



# Socio-demographic and Clinical Profile of Suicide Attempters attending a Tertiary Care Hospital: A Cross-sectional Study

Ved P. Gupta, Akanksha, Suhail A. Azmi, Mohammed Reyazuddin, Rehan Mateen

Department of Psychiatry, Jawaharlal Nehru Medical College and Hospital, Aligarh Muslim University, Aligarh, Uttar Pradesh India

## ARTICLE INFO

### \*Correspondence:

Ved Prakash Gupta  
dr.vedgupta2k11@gmail.com

Department of  
Psychiatry, Jawaharlal  
Nehru Medical College  
and Hospital (JNMCH),  
Aligarh Muslim  
University (AMU),  
Aligarh, India

### Dates:

Received: 09-06-2022

Accepted: 29-07-2022

Published: 05-11-2022

### Keywords:

Socio-Demographic  
Profile, Clinical Profile,  
Suicide Attempter

### How to Cite:

Gupta VP, Akanksha,  
Azmi SA, Reyazuddin  
M, Mateen R. Socio-  
demographic and  
Clinical Profile of Suicide  
Attempters attending a  
Tertiary Care Hospital:  
A Cross-sectional  
Study. *Indian Journal of  
Behavioural Sciences.*  
2022;25(2): 87-92.  
doi: 10.55229/ijbs.v25i2.03

## Abstract

**Background:** Suicide attempts are one of the most common psychiatric crises. Suicide attempts are thought to be the most accurate determinants of completed suicide. A variety of circumstances causes suicide attempts. Although mental illness and extreme stress have long been linked to suicide, the socio-demographic and clinical features of those who attempt suicide can also reveal suicidal intent.

**Objectives:** The aim of the study was to explore the socio-demographic factors and the clinical profile of suicide attempters.

**Method:** The present study was conducted in the Department of Psychiatry, Jawaharlal Nehru Medical College and Hospital, Aligarh, Uttar Pradesh. Suicide attempters referred for psychiatric evaluation from various hospital departments from December 2018 to November 2019 were evaluated after proper stabilization. Details including socio-demographic data and psychiatric diagnosis were tabulated and analyzed using SPSS-16.

**Result:** In our study, out of 80 subjects, maximum suicide attempters (71.2%) belonged to the age group of 18–30 years, most of whom were females (51.2%), mostly married (65%), followed the Hindu religion (66.3%), equally distributed in a rural and urban area (50%), literate (76.2%), unemployed (56.2%), of the lower middle class (48.8%), living in a nuclear family (46.2%). Of all the methods, the most commonly used method was ingestion of insecticides/ pesticides (38.7%), and most attempters had interpersonal issues with their spouse (38.8%) and had some psychiatric comorbidity (56.3%).

**Conclusion:** Suicide attempts are common among the young population. Poisoning is the most popular mode, with Organophosphorus compounds being the most common in our study. As a result, patients require psychiatric care. Self-harm can be reduced by promoting healthy coping strategies and reducing stress. In a nation like India, where established mental health facilities are rare and stigmatized, it is also essential to convey enough information to people from lower socio-economic backgrounds.

## INTRODUCTION

The word suicide is derived from the Latin term “suicidium”, which means “the act of taking one’s own life” (Stedman’s Medical Dictionary, 28th ed.). The World Health Organization defines suicide as “an injury with various degrees of lethal intent, and that suicide can be described as a suicidal act with a fatal outcome”.<sup>1</sup>

© IJBS, 2022. Open Access This article is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows users to download and share the article for non-commercial purposes, so long as the article is reproduced in the whole without changes, and the original authorship is acknowledged. If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. If your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <https://creativecommons.org/licenses/by-nc-sa/4.0/>

Suicides rank second behind traffic accidents in terms of premature death among those aged 15 to 29 years and third among those aged 15 to 44 years worldwide.<sup>2</sup> Unfortunately, 78% of suicides in 2015 were completed in low- and middle-income countries (LMIC) (WHO 2015).

