



OBSERVATIONAL STUDY OF MEDICO-LEGAL PROFILE OF 'SUICIDE ATTEMPTERS' ADMITTED AT SMS HOSPITAL, JAIPUR DURING 2020-21

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ABSTRACT

Suicide is defined as an act of intentionally causing one's own death. Suicide is an intentional act and 'suicide attempt' is an intentional self-harm in which a person tries to kill himself but survives the attempt. The term 'parasuicide' was first coined by Norman Krietman in Edinburgh. Parasuicide, also labelled as deliberate self-harm is a major risk factor for completed suicide. Parasuicides and failed attempted suicides should be dealt responsibly as they sometimes leave a residual temporary or permanent disability and may also act as a primary event prior to the execution of a fatal suicidal attempt. Available literature is flooded with research on suicidal fatalities with a relative paucity of studies on non-fatal attempted suicides which lead the way to the initiation of this study to evaluate the medico-legal profile of suicide attempters admitted to SMS Hospital, Jaipur during the study period. The participants were interviewed using a proforma. Results were obtained using relevant statistical techniques. Majority of the suicide attempters in the present study were young adult married males, being the most active and productive population of society. Young unemployed and earning middle aged persons were the major sub groups of the suicide attempters. The most commonly employed methods for attempting suicide was poisoning (81.5%) followed by hanging (11.2%). Gender is significantly related to the method used for suicide attempts ($p < 0.5$). Family problems were the main reason behind the attempted suicide in the present study (53.5%) followed by miscellaneous reasons (20.4%) and financial issues (13.8%). Investigation of the risk factors and medico-legal aspects of intentional and non-intentional acts of self-harm is immensely useful for prevention of such events, their repetitions and also completed suicides.

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INTRODUCTION

Suicide is defined as an act of intentionally causing one's own death¹. Suicide is an intentional act and 'suicide attempt' is an intentional self-harm in which a person tries to kill himself but survives the attempt^{2,3}. The term 'parasuicide' was first coined by Norman Krietman in Edinburgh^{4,5}. Parasuicide, also labelled as deliberate self-harm is a major risk factor for completed suicide⁶. Parasuicide or attempted suicide is a grave problem and a major concern to the society, which sometime or the other affects the lives of a significant proportion of the population and is not to be taken casually, for it may prove as equally dangerous as suicide itself and sometimes more than that because of the residual temporary or permanent disability⁷. The prevalence of parasuicidal acts is estimated to be 10- 20 times higher than that of completed suicides⁸. It is the strongest indicator for a future successful suicide attempt^{7,9}. Studies have estimated that about 13-50% people who commit suicide have a lifetime history of suicide, rather, 20-25% of them have an episode of parasuicide in the year before their deaths¹⁰⁻¹³. Each suicide results in an unexpected and untimely death of the individual which has long term effects on lives of all people related to the deceased.

In India, a suicide attempt was until recently a punishable legal offence, hence it is either 'covered up' or labelled as

'accidental' in order to avoid social stigma and legal consequences¹⁴. Therefore, there is very little information available about suicide attempters in literature as most of these acts remain unreported; moreover, to avoid mental trauma to survivor any probe is avoided in a gesture of care to prevent the recapitulation of the event. Parasuicides and failed attempted suicides should be dealt responsibly as they sometimes leave a residual temporary or permanent disability and may also act as a primary event prior to the execution of a fatal suicidal attempt. Investigation of the risk factors and medico-legal aspects of intentional and non-intentional acts of self-harm is immensely useful for prevention of such events, their repetitions and also completed suicides. Knowledge of the most commonly used suicide methods and other related factors is important to devise prevention strategies. Available literature is flooded with research on suicidal fatalities with a relative paucity of studies on non-fatal attempted suicides which lead the way to the initiation of this study to evaluate the medico-legal profile of suicide attempters admitted to SMS Hospital, Jaipur during the study period.

Aim & Objective

1. To observe medico-legal variables and characteristics of failed attempted suicides viz- methods employed, time

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and place of occurrence, previous attempts, procurement of material used.

- To observe precipitating events and identify the risk factors of attempted suicides.
- To observe the socio-demographic profile in these cases.

MATERIAL & METHODS

This study was carried out at the Department of Forensic Medicine, SMS Hospital, Jaipur after prior approval from the Research Review Board and Institutional Ethics Committee and the confidentiality of participants was maintained. The study period was from 1st September 2020 to 7th January 2022. The study was conducted on 260 cases.

Inclusion criteria

- Suicide attempters who survive the attempt.
- Parasuicide cases of attempted suicides without the aim to die.
- Fully conscious patients able to narrate the details of the event.
- Suicide attempters willing to give informed written consent for their participation in the study.

