

Study of Factors Affecting Suicidal Ideation in Persons with Schizophrenia

DrChalla. S. V. Krishna Vasani¹, Dr S.Kiran Kumar², Dr K. V. Rami Reddy³

¹(Postgraduate, Department of Psychiatry, Andhra Medical College, Visakhapatnam, India)

²(Assistant professor, Department of Psychiatry, Andhra Medical College, Visakhapatnam, India)

³(Professor, Department of Psychiatry, Andhra Medical College, Visakhapatnam, India)

Abstract:

Background: Schizophrenia has been called a 'Life-shortening disease', because many people who suffer from it die early than general population and suicide accounts for a significant proportion of those dying prematurely. Indian research on factors affecting suicidal ideation in schizophrenia have been few.

Aim: To compare and study the positive and negative symptoms, depressive symptoms in persons with schizophrenia with suicidal ideation compared to persons without suicidal ideation, along with socio-demographic parameters.

Materials and methods:

The study was carried out in a tertiary care hospital, Government Hospital for Mental Care, Visakhapatnam. Eighty consecutive patients diagnosed as suffering from Schizophrenia according to ICD-10 diagnostic criteria for research, who were attending the Out Patient Department and inpatients between June 2019 and August 2019, were selected. Patients indulging in substance use, those having a severe medical illness, those below the age of 18 years and above 60 years, and those who could not be evaluated due to their present mental state, which prevented them from giving necessary details were excluded. The subjects were divided into two groups as persons with suicide ideation and without, and analyzed using the Positive and Negative Syndrome Scale (PANSS), Calgary Depression Scale for Schizophrenia (CDSS) and a semi-structured proforma was used to collect the socio-demographic details of the participants which included, age, gender, marital status, occupational history, and educational history.

Results: Of the patients, 31.25% had suicidal ideation, positive symptoms ($p=0.025$), depressive features ($p=0.009$) were found to be significantly associated with the presence of suicidal ideation. Demographic parameters like age, sex, educational status, occupation, and marital status were not found to be significant factors linked to suicidal ideation.

Conclusion: People suffering from schizophrenia are at high risk for suicidal behavior, especially when accompanied by symptoms of depression and hopelessness. Mental health professionals need to be wary of this fact and intervene promptly and effectively. More attention is required for the higher risk group, which includes those with positive symptoms, depression. Suicide being the single most significant cause of premature death among individuals with schizophrenia, early identification of risk factors and possible preventive strategies needs to be devised.

Keywords: Schizophrenia, suicidal ideation, depression

Date of Submission: 20-01-2020

Date of Acceptance: 10-02-2020

I. Introduction

Suicide has become a public health problem around the world. According to WHO, every year, about 1 million people die from suicide, and 20 times more people attempt suicide.⁽¹⁾ Suicidal ideation refers to thoughts of engaging in behaviour intended to end one's life.⁽²⁾ Schizophrenia is a chronic mental illness with a worldwide prevalence of approximately 1%.⁽³⁾ Schizophrenia reduces life expectancy by about ten years in persons who are suffering from it. Suicide is the single most significant cause of premature death among individuals with schizophrenia. Among the reasons for suicide, schizophrenia is the second leading disorder contributing to the same, preceded only by depressive disorders.⁽²⁾ Hence analyzing the risk factors and psychological aspects of suicide attempters in schizophrenia will throw light in reducing worldwide mortality. There have been very few Indian studies on this subject. In this study, we investigate the prevalence of recent suicidal ideation in a population with schizophrenia and seeks to reveal the socio-demographic and clinical parameters associated with suicidal ideation.

II. Aim & objectives

To compare and study the positive and negative symptoms, depressive symptoms, in the persons with schizophrenia with suicidal ideation compared to the persons without suicidal ideation, along with socio-demographic parameters.

III. Materials and Methods

The study was carried out in a tertiary care hospital, Government Hospital for Mental Care, Visakhapatnam. Eighty consecutive patients diagnosed as suffering from Schizophrenia according to ICD-10 diagnostic criteria for research, who were attending the Out Patient Department and inpatients between June 2019 and August 2019, were selected.

Inclusion criteria:

1. Age 18 to 60 years.
2. Subjects who had given written informed consent.
3. Subjects with a diagnosis of schizophrenia according to ICD-10 diagnostic criteria for research.

