

Original Research Article

PSYCHIATRIC AND PSYCHOSOCIAL PROFILES OF SUICIDE ATTEMPTERS: A CROSS-SECTIONAL STUDY IN EASTERN UTTAR PRADESH

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ABSTRACT

Background: Many suicide attempts happen in India, making it a public health concern. These mostly stems from mental health problems and is made worse by certain socio-cultural stressors. To design helpful strategies, one needs to understand deeply about the mental health patterns and social determinants linked to suicidal behavior. The aim is to identify patterns of psychiatric morbidity in individuals who have attempted suicide and to evaluate their socio-demographic, clinical, and psychosocial correlates in the context of Eastern Uttar Pradesh.

Materials and Methods: This cross-sectional study included 100 patients admitted following suicide attempts at a tertiary care hospital in eastern Uttar Pradesh. Psychiatric diagnoses were made using ICD-10 Diagnostic Criteria for Research, alongside standardized psychometric tools to assess suicide intent, impulsivity, and associated clinical variables.

Results: The most common psychiatric diagnoses were major depressive disorder (37%), adjustment disorder (24%), and substance use disorders (18%). Suicide attempts were significantly more frequent among younger individuals, those from rural backgrounds, nuclear families, and individuals with lower education and socioeconomic status. Most attempts were impulsive in nature, with insecticide ingestion being the most common method. Over 70% of participants reported acute psychosocial stressors such as interpersonal conflict, academic failure, or financial hardship preceding the attempt.

Conclusion: A substantial proportion of suicide attempters suffer from undiagnosed or untreated psychiatric conditions, particularly depressive and stress-related disorders. The findings highlight the need for routine psychiatric screening, early intervention, and community-based mental health support. A comprehensive, multi-sectoral approach involving clinical services and public health efforts is essential to reduce the incidence and recurrence of suicide attempts.

Keywords: Suicide attempts, Psychiatric morbidity, Depression, Socio-demographic factors, Psychosocial stressors.

INTRODUCTION

Suicide is a major contributor to premature mortality globally and a significant burden on healthcare systems. According to the World Health Organization (2021), more than 700,000 people die by suicide each year globally, with India accounting for a substantial proportion over 1,39,000 deaths

annually (National Crime Records Bureau [NCRB], 2022).^[1,2] Suicide attempts outnumber completed suicides by a large number and are among the strongest predictors of future suicide deaths (O'Connor & Nock, 2014).^[3]

People with tendency of suicidal behaviour are often seen strongly associated with psychiatric disorders too. Up to 90% of individuals who die by suicide have

a diagnosable mental illness, among these most common are mood disorders, substance use disorders, or personality disorders (Arsenault-Lapierre et al., 2004).^[4] In India, social stigma, hesitation to get support and lack of awareness of mental health disorders leave people struggling, stopping them from getting diagnosed or treated on time. This neglect leads to more severe symptoms, making them more at risk for lasting psychological distress, disabilities and even completing suicide.

Aim and Objectives

This study aims to identify the psychiatric morbidities contributing to suicide attempts in Eastern Uttar Pradesh, and to evaluate the associated socio-personal, familial, and clinical antecedents, while correlating these findings with the socio-demographic and cultural characteristics of the participants.

MATERIALS AND METHODS

This cross-sectional, hospital-based study was conducted in the Department of Psychiatry at a tertiary care hospital in eastern Uttar Pradesh, India, over a period from January 2020 to July 2021. A total of 100 patients, aged between 18 and 65 years, who were admitted following a suicide attempt and were accompanied by a relative or caregiver, were enrolled after obtaining written informed consent. Inclusion criteria included medical stability, full consciousness at the time of evaluation, and the ability to comprehend and participate in clinical assessments. Patients were excluded if they were medically unstable or unconscious, had significant cognitive impairments interfering with assessment, were involved in accidental harm cases, or refused to provide informed consent. Ethical approval for the study was obtained from the Institutional Ethics Committee prior to initiation.

