

A Cross-sectional Study of Suicide Attempters Presenting in Tertiary Care Hospital

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Abstract

Background and Objective: The rate of suicide is rising. The study aims to describe the nature and determinants of suicidal behaviors in individuals to better understand this phenomenon and suggest measures to prevent the suicidal deaths.

Methods: A cross-sectional descriptive study of consecutive cases attending Chengalpattu Medical College Hospital using a semi-structured pro forma and clinical evaluation.

Results: A total of 236 suicide attempters were interviewed. Suicide attempts were more common in men, younger population were triggered by interpersonal conflict and linked to impulsivity, depression, and alcohol use.

Conclusion: Suicidal behavior is common in the population, and a careful analysis of societal, psychological, and individual factors in its causation is necessary for appropriate treatment and risk reduction.

Key words: Demographic profile, Method of attempt, Suicide attempters

INTRODUCTION

The WHO defines suicidal act as self-injury with varying degrees of lethal intent and suicide is defined as a suicidal act with fatal outcome. Suicidal acts with non-fatal outcome are labeled by the WHO as either, suicide attempts, suicidal gestures, or acts of deliberate self-harm.¹ The WHO estimates about 1.8 lakh deaths in India every year are due to suicide.² Southern states lead the others in suicidal deaths.³ Despite the efforts to control, suicides rise at a rate of 0.7% annually. Unlike cardiovascular disorders, suicide is prevalent even among the younger population. Such as other non-communicable diseases, suicide is increasing throughout the world and is a major public health problem.⁴ The prevalence, methods, and triggers of suicidal attempt vary between different cultures and time

periods. The purpose of this study is to describe the nature and determinants of suicidal behaviors in individuals to better understand this phenomenon and suggest measures prevent suicidal deaths.

Common factors that are described to be related with suicide attempts in various studies include male gender, availability of pesticides, economic instability and debts, inter personal conflicts, substance abuse, mental and physical illness, impulsivity, adverse life experience, low serotonin levels, peer influences, and modeling.^{5,6} Swanson and Colman have determined that knowing someone who had committed suicide was associated with increased suicidality for all age groups.⁷ Warning signs of imminent suicidal attempt include talking about committing suicide, change in behavior, withdrawal from social activities, lack of interest in work and family, preparation for death by making final arrangements, recent or severe loss, and pre-occupation with dying.⁸

Aim

The aim of the study was to describe the social profile of suicide attempters, methods adopted, and preceding causes for suicidal attempts and the relation between substance abuse and suicide.

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METHODS

This cross-sectional study was done in Department of Psychiatry, Chengalpattu Medical College Hospital in the period from June to July 2016. All cases admitted after suicidal attempt brought for treatment were enrolled in the study after obtaining informed consent. A semi-structured pro forma was used to gather socio-demographic details and circumstances surrounding the attempt. Data were obtained from the attempters and relatives. For the purpose of this study, "suicidal attempt" was defined as "a person who had made deliberate act of self-harm consciously aimed at self-destruction, irrespective of his/her intention to die, irrespective of outcome."⁵ Those who did not consent were excluded and all other attempters were included. Data obtained were studied by descriptive statistics.

RESULTS

The total number of attempters admitted during the study period was 236. All individuals gave consent and none were excluded. The distribution of attempters in various socio-demographic variables is given in Table 1. Suicidal attempters were more often men (60.59%) than women (39.41%). Most were from urban areas. The majority of attempters were farmers, workers, and housewives. The attempters were predominantly Hindu (96.18%) and very few were from other religions. Many were unmarried and lived in nuclear families. There were fewer cases in the higher socio-economic groups.

Table 2 shows the distribution of attempters in different age groups sorted by gender. Suicide attempts are more common in the younger age groups (age 11-40 years). As the age increases, the proportion of females drops in comparison with women. The average age was 33 years, and the modal distribution was between 21 and 30 years.

An analysis of the circumstances and triggers for the suicidal attempt (Table 3) reveal that most attempts are carried out in the evenings and occur predominantly in the home. The proportion of women in those who attempt suicide outside the house is minimal. The precipitating cause in most attempts was marital and family conflict. Academic and work stress were a minor contributor. While most attempts were carried out alone, careful planning and suicidal note were rare.

Pesticides were the most commonly chosen method and oleander seed ingestion second most preferred. Nearly 15 individuals (6.40%) had attempted hanging. Easily available household toxins such as mosquito repellants, cleaning liquid, tablets, and kerosene were also preferred (Table 4).

