

ASSESSMENT OF THE FREQUENCY AND LEVEL OF SUICIDE RISK IN PATIENTS WITH SCHIZOPHRENIA PRESENTING AT A TERTIARY CARE HOSPITAL

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Submitted: March 04, 2021

Accepted: June 05, 2021

ABSTRACT

OBJECTIVE

Objective: To determine the frequency and level of suicide risk in patients with schizophrenia presenting at a tertiary care hospital.

STUDY DESIGN

Cross sectional descriptive study.

PLACE AND DURATION OF THE STUDY

Department of Psychiatry and Behavioral Sciences, JPMC, Karachi, Pakistan.

SUBJECTS AND METHODS

Two hundred previously diagnosed cases of Schizophrenia, including males and females, 18 years and above by age, were enrolled. Patients with mental retardation and post-schizophrenic depression were excluded to control the confounding factors. Patients were enrolled through consecutive purposive sampling. "California Risk Estimator for Suicide" was used to assess the outcome variable. Data were analyzed through SPSS version 17. P-value <0.05 was taken as significant. Ethical issues were addressed according to the IRB of the institute.

RESULTS

Majority of patients were males, 18 to 29 years old, single, matriculate, having schizophrenia for less than five years. Almost equal proportion of patients had "low", "moderate" and "high" severity of suicide risk, signifying a huge amount of suicide risk as compared with general population.

CONCLUSION

Patients with schizophrenia have significant risk of suicide. Hence, every patient must be assessed thoroughly for suicide risk. The bio-psycho-social model of health care is the key to manage patients with schizophrenia.

KEY WORDS

Suicide, Suicide risk, Schizophrenia.

INTRODUCTION

Suicide is defined as an act that a person willingly and purposefully does to end his or her life. According to WHO, approximately one million people commit suicide each year worldwide, that is about one death every 40 seconds or 3,000 per day.

Established risk factors for suicide include hopelessness¹, history of prior attempt², isolation³, family conflict⁴, marital disharmony, unemployment and above all, psychiatric illnesses⁵. Psychiatric illnesses account for around 90% of suicide cases⁶.

Schizophrenia is a major psychiatric disorder that carries a high risk of suicide (i.e. 4.9%)⁷. Reportedly, the prevalence of schizophrenia is around 1% of general population, estimating 20 lac cases of schizophrenia in Pakistan⁸. This huge population having significant suicide risk deserves immediate attention.

But risk of suicide is not assessed in Pakistan in Patients with schizophrenia, current study aims to fill this gap in literature.

The gathered data will help in improving the health care quality provided to these patients at all the stages ranging from assessment to treatment and rehabilitation. Thus, a huge number of lives may be saved.

SUBJECTS AND METHODS

Participants

It was a descriptive cross-sectional study, conducted at The Department of Psychiatry and Behavioral Sciences, JPMC, Karachi. The ethical committee's approval was taken before-hand. A total of 200 known cases of schizophrenia including both genders aged 18 years and above were enrolled in the study after taking informed consent. Those having mental retardation, schizoaffective disorder, or post-schizophrenic depression were excluded to control the confounding factors.

Instruments

A standardized tool – California Risk Estimator for Suicide, was used to assess patient's particulars and the outcome variable i.e. Severity of Suicide Risk. The Suicide risk was categorized into five severity groups depending upon the total score on California Risk Estimator for Suicide, i.e. very low risk, low risk, moderate risk, high risk and very high risk.

Procedure

The ethical issues were dealt with according to the IRB of institute. The data collected was analyzed using computer packages SPSS (Statistical Packages of Social Sciences) version 17. Mean and standard deviation (SD) were

computed for all the quantitative variables (e.g. age). Categorical variables (such as gender, education) and the outcome variable (i.e. stratified groups of severity of suicide risk) were measured in frequencies and percentages. Stratification was done with regard to demographic factors, for the outcome variables. The impact of these factors on the outcome variables was assessed by using chi-square test., p value less than 0.05 were considered as significant.

RESULTS

This study of 200 patients showed that majority of the patients were males (60%), 18 to 29 years of age (47%), single (63%), matriculate (26%), and having illness for less than five years (39%).

33% patients had very low or low risk, 37% had moderate risk, and 30% had high or very high risk. Keeping in view the 1% risk of suicide in general population, we find here that a huge majority of patients with schizophrenia have remarkably high or very high suicide risk. Thus the study has unveiled an alarming situation.

The study analyzed the effect modification of frequency and severity of suicide risk by stratifying data by age, duration of illness, gender, education and marital status.

When data was stratified according to age through chi square statistics, it was seen that around one third of the patients who fell in the age bracket of 18-29 years had moderate risk for suicide (36.2%, n=34). High and very high risk was seen in least number of these patients, 12.8% (n=12) of each. 36.4% (n=24) patients who fell in the age bracket of 30-39 years had moderate risk. Least number of these patients fell in the category of low risk that is only 12.1% (n=8) of the total. None of the patients aged 40-49 years had very high risk for suicide, most of them had moderate risk, 46.2% (n=12). These results were significant at $\alpha = 0.05, p = 0.047$ (see table 3 for details).

When data was stratified according to gender, marital status and education, findings were not significant ($p = 0.099, p = .38$ and $p = .18$ respectively, $\alpha = 0.05$).