Exclusion criteria:

1. Subjects with other morbid psychiatric illness at present admission.
2. Subjects with other severe medical illnesses.
3. Cases where the self-harm was found to be accidental.
4. Persons with substance use.
5. Persons who could not be evaluated due to their present mental state, which prevented them from giving necessary details.

Operational procedure: Patients fulfilling the inclusion criteria were taken up for the study. After taking informed consent, the subjects were divided into two groups as persons with suicide ideation and without based suicidality item in the Calgary Depression Scale for Schizophrenia (CDSS) and analysed using the Positive and Negative Syndrome Scale (PANSS), CDSS and a semi-structured proforma was used to collect the socio-demographic details of the participants which included, age, gender, marital status, occupational history, and educational history.

Ethical Issues: Informed consent was obtained from each subject and their caregiver prior to inclusion in the study. All were explained regarding the nature and the rationale of the study.

Study tools:

1. **A Semi-structured Proforma:** It was a self-designed proforma used to collect the socio-demographic details of the participants, which included family history, duration of illness, age, gender, marital status, treatment history and details of suicide attempt if present.
2. **International classification of Mental and behavioural disorders-10 Diagnostic criteria for research.**
3. **The Positive and Negative Syndrome Scale (PANSS)** developed by Kay SR et al. 1987⁽⁴⁾, was used for evaluating the positive, negative, and other symptom dimensions of schizophrenia. The PANSS includes 30 items on three sub-scales: 7 items, each covering positive and negative symptoms, 16 items covering general psychopathology. Each item is scored ranging from 1 to 7.
4. **CDSS (The Calgary Depression Rating Scale for Schizophrenia):** The CDSS was a scale which was developed by D. and J. Addington in 1990⁽⁵⁾ at the Calgary University for assessing specifically the severity of depression in schizophrenia, compared with primary depressive illness, differentiating from positive symptoms, negative symptoms and extrapyramidal symptoms. CDSS has been extensively tested in both relapsed and remitted patients, having very few overlaps compared to the Hamilton Depression rating scale. The scale has nine items, scored from 0 to 3, evaluated by the observer, in the form of a semi-structured interview.

Statistical analysis: Statistical analysis was carried out using SPSS software version 23.0. Mean, and the standard deviation was presented for all continuous variables. Pearson correlation coefficients were used to examine the relationship between suicidal ideation and CDSS score and PANSS domain scores of the study subjects. Chi-square statistics were applied to examine the relationship between various socio-demographic variables and suicidal ideation.

IV. Results

Table 1: Frequency of Suicidal ideation

Suicidal ideation	Frequency (n)	Percentage (%)
Yes	25	31.25

No	55	68.75
Total	80	100.0

In the study, 31.25% had suicidal ideation, and 68.75% doesn't have suicidal ideation.