Table 1: Socio-demographic profile of attempters

Variable	N (%)
Gender	
Male	143 (60.59)
Female	93 (39.41)
Area	
Rural	193 (81.78)
Urban	43 (18.22)
Occupation	
Farmer	55 (23.3)
Driver	18 (7.62)
Construction worker	17 (7.2)
Industrial worker	19 (8.05)
Student	15 (6.35)
Unemployed	11 (4.66)
Housewife	52 (22.03)
Others	49 (20.76)
Education	
Uneducated	63 (26.7)
Primary	12 (5.1)
Intermediate	51 (21.61)
High school	81 (34.32)
Higher secondary	16 (6.77)
Degree/diploma	13 (5.5)
Religion	
Hindu	227 (96.18)
Christian	6 (2.54)
Muslim	3 (1.27)
Marital status	
Arranged marriage	144 (61)
Love marriage	25 (10.60)
Unmarried	67 (28.38)
Type of family	
Nuclear	163 (69.06)
Joint	73 (30.93)
Socio-economic status	
Class 5	36 (15.25)
Class 4	113 (47.88)
Class 3	75 (31.78)
Class 2	12 (5.08)
Class 1	0 (0)

Table 2: Distribution of attempters by age and gender

Age group (years)	Male	Female	Total (%)
11-20	15	21	36 (15.25)
21-30	50	38	88 (37.29)
31-40	38	22	60 (25.42)
41-50	18	4	22 (9.32)
51-60	18	6	24 (10.17)
61-70	2	1	3 (1.27)
71-80	3	0	3 (1.27)

Most of the male attempters had a history of alcohol use and a majority (75.93%) was intoxicated during the attempt. Depression was diagnosed in 20.76% of all attempters. A total of 77.11% of attempts were rated to be impulsive. Previous history of suicidal attempt was noted in 13 individuals and 13 attempters had a positive history for suicidal attempts in the family. Physical illnesses were comorbid in 42 attempters (17.80%) (Table 5).

Table 3: Circumstance and triggers

Variables	N (%)
Time	
12 am-6 am	9 (3.81)
6 am-12 pm	57 (24.15)
12 pm-6 pm	94 (39.83)
6 pm-12 am	76 (32.20)
Place	
Home	178 (75.42)
Outside	58 (24.58)
Precipitating cause	
Marital problem	119 (50.42)
Family conflict	48 (20.34)
Work stress	3 (1.30)
Romantic conflict	10 (4.23)
Academic failure	3 (1.30)
Pain related	25 (10.60)
Others	28 (11.90)
Isolation	
Alone	175 (74.20)
Not alone	61 (25.80)
Planning	
Planned	1 (99.58)
Unplanned	235 (0.42)

Table 4: Distribution by method chosen

Method	N (%)
Pesticide and insecticide	100 (42.37)
Oleander seed	61 (25.94)
Rat killer	25 (10.60)
Cleaning agents	8 (3.30)
Ant killer	4 (1.70)
Mosquito repellent	4 (1.70)
Kerosene	3 (1.30)
Tablet overdose	10 (4.40)
Hanging	15 (6.40)
Others	6 (2.50)

DISCUSSION

The presence of 236 cases of attempted suicide in a span of just 2 months is an indicator of the burden of suicide in the population. Men outnumbered women in the sample and this trend is reflected in many recent studies in South India. Most of the sample was rural reflecting the catchment area of the hospital. Being a public hospital, lower socio-economic, and less educated populations were predominant in the sample. The preponderance of Hindu religion disproportionate to demographic distribution reveals the role of cultural factors in modulating expression of suicidal behavior. The relative frequency of love marriage and nuclear family type reflect the changing societal trends and might be the mediator of the rise in suicide incidence.

The decrease in number of women in the older age group could reflect the protective role of family and child rearing and the effect of substance use on male population. The

Table 5: Clinical variable distribution among attempters

Variable	N (%)
Substance use	
Alcohol	57 (24.15)
Alcohol and tobacco	51 (21.03)
Tobacco	3 (1.30)
No substance use	125 (52.90)
Alcohol during attempt	
Present	82 (75.93)
Absent	26 (24.07)
Depression	
Present	49 (20.76)
Absent	187 (79.23)
Impulsivity	
Present	182 (77.11)
Absent	54 (22.88)
Previous attempt	
Present	13 (5.50)
Absent	223 (94.50)
Family history	
Present	12 (5.10)
Absent	224 (94.90)
Physical comorbidity	
Present	42 (17.80)
Absent	194 (82.62)

higher prevalence in younger age group could reflect the role of impulsivity and interpersonal conflict in suicidal behavior.

The relative frequency of pesticide and oleander seed ingestion could be due to the easy availability of these toxins in the rural region and also cultural factors. The prominent role of impulsivity is manifest in the link between younger population, interpersonal and marital conflict, and unplanned suicide attempts. The higher frequency of depression than in the general population is an indicator of the need for psychological screening all suicide attempters. The prominence of alcohol use and intoxication in men attempting suicide is a clear indicator of the role of alcohol in suicide in men.

CONCLUSION

Suicidal behavior is common in the population and a careful analysis of societal, psychological, and individual factors in its causation is necessary for appropriate treatment and risk reduction.

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