All participants underwent comprehensive clinical and psychiatric evaluation using a range of standardized instruments. Psychiatric diagnoses were established using the ICD-10 Diagnostic Criteria for Research (DCR).^[5] To assess various psychopathological domains, the following rating scales were administered: the Comprehensive Psychopathological Rating Scale (CPRS),^[6] for overall psychiatric symptoms; the Hamilton Depression Rating Scale (HAM-D),^[7] and Hamilton Anxiety Rating Scale (HAM-A),^[8] for the evaluation of depressive and anxiety symptoms, respectively; the Brief Psychiatric Rating Scale (BPRS),^[9] for general psychopathology; the Young Mania Rating Scale (YMRS),^[10] for manic symptoms; and the Yale-Brown Obsessive Compulsive Scale (Y-BOCS),^[11] for the severity of obsessive-compulsive features. The Suicide Intent Scale (SIS),^[12] was used to assess the seriousness of intent during the suicide attempt. Socio-demographic and economic data were gathered using the Socio-Economic Status Scale (SESS),

based on the modified Kuppuswamy scale adapted for Indian populations.^[13]

All standardized instruments used in this study are freely available for academic research and do not require specific licensing. The ICD-10 DCR, HAM-D, HAM-A, BPRS, YMRS, SIS, and Y-BOCS are widely used clinical tools published in the scientific literature and are publicly accessible for non-commercial use. The Comprehensive Psychopathological Rating Scale (CPRS), is also freely available for academic use. The Socio-Economic Status Scale employed in this study is based on the modified Kuppuswamy Scale, which is extensively used in Indian research and is in the academic domain. No proprietary tools requiring special licensing or permissions were used in this study. All tools have been appropriately cited in accordance with ethical standards.

Data were analyzed using IBM SPSS Statistics for Windows, Version 25.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics including frequencies, percentages, means, and standard deviations were used to summarize demographic and clinical data. Associations between categorical variables were tested using the chi-square test, while logistic regression analysis was used to identify predictors of psychiatric diagnoses and suicidal intent. A p-value of less than 0.05 was considered statistically significant.

RESULTS

The present study comprised 100 patients who had attempted suicide and were admitted to a tertiary care hospital in Eastern Uttar Pradesh. The findings are summarized below across socio-demographic, clinical, suicide-related, and psychiatric parameters. The socio-demographic profile showed that the mean age of participants was 29.80 ± 11.08 years, with the majority (62%) falling in the age group of 18–30 years. Males slightly outnumbered females (51% vs. 49%). Most of the individuals were unmarried (54%) and belonged to nuclear families (71%), residing in rural areas (72%).

In terms of education, 28% had completed intermediate school, followed by 24% with high school education, and 14% were illiterate. The most common occupational categories were unemployed (34%) followed by unskilled workers (27%), and students (18%).

The clinical profile revealed that about 49% of patients reported that the duration of their mental health symptoms prior to the suicide attempt was less than one month, while 21% had been experiencing symptoms for more than a year. A history of past psychiatric illness was present in 32%, of whom 19% had depression and 11% had adjustment disorder. A positive family history of psychiatric illness was found in 24%, and 3% had a family history of suicide. Additionally, 18% had a substance use disorder (mainly alcohol and tobacco), and 20% had medical

comorbidities such as epilepsy, diabetes, or hypertension. Past suicide attempts were reported by 14% of the participants.

The majority of suicide attempts (86%) were impulsive in nature, and 71% of patients reported a clear psychosocial stressor preceding the attempt. The most commonly used method was ingestion of insecticides (58%), followed by drug overdose (17%), partial hanging (8%), and disinfectant ingestion (7%). Less common methods included jumping from heights, self-inflicted cuts, or burns. In terms of lethality, 38% of the attempts were classified as high lethality, 14% as moderate, and 48% as low. Regarding motive, 46% of patients reported attempting suicide to escape from a difficult situation, 37% reported it as a manipulative/attention-seeking act, and 16% acted out of hopelessness or guilt.