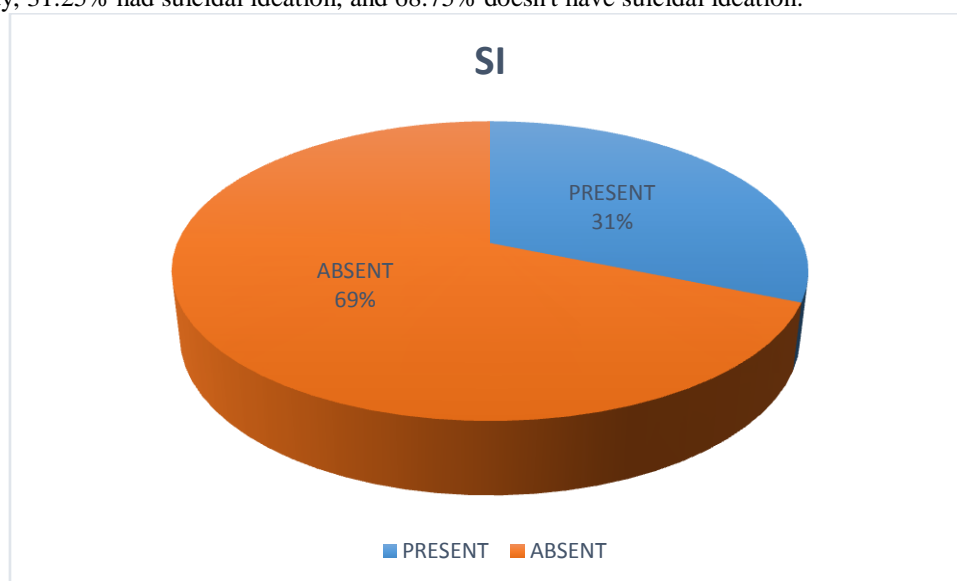


Table 2: Socio-Demographic Characteristics of the Participants

	Variables	Frequency (n)	Percentage (%)	P value
Age	18-20 yrs.	4	5	0.41
	21-30 yrs.	18	22.5	
	31-40 yrs.	30	37.5	
	41-50 yrs.	20	25	
	51-60 yrs.	8	10	
Gender	Male	36	45	0.38
	Female	44	55	
Marital Status	Single	42	52.5	0.16
	Married	32	40	
	Divorced	4	5	
	Widowed	2	2.5	
Education	Illiterate	16	20	0.89
	Primary	12	15	
	Secondary	26	32.5	
	Higher Secondary	18	22.5	
	Graduate	8	10	
Occupation	Professional	2	2.5	0.53
	Business	4	5	
	Skilled	12	15	
	Semi-skilled	20	25	
	Unemployed	42	52.5	

The p-value for socio-demographic parameters was found to be not significant.

Table 3: Comparison of the Two Groups by PANSS Scores

Variables	Persons with suicidal Ideation (n-25) Mean (SD)	Persons Without suicidal ideation (n-55) Mean (SD)	P-value
Positive Symptoms	28.76 (4.31)	20.89 (2.90)	0.025*
Negative Symptoms	13.84 (2.67)	15.11 (2.82)	0.77
General Psychopathology	37.96 (3.16)	38.31 (5.00)	0.088

A significant difference between the two groups on positive symptoms was found. No significant difference is observed between the two groups on negative symptoms and general psychopathology scores.

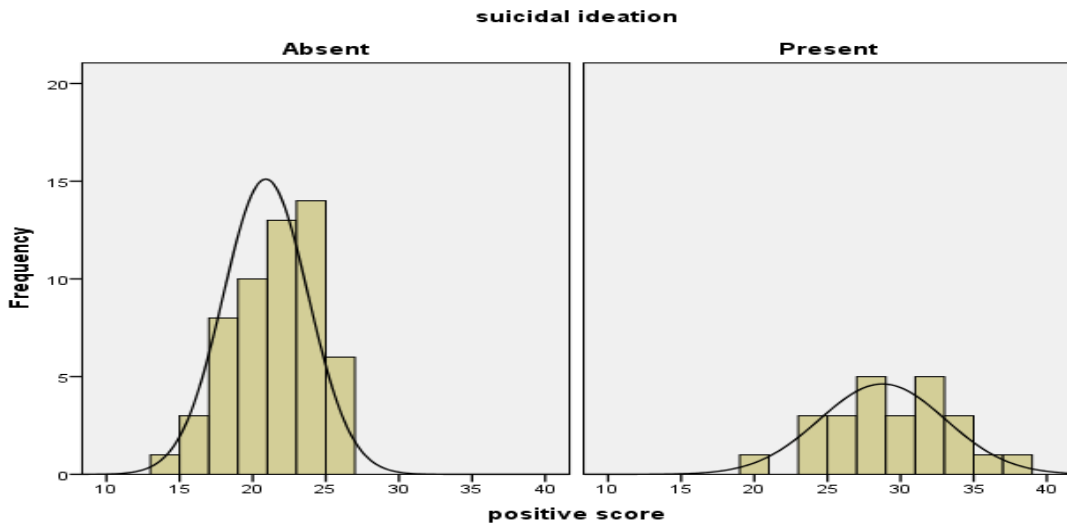
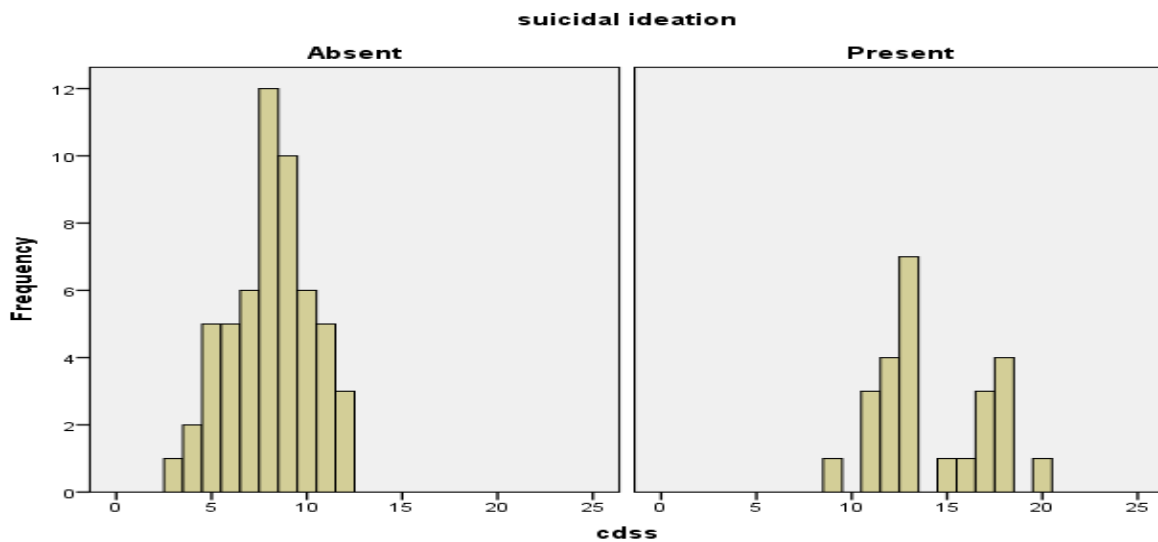


