizophrenia would thus rely on

identifying those individuals with the risk factors noted above, and actively treating any comorbid depressive illness and positive psychotic symptoms, as well as addressing any co-existent substance abusers. In this study of people with schizophrenia psychopathology, insight and suicidality systematically examined and correlation found. Further study is needed to explore the factors mediating the above findings, to understand the relative contributions that psychosis and depression each have to the continuum of suicidal behaviour and to develop preventive interventions to reduce the risk of suicidal behaviour.

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