Based on ICD-10 criteria, psychiatric morbidity was found in 97% of the participants. The most frequent diagnosis was major depressive disorder (37%), followed by adjustment disorder (24%), and substance use disorders (18%). Other diagnoses included personality disorders (6%), bipolar affective disorder (5%), OCD (4%), and psychotic disorders (3%). Only 3 patients had no diagnosable psychiatric disorder. [Figure 1]

The association between psychiatric diagnoses and socio-demographic variables showed that a significant proportion (70%) of patients were aged 18–34 years, showing a highly significant association with diagnosis ($p < 0.001$). Gender was not statistically significant ($p = 0.072$). Marital status showed a significant correlation ($p < 0.001$), with married individuals mostly suffering from depression, schizophrenia, and OCD, while singles had higher rates of mania and other disorders. Religion and type of family were not significantly associated ($p = 0.828$ and $p = 0.950$, respectively).

Education ($p = 0.033$), occupation ($p = 0.001$), domicile ($p = 0.032$), and SESS category ($p = 0.018$) showed significant associations, while monthly family income did not ($p = 0.755$). [Table 1]

There was no statistically significant relation found between various socio-demographic variables and recent stressors / significant life events. [Table 2]

There was no statistically significant relation found between recent stressors/ significant life events and clinical variables. [Table 3]

Suicide intent scores were significantly associated with age, marital status, education, occupation, and type of family. Most patients with low and medium SIS scores were aged 18–34 years ($p < 0.001$). Single patients mostly had low scores, married patients had medium scores, and all widowed/separated patients had high scores ($p < 0.001$). Education ($p = 0.004$) and occupation ($p = 0.003$) also showed significant associations. Patients from nuclear families predominantly had low and medium scores, which was statistically significant. No significant association was found with other socio-demographic variables. [Table 4]

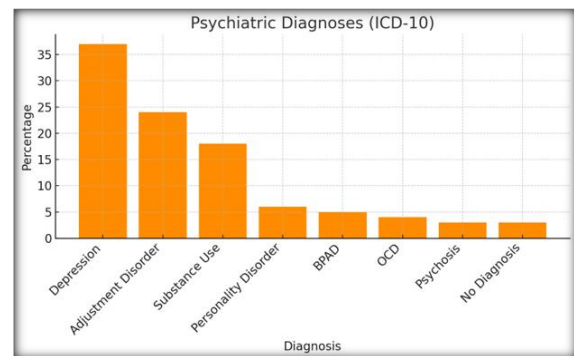


Figure 1: Distribution of Psychiatric Diagnoses (ICD-10) among suicide attempt patients

Table 1: Relation Between Psychiatric Diagnosis and Socio-Demographic Variables

Sociodemographic Variables	Depressive episode	Manic episode	Schizophrenia	OCD	Others	Total	Pearson Chi-Square	p-value
AGE								
18-34 years	27	7	1	6	29	70	$\chi^2 = 34.89$	$p < 0.001$
35-50 years	13	0	6	1	0	20		
51-65 years	7	0	2	1	0	10		
Total	47	7	9	8	29	100		
GENDER								
Male	21	5	8	5	12	51	$\chi^2 = 8.58$	$p = 0.072$
Female	26	2	1	3	17	49		
Total	47	7	9	8	29	100		
Marital Status								
Single	17	7	0	3	27	54	$\chi^2 = 43.95$	$p < 0.001$
Married	3	0	0	0	3	6		
Widow	27	0	9	5	2	43		
Total	47	7	9	8	29	100		
Religion								
Hindu	41	6	9	7	26	89	$\chi^2 = 4.31$	$p = 0.828$
Muslim	6	1	0	1	2	10		
Others	0	0	0	0	1	1		
Total	47	7	9	8	29	100		
Education Status								
Degree	8	0	0	1	2	11	$\chi^2 = 27.82$	$p = 0.033$
Intermediate	8	4	2	3	11	28		