The rate of suicide death is 1.4% worldwide, varying from 0.5% in African countries to 1.9% in South-East Asia. There have been various changes regarding the continents or WHO areas with the highest suicide rates. The highest rates were seen in Japan when WHO started documenting. Following the peak in Eastern Europe and Asia<sup>3</sup>, China and India accounted for 30% of all suicides globally.<sup>4</sup> According to Vijayakumar *et al.*, the two nations cited to account for even 54% of all suicides worldwide.<sup>5</sup>

Every year, around 100,000 individuals commit suicide in India. In the nation, there were 1,53,052 suicides recorded in 2020, a rise of 10.0% over 2019. Maharashtra recorded the highest number of suicides (19,909), followed by Tamil Nadu, Madhya Pradesh, West Bengal, and Karnataka, which accounted for 13.0%, 11.0%, 9.5%, 8.6%, and 8.0% of total suicides, respectively. Together, these 5 States were responsible for 50.1% of all suicides reported nationwide. Among Union Territories, most suicides (3,142) have been reported in Delhi, which is the most populous of the Union Territories.<sup>6</sup>

A suicide attempt or a suicidal gesture is a suicidal act that does not result in death.<sup>7</sup> It is unclear if suicide attempter's socio-demographic and clinical data have any predictive value. The literature on both attempted and completed suicides offers an alarming picture.

There has been more focus on completed suicide rather than attempted suicide in prior epidemiologic research because data gathered is more systematized in the former. Despite mounting data showing the likelihood of attempted suicide is far greater than completed suicide, those hospitalized after a suicidal attempt has received very little attention. However, hospitalization following a suicide attempt provides an opportunity for treatment intervention in a population known to be at high risk for suicide in the future.

Additionally, several research conducted in India and overseas predict different risk factors for suicide attempts. There is a need to obtain data relevant to a particular region, especially in the current environment where suicide is considered a major public health concern. The present study is aimed to explore the various clinical characteristics of suicide attempters in a tertiary care hospital of Aligarh, Uttar Pradesh, a northern state of India.

## MATERIAL AND METHODS

This study was a hospital-based descriptive cross-sectional study from December 2018 to November 2019. We have included all consecutive patients of attempted suicide during the study period.

### Study Population

Patients with attempted suicide were referred from various hospital departments to the Department of Psychiatry, Jawaharlal Nehru Medical College and Hospital, Aligarh, Uttar Pradesh, for psychiatric evaluation.

### Study Tool

Self-constructed Semi-Structured Proforma included details about the socio-demographic profile, psychiatric comorbidity, mode of suicide, and psycho-social factors.

### Modified B.G Prasad Classification

The socio-economic scale of modified BG Prasad has been used in community-based health studies in India since 1961 to assess the socio-economic status of study subjects. It is an income-based scale; therefore, a constant update is required to take inflation and depreciation of the rupee into account. The social standing of an individual or a family in society can be measured by it.

## INCLUSION CRITERIA

- Patient's aged between 18–60 years.
- Patients who gave informed consent for the study.
- Suicide attempters are referred for psychiatric evaluation from various hospital departments.

## EXCLUSION CRITERIA

- Patients aged below 18 years or above 60 years.
- Patients who did not give informed consent for the study.



## Methodology Followed

When a patient with attempted suicide who fulfilled the inclusion criteria was referred to the department of Psychiatry JNMCH, Aligarh, for consultation from various departments, a detailed history taking and examination was done. Information regarding study variables were obtained through an interview

schedule as described in the study tool. All the patients were provided with standard medical and psychiatric care irrespective of their participation in the study.

## STATISTICAL ANALYSIS

Result of the study were analysed by using Statistical Package for Social Science (SPSS 25.0). Subjects

**Table 1:** Socio-demographic profile of patients.

<i>Socio-demographic variables</i>	<i>Frequency (n=80)</i>	<i>Percentage (%)</i>
AGE (in years)		
18–30	57	71.2
31–40	17	21.2
41–50	3	3.8
51–60	3	3.8
SEX		
Male	39	48.8
Female	41	51.2
MARITAL STATUS		
Married	52	65
Unmarried	28	35
RELIGION		
Hindu	53	66.3
Muslim	27	33.7
Residence		
Rural	40	50
Urban	40	50
Education		
Illiterate	19	23.8
Primary	12	15.0
Middle	7	8.8
Secondary	9	11.3
Senior Secondary	20	25.0
Graduate	12	15.0
Postgraduate	1	1.3
Occupation		
Farmer	9	11.3
Businessman	7	8.7
Professional	3	3.8
Housewife	23	28.7
Student	22	27.5
Labourer	16	20.0
Socio-economic status		
Upper	4	5.0
Upper-middle	7	8.8
Middle	15	18.7
Lower-middle	39	48.8
Lower	15	18.7
Family type		
Nuclear	37	46.2
Joint	22	27.5
Extended	21	26.3

characteristics were summarized as mean and standard deviation for continuous variables and frequency and percentage for categorical variables.

