

Study on Suicide Pattern in Tertiary Care Hospital in Chengalpattu District, Tamil Nadu, IndiaShankar Anand. R¹, Preethi. P², M. Bastina Jenoffia³, V. Pragadeesh Raja⁴, Dharani Lenin⁵¹Associate Professor, Department of Anesthesiology, Tagore Medical College and Hospital, Chennai²Associate Professor, Department of Anatomy, Tagore Medical College and Hospital, Chennai³Assistant Professor, Department of Anesthesiology, Tagore Medical College and Hospital, Chennai⁴Assistant Professor, Department of Community Medicine, Father Muller Medical College, Mangaluru, Karnataka⁵Resident, Critical Care Medicine, KMC Hospital, Mangaluru, Karnataka

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Abstract:**Background:** Suicide is a significant issue in public health. Throughout the world every year, more than 700 000 people lose their lives to suicide. India ranks 49th in the world in terms of suicide rate in 2019 (14.04% per lakh of population), but it is impossible to ignore the grim fact that India reports the highest number of suicides each year.**Objectives:** to study the pattern of suicide among patients in a tertiary care center and to assess the factors associated with suicide.**Methodology:** The cross-sectional study was carried out in a tertiary care hospital located in the Chengalpattu district of Tamil Nadu. Over a period of 8 months, specifically from September 2023 to May 2024. All patients admitted to the ICU after attempting suicide provided data for the study. The use of a pretested questionnaire to collect data on the sociodemographic characteristics, type, method.**Results:** Among the 90 patients admitted with suicide attempt, the mean age of patients was 31.48± (12.24) SD years, ranging from 15-80 years. Among them, 62 (68.9%) were females. Majority of the patients from rural area 80(88.9%). Poisoning was the most common cause among suicidal individuals. The major reason for suicidal attempt was family problems 69 (76.7%).**Conclusion:** Concern is expressed about the rise in self-poisoning suicides in India. The primary causes of self-poisoning suicide attempts were family conflicts, financial difficulties, and psychological problems. In order to provide support, health education, and legislation, doctors, nurses, families, the community, and state leaders must all work together to address the multifaceted issue of attempted suicide by self-poisoning.**Keywords:** Suicide, Poisoning, Family problem.

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Introduction

Suicide is a significant issue in public health. Suicide is defined as death caused by self-directed injurious behaviour with intent to die as a result of the behaviour. A suicide attempt is a non-fatal, self-directed, potentially injurious behavior with intent to die as a result of the behavior. A suicide attempt might not result in injury [1].

Throughout the world every year, more than 700 000 people lose their lives to suicide. In 2019, over 77% of suicides worldwide happened in low- and middle-income nations, The fourth most common cause of death for people aged 15 to 29 is suicide. [2] India ranks 49th in the world in terms of suicide rate in 2019 (14.04% per lakh of population), but it is impossible to ignore the grim fact that India re-

ports the highest number of suicides each year. [3] In India more than 1 lakh population commit suicide every year. A total of 1,70,924 suicides were reported nationwide in 2022, representing a 4.2% increase from 2021 and a 3.3% increase in the suicide rate from 2021 to 2022. The state of Maharashtra reports the most suicide cases 13.3%, followed by Tamilnadu 11.6%. [4]

The pattern of suicide changes every year and varies according to the difference in cultural and socio demographic factors. Appropriate information on such factors helps in policy making and framing treatment guidelines of suicide. There is a paucity of literature on various factors associated with suicide which hinders effective suicide prevention.

Hence, the current study aimed to study the pattern of suicide among patients in a tertiary care center and to assess the factors associated with suicide

Methodology

The cross-sectional study was carried out at an 12 bed intensive care unit (ICU) in a tertiary care hospital located in the Chengalpattu district of Tamil Nadu, is located in India. We conducted the study over a period of 8 months, specifically from September 2023 to May 2024.

All patients admitted to the ICU after attempting suicide provided data for the study. The head of the Intensive Care Unit (ICU) authorized the use of a pretested questionnaire to collect data on the socio-demographic characteristics, type, method, and

outcome of poisoning. We conducted the statistical analysis using SPSS version 23.

