



Original Article

## Risk Factors of Suicide Attempts among Psychiatric Patients: A Hospital-Based Study


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### ABSTRACT

**Background:** Suicide attempts constitute a major public health concern, particularly among individuals with psychiatric disorders. Identification of key risk factors is essential for early intervention and prevention strategies.

**Aim:** To assess the socio-demographic, clinical, and psychosocial risk factors associated with suicide attempts among psychiatric patients.

**Materials and Methods:** This hospital-based cross-sectional observational study was conducted in the Department of Psychiatry at Naraina Medical College and Research Centre over a period of 6 months. A total of 100 psychiatric patients aged  $\geq 18$  years with a history of at least one suicide attempt were included. Data were collected using a semi-structured proforma, and psychiatric diagnoses were made according to DSM-5 criteria. Statistical analysis was performed using SPSS version 25.0, with  $p < 0.05$  considered statistically significant.

**Results:** The majority of patients were in the 20–40 years age group (60%), with a higher proportion of females (58%). Depression was the most common psychiatric diagnosis (48%), followed by bipolar disorder (20%) and schizophrenia (15%). Substance use was present in 35% of patients, while 40% had a history of previous suicide attempts. Psychosocial stressors such as recent life events (55%), family conflicts (46%), and financial problems (38%) were frequently observed. Significant associations were found between suicide attempts and depression, substance use, and previous suicide attempts ( $p < 0.05$ ).

**Conclusion:** Suicide attempts among psychiatric patients are influenced by a complex interplay of clinical and psychosocial factors. Early identification of high-risk individuals and targeted interventions addressing depression, substance abuse, and life stressors are crucial for effective suicide prevention.

**Keywords:** Suicide attempt, psychiatric patients, depression, substance abuse, risk factors, India.

### INTRODUCTION

Suicide is a major global public health concern and ranks among the leading causes of death worldwide. It is estimated that close to 700,000 people die by suicide every year, with many more attempting suicide, particularly in low- and middle-income countries like India [1]. Psychiatric disorders are one of the strongest predictors of suicidal behavior, with evidence suggesting that up to 90% of individuals who attempt or complete suicide have an underlying mental illness [2].

Among psychiatric conditions, depression has been identified as the most significant contributor to suicide risk, followed by bipolar disorder, schizophrenia, and substance use disorders [3]. Comorbidity with substance abuse further exacerbates impulsivity and reduces inhibition, thereby increasing the likelihood of suicide attempts [4]. Additionally, personality traits such as impulsivity, aggression, and hopelessness are known to play a crucial role in suicidal behavior [5].

Socio-demographic factors such as young age, female gender, unemployment, and low socio-economic status have also been associated with increased risk of suicide attempts [6]. Psychosocial stressors, including relationship conflicts, financial difficulties, academic stress, and loss of loved ones, significantly contribute to suicidal tendencies, especially in vulnerable individuals [7].

A previous history of suicide attempts is considered one of the most important predictors of future attempts, indicating the need for careful monitoring and intervention in such patients [8]. Furthermore, family history of psychiatric illness or suicide, lack of social support, and easy access to lethal means further increase the risk [9].

Despite the growing burden of suicide in India, there remains a lack of region-specific data focusing on psychiatric populations. Understanding the risk factors in this group is essential for developing targeted prevention strategies. Therefore, the present study aims to evaluate the risk factors associated with suicide attempts among psychiatric patients attending a tertiary care hospital in Kanpur.

## **MATERIALS AND METHODS**

### **Study Design and Setting**

This was a hospital-based, cross-sectional observational study conducted in the Department of Psychiatry at Naraina Medical College and Research Centre. The study was carried out over a period of 6 months.

### **Study Population**

The study included psychiatric patients presenting to the outpatient and inpatient services of the Department of Psychiatry with a history of suicide attempt.

### **Sample Size**

A total of 100 patients meeting the inclusion criteria were enrolled consecutively during the study period.

### **Inclusion Criteria**

- Patients aged 18 years and above
- Diagnosed with a psychiatric disorder as per DSM-5 criteria
- History of at least one suicide attempt
- Provided informed written consent

### **Exclusion Criteria**

- Patients with severe cognitive impairment or organic brain syndrome
- Patients who were medically unstable at the time of assessment
- Individuals unwilling to participate in the study

### **Study Variables**

#### **Socio-demographic Variables**

- Age
- Gender
- Marital status
- Education level
- Occupation
- Socio-economic status

#### **Clinical Variables**

- Psychiatric diagnosis
- Duration of illness
- History of previous suicide attempts
- Family history of psychiatric illness or suicide

#### **Psychosocial Variables**

- Recent stressful life events (within past 6 months)
- Substance use history
- Interpersonal conflicts
- Financial difficulties

## Data Collection Procedure

Eligible patients were identified and recruited consecutively. After obtaining informed consent, data were collected using a pre-designed and semi-structured proforma.