## RESULTS

The study showed a majority of patients were young, in the age group of 18–30 years (71.2%) followed by 31–40 years (21.2%). The mean age of patient's was  $28.1 \pm 9.15$ , the male gender was  $31.69 \pm 9.50$ , and that of the female gender was  $24.68 \pm 7.41$ . The youngest patient was 18 years old and the most senior was 56 years old. Females (51.2%) were slightly higher than males (48.8%); 52 (65%) patients were married, while 28 (35%) were unmarried. Most of the patients in the study followed the Hindu religion (66.3%), while 27 (33.7%) patients were Muslims. Forty (50%) residents belonged to both rural and urban areas, respectively.

Most of the subjects were literate, with 12 (15%) studied till primary schooling, 7 (8.8%) having middle schooling, 9 (11.3%) having secondary schooling, 20 (25%) studied till 12<sup>th</sup> standard, 12 (15%) were graduates and 1 (1.3%) completing post-graduation. Around 19 (23.8%) were illiterate. By occupation, 23 (28.7%) subjects were housewives, 22 (27.5%) were students, 16 (20%) were labourers, 9 (11.3%) were farmers, 7 (8.7%) were having business and 3 (3.8%) were professionals.

As per Modified B.G Prasad Classification, 39 (48.8%) patients belonged to the lower middle socio-economic class, 15 (18.7%) belonged to both middle and lower class respectively, 7 (8.8%) belonged to the upper middle class, and 4 (5%) belonged to the upper class. Out of 80 subjects, 37 (46.2%) were living in nuclear families, 22 (27.5%) belonged to joint families, and 21 (26.3%) were in extended families (Table 1).

Among 80 suicide attempters, 45 (56.3%) had some diagnosed psychiatric illness, while 35 (43.7%) had no psychiatric comorbidity (Table 2).

Insecticide/ pesticide poisoning was the most common mode of suicide attempt in 31 (38.7%) patients, followed by corrosive poisoning (25%),

**Table 2:** Psychiatric comorbidity in suicide attempters

Psychiatric Comorbidity	Frequency (N=80)	Percentage (%)
Present	45	56.3
Absent	35	43.7

**TABLE 3:** Mode of suicide attempt

Mode of suicidal attempt	Frequency (n=80)	Percentage (%)
Corrosive	20	25
Hanging	8	10
Insecticide/Pesticide	31	38.7
Drug/Medicines	12	15
Cut	2	2.4
Burn	7	8.8

drugs/ medicines ingestion (15%), hanging (10%), burns (8.8%) and least by cutting (2.5%) (Table 3).

The most common psycho-social factor associated with suicide was interpersonal conflict with the spouse (38.8%) followed by family dispute (32.5%), broken love affairs (11.2%), failure in an exam (8.8%), and job-related issues (6.2%) (Table 4).

## DISCUSSION

Finding from the present study focus on socio-demographic and clinical profile of suicide attempters referred for psychiatric evaluation. Most of the subjects in our study were in the 18–30 years age group (71.2%). This distribution was similar to another study done previously by Banerjee *et al.* (2009) who reported suicide rates are highest in persons in the age group 20 to 29 years.<sup>8</sup>

Of the 80 subjects in our study, 48.8% were males, and 51.2% were females which is in line with findings from the study by Nandi *et al.* (1979).<sup>9</sup> In contrast to our results, Hedge RS *et al.* recorded a male (67%) preponderance in its research on suicide patterns in a rural community in northern Karnataka.<sup>10</sup> Majority of suicide attempters in our study were married (65%) and equally distributed in rural and urban areas, as also found in the study by Mohanty S *et al.* (2007).<sup>11</sup>

In our study, 66.3% of suicide attempters were following the Hindu religion, while 33.7% were Muslims.