Results

Among the 90 patients admitted with suicide attempt, the mean age of patients was $31.48 \pm (12.24)$ SD years, ranging from 15-80 years. Among them, 62 (68.9%) were females and 28 (31.1%) were males. Majority of the patients from rural area 80(88.9%).

The majority of the patients, 64 (71.1%), were married. Most of the patients are unemployed, 59 (65.6%); among the unemployed, most are housewives, 33 (65.5%), followed by students, 15 (25.4%). The patients' general characteristics are shown in Table 1.

Table 1: General characteristics of suicide patients

General characteristics	n (%)
Sex	
Male	28 (31.1%)
Female	62 (68.9%)
Marital Status	
Married	64 (71.1%)
Unmarried	28.9 (28.9%)
Area	
Rural	80 (88.9%)
Urban	10 (11.1%)
Occupation	
Profession	Nil
Semi profession	2 (2.2%)
Clerical/Shop/Farm	4 (4.4%)
Skilled	14 (15.6%)
Semi-skilled	2 (2.2%)
Unskilled	9 (10%)
Unemployed	59 (65.6%)
Education	
Post graduate	3 (3.3%)
Graduate	27 (30%)
Diploma/Higher Secondary	19 (21.1%)
High school	20 (22.2%)
Middle	15 (16.7%)
Primary	1 (1.1%)
Illiterate	5 (5.6%)
Socio economic status	
Class I	8 (8.9%)
Class II	18 (20.0%)
Class III	40 (44.4%)
Class IV	15 (16.7%)
Class IV	9 (10.0%)

The mean time the patient reached the hospital after a suicide attempt was $29.60 \pm (9.679)$ SD minutes, ranging from 15 to 48 minutes.

Poisoning was the most common cause among suicidal individuals. (85.6%), followed by hanging (10%) and self-cut injury (4.4%). Among the poi-

soning majority of the patient were tablet poisoning (33.1%) followed by insecticide (20%). Table 2 shows the agents used for poisoning.

Most of the tablet poisoning were consumed Tab. Paracetamol (32.1%). Table 3 shows the tablet used by poisoning.

Table 2: Agent used for Poisoning

Poisoning	Frequency (%)
Tablet	28 (36.4%)
Herbicide	2 (2.6%)
Corrosive	13 (17%)
Insecticide	18 (23.3%)
Plants	2 (2.6%)
Rodenticide	10 (13%)
Others	4 (5.1%)

Table 3: Tablet used for Poisoning

Tablet	Frequency (%)
Benzodiazepine	4 (14.2%)
Iron	3 (10.8%)
Paracetamol	9 (32.1%)
Phenytoin	1 (3.6%)
Thyroid Tablet	5 (17.9%)
Others	6 (21.4%)

The major reason for suicidal attempt was family problems 69 (76.7%) followed by love failures 7 (7.8%). Figure 1 shows the causes of suicide. Poisoning was equally distributed among homemakers (20.8%) and college students (19.8%). Among the patients, 9 (10%) of the patients had previously attempted suicide.