Table 4: Comparison of Depression between the Two Groups

Scale	Persons with suicidal Ideation (n-25) Mean (SD)	Persons Without suicidal ideation (n-55) Mean (SD)	P-value
Depression (CDSS)	14.20 (2.93)	8.09 (2.17)	0.009*



A significant difference was noted between the two groups on depression.

V. Discussion:

In our study, we found suicidal ideation in 31.25% of persons with schizophrenia similar to a study conducted by Dassori et al.⁽⁶⁾, who reported that 32% of the sample exhibited death wishes with or without suicidal plans or attempts. Fenton et al.⁽⁷⁾ reported that 40% of the schizophrenia patients studied expressed suicidal ideation at some time during a 19-year follow-up.

The role of demographic variables in suicidal behavior has given contrasting results across various studies. Vanessa R et al.⁽⁸⁾ reported higher risk in young males, while Ho TP et al.⁽⁹⁾ gave higher rates in females. In the present study, we couldn't establish age and gender to be associated with suicidal attempts in schizophrenia. Unlike in suicides, more generally, being single is of limited use as an indicator of risk for suicide in populations affected by chronic psychotic disorders Hawton et al.⁽¹⁰⁾ In our study, marital status was found not to be associated with risk of schizophrenia. We found the role of unemployment to be not significant, similar to studies by Harkavy et al.⁽¹¹⁾, Hawton et al.⁽¹⁰⁾ The most consistent finding in psychiatric populations has been an association between increased risk for suicide and lower levels of education in persons with schizophrenia Qin et al.⁽¹²⁾ However, there is a significant association with higher levels of education and suicide Hawton et al.⁽¹⁰⁾, McGirret al.⁽¹³⁾

In this study, positive symptoms of schizophrenia reported a statistically significant association with suicidal risk in numerous studies Heila H et al.⁽¹⁴⁾, Hu WH et al.⁽¹⁵⁾, De Hert M et al.⁽¹⁶⁾ Negative symptoms did not show any overall association with suicide risk; however, Fawcett J et al.⁽¹⁷⁾ found a relationship between anhedonia and committing suicide within a year of onset of psychiatric illness. Depressive symptoms can occur in every phase of the Schizophrenia disorder. Depressive symptoms are common in schizophrenia and can occur in every phase of the disease. Estimates of frequency vary but appear to occur in approximately 25% of individuals with schizophrenia.

Limitations: Our study was a cross-sectional study; a prospective study would have been more useful. A larger sample would have more practical implications. As the study was carried out in a tertiary care hospital, it cannot be generalized to the community. Rating for suicidal ideation was based on the Calgary Depression Scale for Schizophrenia "suicidality" item, which was included in the calculation of the total depression score.