Exclusion criteria

- Unconscious and critically ill patients.
- Patients who are unable to speak due to residual effects of suicidal attempt.
- Patient not willing to furnish intricate details of the incident/ Non-cooperative patients
- Patients with amnesia for the event

After selection of cases satisfying inclusion and exclusion criteria, and obtaining informed consent, the subjects were interviewed as per the proposed proforma. Details regarding age, gender, other socio-demographic details; time since incident, time and place of occurrence; method employed, details of procurement of materials used; previous attempts, if any with relevant details; details of precipitating event; and, history of chronic illness, substance abuse, psychiatric morbidity were recorded. The findings were then computed using Microsoft excel datasheet and tabulated using pivot table function of Microsoft excel. Continuous variables were summarized as mean and standard deviation whereas nominal/categorical variables as proportions and percentages. Chi-Square test was used for analysis of nominal categorical variables to test for significance of the observations of attempted suicides. Statistical analysis was then conducted using SPSS version 20.0 software. A p-value < 0.05 was considered as statistically significant.

OBSERVATIONS & RESULTS

Maximum number of cases of suicide attempters were seen in 25 to 34 years age group (37.3%) followed by young adults (youth) of 18 to 24 years of age, followed by 16.5% cases in 35-44 years of age and 11.2% cases of more than 45 years of age. Least number of cases were of adolescents between 14 to 17 years of age (8.1%). The subjects included in the study ranged from 14 to 72 years of age. There were only six cases of people more than 60 years of age. The mean age of the suicide attempters in the study was 30.11 ± 11.135 years. The present study included 172 cases (66.2%) and 88 females (33.8%). Thus, males were the predominant population among suicide attempters. More than half of the suicide attempters in

the present study were from urban regions (52.7%) followed by 47.3% subjects from rural areas. Table 1 shows educational status of suicide attempters.

Table No. 1 Educational statuswise distribution of suicide attempters (n=260)

Educational status	No. of Cases	Percentage (%)
Illiterate	25	9.6
Primary	34	13.1
Secondary	107	41.2
Senior Secondary & Diploma	25	9.6
Graduation & above	69	26.5
Total	260	100

Table 2 shows occupation wise distribution of suicide attempters.

Table No. 2 Occupational status wise distribution of suicide attempters (n=260)

Occupational status	No. of Cases	Percentage (%)
Unemployed	14	05.4
Students	52	20
Housewives	42	16.2
Farmers	20	07.7
Daily Wages workers	31	11.9
Salaried	63	24.2
Self employed	38	14.6
Total	260	100

64.6% suicide attempters were married and 34.2% were either unmarried or had not attained the marriageable age. Only three subjects were widow and none was legally separated i.e. divorced. Although there was a proportion of married people living in separation but has not been depicted due to lack of legal validation. Table 3 shows socio-economic status wise distribution of cases.

Table No. 3 Socioeconomic statuswise distribution of suicide attempters (n=260)

Total monthly Income of household (in Rupees)	No. of Cases	Percentage (%)
< 10,000	202	77.7
10,000 – 50,000	58	22.3
Total	260	100

Although low socioeconomic status was predominant among the suicide attempters, yet ongoing loans were not very common in the study group. 14.6% suicide attempters were under financial debt/ loan. 60% of the study population were from nuclear families and rest 40% were living in joint families. Majority of the suicide attempts were done at home (93.1%). Only 4.6% and 2.3% of attempts were done outside home or workplace respectively. Figure 1 shows distribution of cases based on methods used.

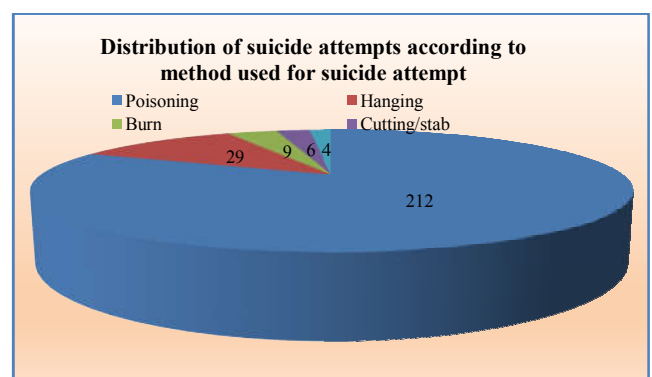


Table 4 shows distribution of materials used for suicide attempts.

Table No. 4 Distribution of suicide attempts according to material used for suicide attempt (n=260)

Material used for suicide attempt	No. of Cases
Medicinal & other Poisonous substances	122
Insecticides/ Pesticides	98
Cloth item	29
Inflammable substance with fire	09
Sharp weapon	06
Acid	04

In majority of cases the material used to inflict deliberate self-harm was used from the substances available at home (80.4%) and in 19.2% cases it was procured specifically for suicide attempt. Table 5 shows reasons of suicide attempt.