**Table 4:** Psycho-social factors responsible for suicide attempt

Psycho-Social Factors	Frequency (N=80)	Percentage (%)
Marital Dispute	31	38.8
Family Dispute	26	32.5
Job Related Stress	5	6.2
Failure In Exam	7	8.8
Broken Love Affairs	9	11.2
Unidentified	2	2.5

Also 43.8% subjects were employed which is in concordance with the findings in study by Ramdurg S *et al.* (2011).<sup>12</sup>

Most of the subjects in our study were literate (76.2%). Our findings are somewhat similar to the study conducted by Chavan B *et al.*, (2008) who did a psychological autopsy of 101 suicide cases from the northwest region of India. In his study, a large number of suicide attempters were educated up to senior secondary class (63.7%).<sup>13</sup>

In our research, suicide attempts were reported more in subjects belonging to the lower middle class (43.8%). In a cross-sectional study by Khan F *et al.*, (2005) most of the suicide attempters i.e. 54% belonged to low income group.<sup>14</sup>

Most of the subjects in our study were living in nuclear families. This is in line with the findings reported in a study conducted by Latha K.S and his colleagues in 1994.<sup>15</sup>

In our study, 56.3% of suicide attempters had some psychiatric comorbidity. In the study, Kanchan T *et al.*, (2008) concluded that 28% of females and 11% of males who committed suicide had depression.<sup>16</sup> Manoranjitham SD *et al.* (2010) also reported relation of suicide attempts and co-morbid psychiatric disorders.<sup>17</sup> In 2008 study conducted by Chavan B and colleagues found that chances of suicidal attempts increase with the presence of co-morbid psychiatric illness (34%) and alcohol or other substance use (24%).<sup>13</sup>

In our study, among all the methods, the most common mode of suicide was the use of insecticide/pesticide (38.7%) followed by ingestion of corrosive (25%). This is in line with findings from Banerjee S *et al.* (1990),<sup>18</sup> Latha KS *et al.*, (1994)<sup>15</sup>, and Prasad J *et al.* (2006).<sup>19</sup>

The most common stressor associated with suicide in our study includes interpersonal conflict with spouse (38.8%) or family members (32.5%), which is similar to findings from studies done by Sharma SD *et al.*, (1978),<sup>20</sup> Hedge RS *et al.*, (1980),<sup>10</sup> Banerjee S *et al.*, (1990)<sup>18</sup>, Latha KS *et al.*, (1994)<sup>15</sup> and Ramdurg S *et al.*, (2011).<sup>12</sup>

## CONCLUSION

Suicide attempts is a psychiatric emergency. Our findings show that suicide attempts are widespread

among young people, with interpersonal conflict being the most common cause. It is commonly associated with psychiatric disorders and is usually caused by poisoning, with the most prevalent mechanism being the usage of Organophosphorus compounds. The selling of pesticides should be controlled to prevent their abuse. Suicide is avoidable, according to a social and public health approach, which encourages an integrated system of interventions at several levels of society, including the person, the family, the community, and the health-care system. A key step in such an approach involves modifying attitudes toward suicide via educational efforts and legal levers. Hence psychiatric care is necessary. Further analytical studies are warranted to confirm the findings of our study.

## LIMITATIONS

- The study results may not be generalized since our sample size was small.
- In this study, suicide attempts have been restricted to the adult population (18–60 years) only, exempting children, adolescents and the elderly population.
- Only presence or absence of psychiatric comorbidity has been defined without elaboration of various comorbidities in detail. A detailed description of comorbidities could have suggested the role of different psychiatric conditions in suicide.
- This study reports only those cases reported to the hospitals and there was no control group. Given their brief hospital stays, a complete personality evaluation of the patients was not feasible, which would have provided essential therapeutic inputs.
- The study is cross-sectional study and the subjects were given therapeutic counselling after their mood stabilised, they were not followed up for long.
- Knowing the lethality of suicide attempts could have predicted the risk of completed suicide in attempters.

## FUTURE DIRECTIONS

- A study with a larger sample size should be planned.