High school	7	3	2	1	11	24		
Primary level	15	0	2	1	5	23		
Illiterate	9	0	3	2	0	14		
Total	47	7	9	8	29	100		
Occupation Status							$\chi^2 = 38.84$	p = 0.001
Professional	4	0	2	1	1	6		
Skilled	6	1	2	1	5	15		
Student	2	5	0	0	1	8		
Unskilled	14	1	6	1	5	27		
Unemployed	21	0	1	4	8	34		
Total	47	7	9	8	29	100		
Monthly Income							$\chi^2 = 8.37$	p = 0.755
>10000	8	1	3	1	4	17		
5001-9999	7	0	1	0	2	10		
3000-5000	8	0	1	2	4	15		
<3000	24	6	4	5	19	58		
Total	47	7	9	8	29	100		
DOMICILE							$\chi^2 = 10.58$	p = 0.032
Urban	9	3	0	4	12	28		
Rural	38	4	9	4	17	72		
Total	47	7	9	8	29	100		
Type of family							$\chi^2 = .711$	p = 0.950
Nuclear	33	5	6	5	22	71		
Joint	14	2	3	3	7	29		
Total	47	7	9	8	29	100		
SESS category							$\chi^2 = 18.50$	p = 0.018
II	6	2	1	3	0	12		
III	39	4	5	4	26	78		
IV	2	1	3	1	3	10		
Total	47	7	9	8	29	100		

Table 2: Relation between recent stressors / significant life events and socio-demographic variables

Socio-demographic variables	Current stressor and significant life events			
	Present	Absent	Total	Results
AGE GROUPS				
18–34 years	50	20	70	$\chi^2 = 0.789$ p = 0.688
35–50 years	13	7	20	
51–65 years	8	2	10	
Total	71	29	100	
GENDER DISTRIBUTION				
Male	37	14	51	$\chi^2 = 0.121$ p = 0.728
Female	34	15	49	
Total	71	29	100	
MARITAL STATUS				
Single	40	14	54	$\chi^2 = 0.540$ p = 0.763
Married	9	4	13	
Widow / widower	22	11	33	
Total	71	29	100	
RELIGION				
Hindu	63	26	89	$\chi^2 = 0.415$ p = 0.813
Muslim	7	3	10	
Others	1	0	1	
Total	71	29	100	
EDUCATION STATUS				
Degree or above	4	7	11	$\chi^2 = 1.940$ p = 0.747
Intermediate	21	7	28	
High school	15	9	24	
Primary level	21	5	26	
Illiterate	10	1	11	
Total	71	29	100	
OCCUPATION STATUS				
Professional	4	2	6	$\chi^2 = 9.253$ p = 0.055
Student	11	4	15	
Skilled	12	6	18	
Unskilled	22	5	27	
Unemployed	22	12	34	
Total	71	29	100	
FAMILY MONTHLY INCOME				
>9000	38	20	58	$\chi^2 = 5.934$ p = 0.115
5001–9000	5	2	7	
3000–5000	15	2	17	

<3000	9	6	15	
Total	71	29	100	
DOMICILE				
Urban	16	12	28	
Rural	55	17	72	$\chi^2 = 3.627$ p = 0.057
Total	71	29	100	
TYPE OF FAMILY				
Nuclear	52	19	71	$\chi^2 = 0.586$ p = 0.746
Joint	19	10	29	
Total	71	29	100	
SESS CATEGORY				
II	8	4	12	$\chi^2 = 0.138$ p = 0.933
III	56	22	78	
IV	7	3	10	
Total	71	29	100	

Table 3: Relation between recent stressors / significant life events and clinical variables

Clinical variables	Recent stressor / significant life events			Results
	Present	Absent	Total	
Total duration of illness				
<1 month	36	13	49	$\chi^2 = 1.068$ p = 0.586
1 month–1 year	22	8	30	
>1 year	13	8	21	
Total	71	29	100	
Substance dependence				
Alcohol	6	4	10	$\chi^2 = 1.837$ p = 0.607
Nicotine	4	3	7	
Others	1	0	1	
None	60	22	82	
Total	71	29	100	
Medical & surgical comorbidities				
Present	14	6	20	$\chi^2 = 0.012$ p = 0.912
Absent	57	23	80	
Total	71	29	100	
Past psychiatric history				
Present	22	10	32	$\chi^2 = 0.116$ p = 0.734
Absent	49	19	68	
Total	71	29	100	
Past medication history				
Present	27	15	42	$\chi^2 = 1.585$ p = 0.208
Absent	44	14	58	
Total	71	29	100	
Past suicide attempt				
Present	8	6	14	$\chi^2 = 1.518$ p = 0.218
Absent	63	23	86	
Total	71	29	100	
Family history				
Psychiatric disorder	21	3	24	$\chi^2 = 5.951$ p = 0.051
Suicide	3	0	3	
None	47	26	73	
Total	71	29	100	