Table No 5 Distribution of suicide attempts according to reason behind the act (n=260)

Reason behind attempted suicide	No. of Cases	Percentage (%)
Family Problem	139	53.5
Financial Problem	36	13.8
Love life	20	07.7
Chronic Illness	08	03.1
Career/Job issues	04	01.5
Miscellaneous/Don't know	53	20.4
Total	260	100

Majority of the suicide attempters repented their act and wished to live happily and promised never to repeat such an act, but 32.2% were not sure of their opinion. 4.6% suicide attempters had a negative outlook towards life and still wished to die, the ones who are at risk for repeated attempts and should be given due attention and consultation to prevent repetition of the event, which may prove fatal, the other time.

DISCUSSION

The majority of subjects who attempted suicide were young adults in active years of life, with maximum cases in less than 35 years of age. 25-34 years was the most preponderant age group in the present study, which is an explainable observation as these are the career forming and initial settlement years of family life full of stresses of employment, daily life chores, familial and societal responsibilities and financial burdens. In modern times, the lifestyle changes and competitive attitudes have led to additional stress and overthinking in the youth. It is important to address this issue as earlier studies have reported attempted suicide as one of the most important predictors of completed suicides. The results of the present study are similar to those of Narang RL, *et al.* (2000)¹⁵; Logaraj M, *et al.* (2005)¹⁶; Polewka A, *et al.* (2005)¹⁷; Nagendra Gouda MR and Rao SM (2008)¹⁸; Saddicha S, *et al.* (2010)¹⁹; Mugdalimath A, *et al.* (2012)¹³; Singh K, *et al.* (2012)²⁰; Halder S and Mahato AK (2016)²¹; Bork T, *et al.* (2021)²² who reported 15-29 years as the most vulnerable population for attempted suicides; but slightly variable to Madhekar NS, *et al.* (2011)⁷ who reported maximum preponderance in 25-35 years age group; and to Pattah Narayan SK (2004)²³; Arun M, *et al.* (2004)²⁴ and Arun M, *et al.* (2007)⁸ who reported maximum preponderance in the third and fourth decades of life. Males were the predominant population among suicide attempters which is also explainable as the society of the region is male dominant with males being more active participants of sociocultural activities, with familial financial responsibility and employment requirements, thus making them vulnerable to stress in daily life. The results are in concurrence with earlier studies.^{14,15,23,24} More than half of the suicide attempters in the present study were from urban regions (52.7%) followed by 47.3% subjects from rural areas.

These results are similar to earlier studies.^{14,15,23,24} The study region is an urban region in the capital city of the state of Rajasthan and the institute is a tertiary care centre catering to both local population of the surrounding areas as well as the referral population for nearby regions and other adjoining districts. This explains the preponderance of urban population in the present study, however, the difference between the two is not much as the hospital also caters to a considerable amount of referral population, being the apex institution in the state. Majority of the study subjects were educated up to secondary level (41.2%) followed by subjects who were graduates and above (26.5%) and 13.1% individuals who had taken only primary education. The results are similar to earlier studies.^{7, 14,15,23,24} Majority of the subjects who had attempted suicide in the present study were salaried persons (24.2%), which amounted for about one quarter of the study population. Students were the next predominant group of study population (20%), followed by housewives (16.2%) and self-employed people (14.6%). Least numbers were of unemployed persons (5.4%). 11.9% suicide attempters were daily wages workers and 7.7% were farmers. These results are quite similar to earlier studies.^{7, 14,15,23,24} The most commonly employed method for attempting suicide was poisoning (81.5%) followed by hanging (11.2%). Self-immolation was used in 3.5% cases. Sharp weapons were used to inflict intentional injuries in 2.3% cases and the suicide attempter jumped from a height in 1.5% cases. These findings are similar to those of previous studies.^{7, 14,15,23,24} All methods were almost equally employed by both genders except hanging (86.2%), jumping from height (75%) and poisoning (64.6%) which were more commonly used by males in comparison to females. Gender is significantly related to the method used for suicide attempts. Proportionately more males have employed daring methods like hanging in comparison to females. There were cases who had consumed more than one kind of poison. The results are quite similar to Narang RL, *et al.* (2000)¹⁵; Saddicha S, *et al.* (2010)¹⁹; Mugdalimath A, *et al.* (2012)¹³ who reported hanging and poisoning as most common methods (72%) and reported that males preferred hanging and females preferred self-immolation. Family problems were the main reason behind the attempted suicide in the present study (53.5%) followed by miscellaneous reasons (20.4%) and financial issues (13.8%). The same was also reported by Mugdalimath A, *et al.* (2012)¹³.

CONCLUSION

Majority of the suicide attempters in the present study were young adult married males, being the most active and productive population of society. Young unemployed and earning middle aged persons were the major sub groups of the suicide attempters.

The most commonly employed methods for attempting suicide was poisoning (81.5%) followed by hanging (11.2%). Gender is significantly related to the method used for suicide attempts (p<0.5). Family problems were the main reason behind the attempted suicide in the present study (53.5%) followed by miscellaneous reasons (20.4%) and financial issues (13.8%).

Conflict of interest: None

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