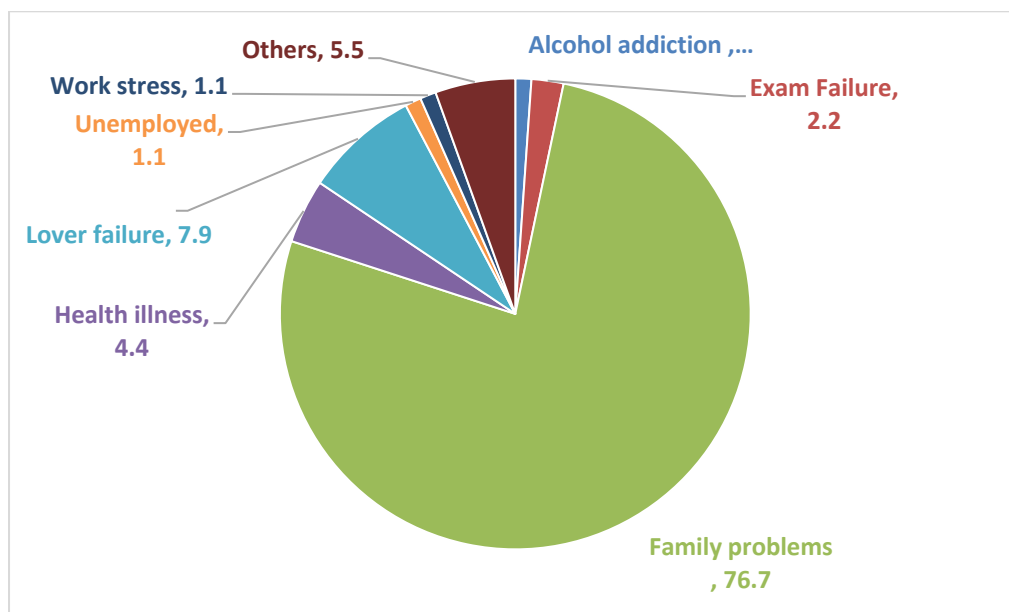


Figure 1: Reason for Suicidal attempt

Suicidal attempt was more among rural population which was statistically significant ($P < 0.001$). Suicidal attempt was more among unemployed particularly housewives (36.7%), which was statistically significant ($P < 0.001$). Suicidal attempt more among the females 62 (68.9%) than males which was statistically significant ($P < 0.001$) Table 4 shows the association of sociodemographic factors with poisoning.

Table 4: Sociodemographic poisoning association

Sociodemographic factor	Suicidal attempt	P value
Rural	80 (88.9%)	0.001
Urban	10 (11.1%)	
Occupation	Type of poisoning	0.000
Profession	Tablet	
Semi profession	Herbicide	
Clerical/Shop/Farm	Corrosive	
Skilled	Insecticide	

Semi-skilled	Plants Rodenticide Others	0.029
Unskilled		
Unemployed		
Sex	28 (31.1%)	
Males	62 (68.9%)	
Females		

Discussion

Every year suicidal case is increasing trend. In this study poison as used for suicidal cases (85.6%), similar results comparable to a study conducted by Sugathi et al., where 86.8% of the patients had suicidal. [5] In the current study most of the patients are females 62 (68.9%).

Similar study conducted by Barary et al., also most of the patients was females (51.7%). [6] In another study also El- Farouny et al., majority of the suicide attempt patients are females (66.8%) only. [7] In this current study females are more among them housewives are more cases, so need of counsel and support from family members. Not only to counsel the housewives and also family members. Housewives need some minds relax from routine activities in their home.

In Current study most of the patients used tablet (36.4%) for suicide attempt and followed by insecticide (23.3%), but another study conducted by Sanjay Samaria et al., contradictory result The most common agent of poisoning was pesticide ingestion, accounting for (44%) of the total cases. Prescribed drugs were the second-largest group (18.6%). [8] In this study among the tablet poisoning, common routine tablet like paracetamol used as agent for suicide attempt, so need legislation control to sell this common drug to the people without symptoms, advised to sell the tablets more than toxicity dose to single person.

Need of counsel all family members because most common cause of suicide attempt, in this study family problem 69 (76.7%). Similar results reported in the study conducted by Shah et al., domestic disputes 26 (43.33%) were the main reason behind poison consumption. [9] In another study also Kasemy et al., reported family disputes (58.2%) is the major reason for suicide attempt. [10]

Conclusion

Concern is expressed about the rise in self-poisoning suicides in India. The primary causes of self-poisoning suicide attempts were family conflicts, financial difficulties, and psychological problems.

Individuals who reside in rural areas, are under 40 years old, are students, and have low to moderate socioeconomic status are more likely to attempt suicide by self-poisoning. In order to provide sup-

port, health education, and legislation, doctors, nurses, families, the community, and state leaders must all work together to address the multifaceted issue of attempted suicide by self-poisoning.

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