Table 4: Relation between suicide intent score and socio-demographic variables

variables	Suicide intent score			Total	Results
	Low	Medium	High		
AGE GROUPS					
18–34 years	31	29	10	70	$\chi^2 = 25.350$ p < 0.001
35–50 years	1	12	7	20	
51–65 years	0	3	7	10	
Total	32	44	24	100	
GENDER					
Male	12	28	11	51	$\chi^2 = 5.402$ p = 0.065
Female	20	16	13	49	
Total	32	44	24	100	
MARITAL STATUS					
Single	29	18	7	54	$\chi^2 = 33.962$ p < 0.001
Married	3	26	14	43	
Widow / widower	0	0	3	3	
Total	32	44	24	100	
RELIGION					
Hindu	29	40	20	89	

Muslim	2	4	4	10	$\chi^2 = 3.792$ p = 0.435
Others	1	0	0	1	
Total	32	44	24	100	
Education status					
Degree or above	3	5	3	11	$\chi^2 = 22.639$ p = 0.004
Intermediate	12	13	3	28	
High school	12	8	4	24	
Primary level	5	13	5	23	
Illiterate	0	5	9	14	
Total	32	44	24	100	
Occupation status					
Professional	3	3	1	6	$\chi^2 = 23.048$ p = 0.003
Skilled	2	10	2	15	
Student	13	4	1	18	
Unskilled	4	15	8	27	
Unemployed	10	12	12	34	
Total	32	44	24	100	
Family monthly income					
>9000	23	22	13	58	$\chi^2 = 5.384$ p = 0.496
5001–9000	3	10	4	17	
3000–5000	2	6	2	10	
<3000	4	6	5	15	
Total	32	44	24	100	
Domicile					
Urban	13	10	5	28	$\chi^2 = 3.748$ p = 0.153
Rural	19	34	19	72	
Total	32	44	24	100	
Type of family					
Nuclear	26	33	12	71	$\chi^2 = 7.115$ p = 0.029
Joint	6	11	12	29	
Total	32	44	24	100	

DISCUSSION

Our study underscores a strikingly high prevalence of psychiatric morbidity among individuals who attempted suicide, a finding that is consistent with a broad base of Indian and international literature. Psychiatric illness remains one of the most critical underlying risk factors for suicidal behavior. Vijayakumar et al. (2007) emphasized the magnitude of suicide as a major public health concern in India, closely linked with untreated psychiatric disorders especially depressive and substance use disorders.^[14] This trend was similarly highlighted by Bertolote and Fleischmann (2002), who found that over 90% of individuals who die by suicide have a diagnosable psychiatric condition.^[15] Hawton et al. (2013), in a systematic review of suicide risk factors, further affirmed that psychiatric morbidity is highly prevalent among suicide attempters across populations and geographies.^[16]

In our sample, Major Depressive Disorder (MDD) was the most common psychiatric diagnosis, observed in 37% of patients. This aligns with global reports where MDD is found in 30–50% of suicide attempts. Beautrais et al. (2000) noted depression as the most frequent diagnosis in suicide attempters, significantly contributing to suicidal ideation and behaviors.^[17] Kessler et al. (1999) also reported that depression, especially when untreated, substantially increases the risk of suicidal behavior.^[18] Adjustment disorder (24%) and substance use disorders (18%) were the next most frequent diagnoses, highlighting the need for early identification and management of these conditions.