- Proper follow-up of patients.
- The study should be multi-centered, and the patient should be selected from different cultural backgrounds.

### Financial Support

Nil.

### Conflicts of Interest

There are no conflicts of interest.

## REFERENCES

1. World Health Organization. The World Health Report 2001. Available from: <http://www.who.int/whr/2001/chapter2/en/index6.html>. Accessed 20 Sep 2015.
2. Bertolote JM, Fleischmann A. A global perspective in the epidemiology of suicide. *Suicidologi*. 2002;7(2).
3. Värnik P. Suicide in the world. *International journal of environmental research and public health*. 2012 Mar;9(3):760-71.
4. Bertolote JM, Fleischmann A. Suicide and psychiatric diagnosis: a worldwide perspective. *World psychiatry*. 2002 Oct;1(3):181.
5. Vijayakumar L. Suicide prevention: the urgent need in developing countries. *World psychiatry*. 2004 Oct 1;3(3):158-9.
6. National Crime Records Bureau. Accidental Deaths and Suicides in India. New Delhi: Ministry of Home Affairs, Government of India, 2020; 196-208
7. Michello C, Lynne FG, Lemyra D. Suicidality: nomenclature. In: Claire MR, Jeffrey LE, editors. *Encyclopedia of interpersonal violence*. Sage Publications; 2008: 701-2.
8. Banerjee S, Chowdhury AN, Schelling E, Brahma A, Biswas MK, Weiss MG. Deliberate self-harm and suicide by pesticide ingestion in the Sundarban region, India. *Tropical Medicine & International Health*. 2009 Feb;14(2):213-9.
9. Nandi DN, Mukherjee SP, Banerjee G, Ghosh A, Boral GC, Chowdhury A, Bose J. Is suicide preventable by restricting the availability of lethal agents? A rural survey of West Bengal. *Indian Journal of Psychiatry*. 1979 Jul 1;21(3):251-5.
10. Hedge RS. Suicide in rural community. *Indian journal of psychiatry*. 1980 Oct;22(4):368.
11. Mohanty S, Sahu G, Mohanty MK, Patnaik M. Suicide in India—A four year retrospective study. *Journal of forensic and legal medicine*. 2007 May 1;14(4):185-9.
12. Ramdurg S, Goyal S, Goyal P, Sagar R, Sharan P. Sociodemographic profile, clinical factors, and mode of attempt in suicide attempters in consultation liaison psychiatry in a tertiary care center. *Industrial Psychiatry Journal*. 2011 Jan 1;20(1):11.
13. Chavan BS, Singh GP, Kaur J, Kochar R. Psychological autopsy of 101 suicide cases from northwest region of India. *Indian journal of psychiatry*. 2008 Jan;50(1):34.
14. Khan FA, Anand B, Devi MG, Murthy KK. Psychological autopsy of suicide—a cross-sectional study. *Indian Journal of Psychiatry*. 2005 Apr;47(2):73.
15. Latha KS, Bhat SM, D'souza P. Attempted suicide and recent stressful life events: a report from India. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*. 1994.
16. Kanchan T, Menezes RG. Suicidal poisoning in Southern India: gender differences. *Journal of forensic and legal medicine*. 2008 Jan 1;15(1):7-14.
17. Manoranjitham SD, Rajkumar AP, Thangadurai P, Prasad J, Jayakaran R, Jacob KS. Risk factors for suicide in rural south India. *The British Journal of Psychiatry*. 2010 Jan;196(1):26-30.
18. Banerjee G, Nandi DN, Nandi S, Sarkar S, Boral GC, Ghosh A. The vulnerability of Indian women to suicide: a field-study. *Indian Journal of Psychiatry*. 1990 Oct;32(4):305.
19. Prasad J, Abraham VJ, Minz S, Abraham S, Joseph A, Muliylil JP, George K, Jacob KS. Rates and factors associated with suicide in Kaniyambadi block, Tamil Nadu, South India, 2000–2002. *International Journal of Social Psychiatry*. 2006 Jan;52(1):65-71.
20. Sharma SD, Gopalakrishna R. Suicide—a Retrospective Study in a Culturally Distinct Community in India. *International journal of social psychiatry*. 1978 Apr;24(1):13-8.