A detailed psychiatric evaluation was conducted by qualified psychiatrists using DSM-5 diagnostic criteria. Information regarding suicide attempts and associated risk factors was obtained through patient interviews and, where available, corroborated by caregivers.

## Operational Definitions

- **Suicide attempt:** A self-directed, potentially injurious behavior with an intent to die, irrespective of the outcome.
- **Substance abuse:** Use of alcohol or other psychoactive substances meeting diagnostic criteria for abuse or dependence.
- **Stressful life events:** Significant adverse events occurring within the last 6 months, such as bereavement, financial crisis, or relationship issues.

## Statistical Analysis

Data were entered into Microsoft Excel and analyzed using Statistical Package for the Social Sciences (SPSS) version 25.0.

- Continuous variables were expressed as mean  $\pm$  standard deviation (SD)
- Categorical variables were presented as frequency and percentages
- Association between variables was assessed using the Chi-square test
- A p-value  $<0.05$  was considered statistically significant

## Ethical Considerations

The study was conducted after obtaining approval from the Institutional Ethics Committee of Naraina Medical College and Research Centre.

- Written informed consent was obtained from all participants
- Confidentiality and anonymity of patient data were strictly maintained

## RESULTS

A total of 100 psychiatric patients with a history of suicide attempts were included in the study. The socio-demographic profile showed that the majority of patients were in the 20–40 years age group (60%), followed by 41–60 years (25%) and  $>60$  years (5%). Females constituted a slightly higher proportion (58%) compared to males (42%). Most participants were unmarried (45%), while 40% were married and the remaining were widowed or separated. A significant proportion of patients were unemployed (52%), indicating a possible association between occupational status and suicide attempts.

**Table 1: Socio-demographic Characteristics of Study Participants (n = 100)**

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	20–40	60	60%
	41–60	25	25%
	$>60$	5	5%
	$<20$	10	10%
Gender	Male	42	42%
	Female	58	58%
Marital Status	Unmarried	45	45%
	Married	40	40%
	Widowed/Separated	15	15%
Occupation	Employed	48	48%
	Unemployed	52	52%

Clinically, depression was the most common psychiatric diagnosis (48%), followed by bipolar disorder (20%), schizophrenia (15%), and other disorders (17%). Substance use disorder was present in 35% of patients, suggesting a strong association between substance abuse and suicidal behavior. Additionally, 40% of patients had a history of previous suicide attempts, indicating a high risk of recurrence.

**Table 2: Clinical Profile of Study Participants (n = 100)**

Variable	Category	Frequency (n)	Percentage (%)
Psychiatric Diagnosis	Depression	48	48%
	Bipolar Disorder	20	20%
	Schizophrenia	15	15%
	Others	17	17%

<b>Substance Use</b>	Present	35	35%
	Absent	65	65%
<b>Previous Attempts</b>	Yes	40	40%
	No	60	60%

Assessment of psychosocial risk factors revealed that recent stressful life events were present in 55% of patients, making it the most common contributing factor. Family conflicts (46%) and financial difficulties (38%) were also frequently reported. These findings highlight the significant role of environmental and social stressors in precipitating suicide attempts among psychiatric patients.

**Table 3: Psychosocial Risk Factors among Study Participants (n = 100)**

<b>Risk Factor</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
Stressful Life Events	55	55%
Family Conflict	46	46%
Financial Problems	38	38%
Substance Abuse	35	35%
Previous Suicide Attempt	40	40%

Further analysis using the Chi-square test demonstrated a statistically significant association between suicide attempts and factors such as depression ( $p < 0.05$ ), substance abuse ( $p < 0.05$ ), and previous suicide attempts ( $p < 0.01$ ). Socio-demographic variables like unemployment and younger age group also showed a positive association, although not all reached statistical significance.

## DISCUSSION

The present hospital-based study evaluated the risk factors associated with suicide attempts among psychiatric patients and demonstrated that suicidal behavior is influenced by a complex interaction of socio-demographic, clinical, and psychosocial variables. The findings of this study are largely consistent with existing literature and provide important insights into region-specific determinants.