VI. Conclusion:

People suffering from schizophrenia are at high risk for suicidal behavior, especially when accompanied by symptoms of depression and hopelessness. Mental health professionals need to be wary of this fact and intervene promptly and effectively. More attention is required for the higher risk group, which includes those with positive symptoms, depression. Suicide being the single most significant cause of premature death among individuals with schizophrenia, early identification of risk factors and possible preventive strategies needs to be devised.

References

- [1]. Sadock BJ, Sadock VA, Ruiz P. Kaplan and Sadock's Comprehensive Textbook of Psychiatry. Wolters Kluwer; 10th edition, 2017:2610-11.
- [2]. Nock MK. Oxford handbook of suicide and self injury, Oxford University Press. 1st edition, 2013:11-13:5-10.
- [3]. World Health Organization. The world health report 2001. Mental health, new understanding, new hope. 2001:Pg. 28.
- [4]. Kay SR, Fiszbein A, Opler LA. The positive and negative syndrome scale (PANSS) for schizophrenia. *Schizophrenia Bulletin* 1987;13(2):261-276.
- [5]. Addington D, Addington J, Schissel B. A depression rating scale for schizophrenics. *Schizophrenia Research* 1990;3(4):247-251.
- [6]. Dassori AM, Mezzich JH, Keshavan M. Suicidal indicators in schizophrenia. *ActaPsychiatrScand* 1990;81:409-13.
- [7]. Fenton WS, McGlashan TH, Victor BJ, Blyler CR. Symptoms, subtype and suicidality in patients with schizophrenia spectrum disorders. *Am J Psychiatry* 1997;154:1999-2004.
- [8]. Vanessa R. Suicide in schizophrenia - how can research influence training and clinical practice. *Psychiatric Bulletin* 2001;25:46-50.
- [9]. Ho TP. The suicide risk of discharged psychiatric patients. *J Clin Psychiatry* 2003;64(6):702-707.
- [10]. Hawton, K., Sutton, L., Haw, C., Sinclair, J., & Deeks, J. J. (2005). Schizophrenia and suicide: Systematic review of risk factors. *British Journal of Psychiatry*, 187, 9-20.
- [11]. Harkavy-Friedman JM, Restifo K, Malaspina D, et al. Suicidal behavior in schizophrenia. *Am J Psychiatry* 1999;156(8):1276-1278.
- [12]. Qin, P., Agerbo, E., & Mortensen, P. B. (2003). Suicide risk in relation to socioeconomic, demographic, psychiatric, and familial factors: A national register-based study of all suicides in Denmark, 1981-1997. *American Journal of Psychiatry*, 160, 765-772.
- [13]. McGirr, A., Tousignant, M., Routhier, D., Pouliot, L., Chawky, N., Margolese, H. C., et al. (2006). Risk factors for completed suicide in schizophrenia and other chronic psychotic disorders: A casecontrol study. *Schizophrenia Research*, 84, 132-143.
- [14]. Heila, H., Isometsa, E. T., Henriksson, M. M., Heikkinen, M. E., Marttunen, M. J., & Lonqvist, J. K. (1997). Suicide and schizophrenia: A nationwide psychological autopsy study on age- and sex-specific clinical characteristics of 92 suicide victims with schizophrenia. *American Journal of Psychiatry*, 154, 1235-1242.
- [15]. Hu, W. H., Sun, C. M., Lee, C. T., Peng, S. L., Lin, S. K., & Shen, W. W. (1991). A clinical study of schizophrenic suicides. 42 cases in Taiwan. *Schizophrenia Research*, 5, 43-50.
- [16]. Hert DM, McKenzie K, Peuskens J. Risk factors for suicide in young people suffering from schizophrenia: a long-term follow-up study. *Schizophr Res* 2001;47(2-3):127-134.
- [17]. Fawcett J, Scheftner WA, Fogg L, et al. Time-related predictors of suicide in major affective disorder. *Am J Psychiatry* 1990;147(9):1189-1194.

DrChalla. S. V. Krishna Vasan, etal. "Study of Factors Affecting Suicidal Ideation in Persons with Schizophrenia." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 19(2), 2020, pp. 01-05.