Our findings show that younger individuals (18–34 years) predominated among attempters, especially with lower suicide intent scores ($p < 0.001$). This reflects the growing burden of mental health issues among youth and aligns with the observations of Aggarwal et al. and Pillai et al., who emphasized that young adults are especially vulnerable due to psychosocial stressors such as academic failure, romantic breakups, and employment-related pressures.^[19,20] Moreover, Rane and Nadkarni et al. highlighted a youth-driven suicide epidemic in India, exacerbated by stigma and lack of access to mental health support.^[21]

Marital status showed a significant correlation with intent. Widowed or separated individuals had the highest suicide intent scores ($p < 0.001$), likely reflecting emotional distress, grief, and social disconnection. Kumar et al. noted similar trends, identifying marital disruption as a strong predictor of high suicidal intent.^[22] This finding is in line with the WHO's global suicide prevention report, which identifies relationship breakdowns as acute triggers.^[23]

There were statistically significant associations between psychiatric diagnoses and education ($p = 0.033$), occupational status ($p = 0.001$), domicile ($p = 0.032$), and socio-economic status ($p = 0.018$). Lower educational levels and unemployment were correlated with higher psychiatric morbidity and intent scores. Sarkar et al. and Trivedi and Sareen et al. documented that socio-economic hardships, illiteracy, and occupational instability increase suicide risk and delay psychiatric care-seeking.^[24,25]

A particularly noteworthy observation was that 71% of participants had a psychosocial stressor, most commonly interpersonal conflict or financial distress. This supports earlier findings by Srivastava et al. and Banerjee et al., who found that acute life stressors act as direct precipitants of suicidal behavior.^[26,27] Studies by Vijayakumar and Rajkumar et al. emphasized the value of psychosocial interventions in both urban and rural suicide prevention programs.^[28]

Impulsivity was a hallmark in our cohort, with 86% of attempts classified as impulsive. Srivastava et al. had previously established impulsivity as a major trait among suicide attempters, especially in the youth.^[26] In a similar vein, Mann et al. discussed the role of serotonergic dysfunction underlying impulsive suicidal behaviors, underscoring the neurobiological vulnerability of such individuals.^[29] Substance use, primarily alcohol and tobacco, was seen in 18% of our participants. As noted by Murphy et al. and Nock et al., substances often act as disinhibitors, impairing judgment and increasing the likelihood of impulsive suicide attempts. Comorbid substance use is a key target for suicide prevention and relapse reduction strategies.^[30,31]

Although gender did not show a statistically significant difference in diagnostic patterns ($p = 0.072$), males were more likely to use lethal methods, echoing findings from Grover et al. and Vijayakumar et al., who noted that while women more often attempt suicide, men tend to use more violent and fatal means.^[14,32] These findings call for gender-responsive mental health policies.

Rural dominance (72%) among suicide attempters was a striking pattern. Kapur et al. and Gururaj et al. identified that rural populations face substantial barriers to mental health care, including stigma, lack of awareness, and underdeveloped services. This can lead to higher impulsivity and lethality in suicide attempts.^[33,34]

Finally, suicide intent scores were significantly associated with education ($p = 0.004$), occupation ($p = 0.003$), and type of family (p significant). Individuals from nuclear families showed lower intent scores, which may reflect limited emotional support networks. Sharma et al. and Singh et al. documented the influence of family structure on emotional resilience, especially during crises.^[35,36]

CONCLUSION

This study underscores the substantial burden of psychiatric morbidity among individuals who attempted suicide in Eastern Uttar Pradesh, with Major Depressive Disorder emerging as the most common diagnosis. Suicide attempts were strongly associated with socio-demographic vulnerabilities such as young age, marital disruption, lower education, unemployment, and rural background. Impulsivity and acute psychosocial stressors particularly interpersonal conflicts, academic

pressures, and financial strain were frequent triggers, highlighting the complex interplay of psychological and contextual factors.

These findings reinforce the need for early psychiatric screening and intervention in both hospital and community settings. We recommend integrating routine mental health assessments, timely treatment, and structured follow-up in tertiary care hospitals. Additionally, culturally sensitive community-based programs focusing on mental health awareness, emotional regulation, and substance abuse prevention should be prioritized to reduce repeat attempts and improve long-term outcomes.

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