When the duration of illness was analyzed, it was seen that amongst all those who had been suffering from schizophrenia for less than five years, about one third patients had moderate risk for suicide, 33.3% (n=26). In those patients who had been suffering from 5-10 years, 41.7% (n=30) had moderate risk. Among the patients whose duration of illness was from 11-19 years, 33.3% (n=10) has high risk. These results were significant at $\alpha = 0.05, p = 0.00$ (see table 4 for details).

Table 1

Age of the patients.

Age of patients	Frequency	Percent
18-29 years	94	47
30-39 years	66	33
40 -49 years	26	13
50- 59 years	10	5
60 years and above	4	2
Total	200	100

M= 31.5, SD = 9.4

Table 2

Duration of illness.

duration of illness	frequency	percent
< 5 years	78	39
5-10 years	72	36
11-19 years	30	15
20-29 years	18	9
> 30 years	2	1
total	200	100

M= 7.48, SD= 6.3

Table 3

Stratification of age and suicide risk with chi square

Age(years)	Suicide risk					
	Very low	low	moderate	high	Very high	total
18-29	14	22	34	12	12	94
	14.9%	23.4%	36.2%	12.8%	12.8%	100 %
30-39	10	8	24	10	14	66
	15.2%	12.1%	36.4%	15.2%	21.2%	100 %
40-49	2	6	12	6	0	26
	7.7%	23.1%	46.2%	23.1%	0%	100 %
50-59	0	2	4	4	0	10
	0%	20.0%	40.0%	40.0%	0%	100 %
60 and Above	0	2	0	0	2	4
	0%	50%	0%	0%	50%	100 %
total	26	40	74	32	28	200
	13.0%	20.0%	37.0%	16.0%	14.0%	100 %

$\alpha = 0.05, p = 0.047$

Table 4

Stratification of duration of illness and suicide risk.

Duration of illness (years)	Suicide risk					
	Very low	low	moderate	high	Very high	total
Less than 5	18	22	26	10	2	78
	23.1%	28.2%	33.3%	12.8%	2.6%	100%
5-10	6	8	30	10	18	72
	8.3%	11.1%	41.7%	13.9%	25%	100%
11-19	2	4	8	10	6	30
	6.7%	13.3%	26.7%	33.3%	20%	100%
20-29	0	6	8	2	2	18
	0%	33.3%	44.4%	11.1%	11.1%	100%
More than 30	0	0	2	0	0	2
	0%	0%	100%	0%	0%	100%
total	26	40	74	32	28	200
	13.0%	20.0%	37%	16.0%	14%	100%

 $\alpha = 0.05, p = 0.00$

DISCUSSION

The major risk factors for suicide as identified by previous studies include a mental illness as well as the social, cultural, economic and family factors⁹. This study focused on the patients of schizophrenia and aimed not only to identify the suicide risk in these patients but also to see the effect modification of risk by socio-demographic factors and duration of illness in this specific population group.

Among sample population of 200 patients, the majority of young, adult, single, males having education till matriculation and history of schizophrenia for less than five years may be clearly explained by the fact that Schizophrenia affects males more than the females¹⁰, and its onset is seen during early adulthood. Moreover the treatment seeking can be expected more during the early periods of illness, as down drift of patients usually leads to progressive worsening of health, treatment drop outs and social neglect.

The identification of moderate and high risk of suicide in 67% of patients once again reinforces the previous studies showing high suicide risk in patients with schizophrenia, thus making suicide the major cause of death in these patients^{11,12}.

Both genders having equally high risk of suicide goes against the previous studies which label male gender as a risk factor for suicide in general population¹³. So an important finding is revealed that once hit by Schizophrenia, the gender differences diminish in this regard¹⁴.

The finding of high risk in old age¹⁵ and separation from spouse¹⁶ reinforces the previous studies that label these both factors as risk factors in general population.

The most significant finding in this study appeared when the duration of illness in relation to suicide risk was assessed. High risk was found increasing continuously as the duration increased from less than five years till 19 years. However the high risk proportion started falling thereafter. The progressive increase in High risk can be explained by exhaustion of personal as well as socio-economic strengths with increasing duration of illness. The subsequent reduction in the high risk group may actually be misleading, because when look closely, we find that 100% of patients with more than 30 years of illness entered the Moderate Risk group, with none

having a low risk. Thus, we may conclude that an overall risk increases with increasing duration though this needs to be investigated in a longitudinal study to be more assertive of the finding.

LIMITATIONS

The study was limited by small sample size, limited duration and cross sectional design. The questionnaire used had closed ended questions that could have resulted in omission of important information. Moreover, this study was conducted in a public sector hospital that usually receives patients of low socioeconomic strata due to the free services provided here. The study therefore should have also been conducted in a private sector hospital for a comparison of socio-demographic factors. Also, this study was conducted in an urban setting so the results cannot be projected all over Pakistan that has a substantial rural population. This study can provide the framework for future studies.

CONCLUSION

Our study concludes that risk of suicide is present in a considerable proportion of patients with schizophrenia albeit of varying degrees. All patients should hence be assessed for suicidal risk and considering the severity interventions should be done to prevent morbidity and mortality in these patients. The socio-demographic factors have shown impact on suicide risk in these patients. The information can help in implementing effective measures for treatment and prevention of suicide in patients with schizophrenia. In nut shell, the Bio-Psycho-Social model of healthcare is the road to success against suicide in patients with schizophrenia.

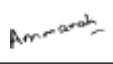




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5	Dr. Fawad Suleman	JPMC, Karachi	Materializing the study	
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