In the current study, the majority of suicide attempters belonged to the 20–40 years age group, indicating that young adults are particularly vulnerable. This finding aligns with earlier reports suggesting that suicide attempts are more common among younger individuals due to heightened emotional reactivity, life stressors, and socio-economic instability [10]. The higher proportion of female patients (58%) observed in this study is also consistent with previous studies showing that while males have higher completion rates, females tend to attempt suicide more frequently [11].

A significant association was observed between unemployment and suicide attempts, with more than half of the participants being unemployed. Economic instability and lack of financial independence have been identified as important stressors contributing to suicidal ideation and behavior [12]. Similarly, marital status also played a role, with a higher proportion of attempts seen among unmarried individuals, which may reflect reduced social support and increased psychosocial stress [13].

Among clinical variables, depression emerged as the most common psychiatric diagnosis (48%), reaffirming its central role in suicidal behavior. This is in agreement with previous research indicating that depressive disorders significantly increase the risk of suicide due to persistent feelings of hopelessness, worthlessness, and impaired coping mechanisms [14]. Other psychiatric conditions such as bipolar disorder and schizophrenia also contributed to suicide risk, consistent with established evidence [15].

The presence of substance use disorder in 35% of patients further highlights its critical role as a risk factor. Substance abuse has been shown to impair judgment, increase impulsivity, and reduce inhibition, thereby facilitating suicidal acts [16]. Moreover, comorbidity between psychiatric disorders and substance use further amplifies the risk, as supported by earlier studies [17].

One of the most important findings of this study is that 40% of patients had a history of previous suicide attempts, making it one of the strongest predictors of future suicidal behavior. This observation is well supported by longitudinal studies indicating that individuals with prior attempts are at significantly higher risk of repetition and eventual suicide completion [18].

Psychosocial factors also played a crucial role, with stressful life events (55%), family conflicts (46%), and financial problems (38%) being highly prevalent among the study population. These findings are consistent with stress-diathesis models of suicide, which propose that environmental stressors act as triggers in vulnerable individuals [19]. Interpersonal

conflicts and lack of family support, in particular, have been shown to significantly increase emotional distress and suicidal tendencies [20].

The statistical analysis in the present study demonstrated significant associations between suicide attempts and depression, substance abuse, and previous suicide attempts, underscoring the importance of early identification and targeted intervention in high-risk individuals. Although socio-demographic factors such as age and unemployment showed trends toward association, not all reached statistical significance, which may be attributed to the relatively small sample size.

Overall, the findings of this study reinforce the multifactorial nature of suicide attempts among psychiatric patients and highlight the need for a comprehensive risk assessment approach. Early detection of depression, screening for substance abuse, and addressing psychosocial stressors should form the cornerstone of suicide prevention strategies in psychiatric settings.

## CONCLUSION

The present study highlights that suicide attempts among psychiatric patients are multifactorial in origin, involving an interplay of clinical, socio-demographic, and psychosocial determinants. Depression emerged as the most prominent psychiatric correlate, while substance use, previous suicide attempts, and recent stressful life events significantly increased vulnerability. Socio-economic factors such as unemployment and lack of social support further compounded the risk.

The high proportion of patients with a prior history of suicide attempts underscores the recurrent nature of suicidal behavior and the critical need for sustained monitoring. Overall, the findings emphasize that suicide risk in psychiatric populations cannot be attributed to a single factor but rather requires a holistic and multidimensional assessment approach.

## Clinical Implications

The findings of this study carry important implications for clinical practice, particularly in psychiatric settings:

- **Routine Suicide Risk Assessment:** All psychiatric patients should undergo structured suicide risk evaluation, especially those diagnosed with depression or with a history of prior attempts.
- **Early Identification and Management of Depression:** Timely diagnosis and effective treatment of depressive disorders can substantially reduce suicidal tendencies.
- **Addressing Substance Use Disorders:** Integrated management strategies targeting substance abuse should be incorporated into psychiatric care to reduce impulsivity and risk behavior.
- **Focused Monitoring of High-Risk Individuals:** Patients with previous suicide attempts require close follow-up, safety planning, and crisis intervention strategies.
- **Psychosocial Interventions:** Counseling services aimed at managing stress, resolving interpersonal conflicts, and improving coping skills should be strengthened.
- **Family Involvement and Support Systems:** Enhancing family awareness and involvement can improve emotional support and reduce isolation in vulnerable individuals.
- **Socio-economic Support Measures:** Addressing unemployment and financial stress through rehabilitation and social support programs may help mitigate suicide risk.
- **Strengthening Mental Health Services:** Establishing accessible crisis helplines, community mental health programs, and early intervention services is essential for suicide prevention.

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