

ORIGINAL ARTICLE

Profile of Suicidal Deaths - An Autopsy based Study

Sreedevi G,¹ Thomas Z,² Saritha SR.³

Assistant Professor,¹ Professor and Head.^{2,3}

1. Department of Forensic Medicine, KMCT Medical College, Kozhikode.

2. Department of Forensic Medicine, Believers Church Medical College, Thiruvalla.

3. Department of Forensic Medicine, Government Medical College, Pariyaram, Kannur.

Abstract:

Suicide is one of the leading as well as preventable cause of premature death not only in our country but worldwide. There has been an increase in the suicidal rates globally over the years. Suicide has many perspectives like religious, philosophical, anthropological, sociological, ethical, psychological, and psychiatric or biological.

The objectives of the present study were to describe the risk factors and different methods adopted for suicide in a district of southern state of India. A descriptive study was conducted on 175 dead bodies brought for medicolegal autopsy in the tertiary care centre, Alappuzha with history and post-mortem findings consistent with suicide. All the cases turned out to be homicide and accidents after investigation were excluded from the study. Information about the deceased were collected from close relatives and investigating officers.

Maximum suicide victims were seen in age group 40 to 60 years where male outnumbered females. Most of the victims preferred their home to commit suicide. Hanging was the most common method adopted followed by poisoning, burns and drowning. In the study population, physical illness seen as the most common reason for suicide followed by family problems. Burns were chosen as a preferred method by females than males. This study supports in finding out the stressors that could have led them to commit suicide and to suggest few strategies to prevent the suicides in the future.

Keywords: Suicide; Methods adopted; Risk factors; Suicidal ideation; Stressors.

Introduction:

The Government of India classifies a death as suicide, when it is an unnatural death and the intent to die commenced within the person. Moreover, there is a reason for the person to end his or her life. Those who have previously attempted suicide is at a greater risk for future attempts. The commonly used method of suicide varies between countries, and depends on the availability of effective means. Common methods adopted for suicide include hanging, pesticide poisoning, burns and drowning.

This study targets to describe the most common methods adopted and to describe the sociodemographic profile and risk factors that leads to suicide.

We can prevent suicide only by finding out the reasons behind it. The reasons may vary from region to region as they face different problems. So it is necessary to find out the stressors affecting that particular region. To find out such stressors, medicolegal autopsy may have to be followed by psychological autopsy.

Materials and Methods:

This descriptive study was conducted in a tertiary care centre in Alappuzha district in Kerala, during the period of May 2019 to

April 2020. The sample size taken for this study was 175 and the study subjects were dead bodies brought for medicolegal autopsy with history and postmortem findings being consistent with suicide. Subjects were selected using inclusion and exclusion criteria. Cases in which relatives gave consent to participate were included in the study and cases with no bystander or relatives to give a reliable history and all the homicidal and accidental cases after police investigation were excluded from the study. The study subjects were examined for method adopted for suicide, their socio-demographic variations and characteristics, time of death, place of death etc. Data related to the life events and stressors preceding the suicide were collected from the relatives of the deceased and concerned investigating agencies by personal interview. Study tools included postmortem report, proforma, hospital records, and suicidal notes if any. Data entered using Microsoft excel worksheet and analysis done using SPSS version 18.0. Quantitative variables were analysed using test for difference in means and qualitative variables were analysed using chi-square-test. The original research was approved by the Institutional Ethics Committee.

Results:

Suicides seen more in age group 40-60 years (65 out of 175 cases accounting for 37.1%) whereas minimum number of suicides seen in age group above 80 years, accounting for 3.4% (6 out of 175 cases). Males (70.9%) outnumbered females (29.1%) in the current study. About 90% study subjects were literate and 74.8% were married. Majority, 126 out of 175 belonged to low socioeconomic status.

Corresponding Author

Dr. Sreedevi G.

Email : sreedevigsreedevig66@gmail.com

Mobile No. : +91 9446500388

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Majority of the suicides occurred at home (84.6%) followed by public places (8%) other than school (1.1%), workplace (1.7%) and hostel (0.6%). Around 35% of total population committed suicide during morning hours and 26.3% committed suicide during night. Most common method adopted by victims was hanging (67%) followed by poisoning (22%). Around 8.6% (15 out of 175) of cases had suicidal notes. Approximately 21% of the study population had history of previous attempts and 15 out of 37 (40.54%) used hanging as the method followed by poisoning (10 out of 37 i.e. 27.02%). In this study, 49 victims verbally expressed their suicidal ideation to their close people which included family members, friends, or colleagues prior to the incidence and 37 out of 175 (21.1%) had history of previous attempts.

Discussion:

Age and Sex: According to this study, maximum numbers of suicides were seen among males (70.9%) than females and most of them belonged to age group 40-60 years. Minimum numbers of suicides were seen in age group above 80 years. These findings were similar to a study on hanging conducted in Kerala where male suicide victims were more in number¹ and they belonged to the age group 21 to 60 years. Suicide rates in the most industrialized countries increased with age.² Similar observations noted in other studies conducted in India.^{3,4} But in some of the western studies, maximum numbers of cases were reported between 21 to 30 years of age among both sexes.⁵

Educational status: Majority of the study subjects were literate (90%). Previous studies showed that the association of education and suicide is inconsistent. In an Indian study by Mohanty S et al.

Table 1. Method (s) adopted for suicide by the victims.

Method adopted	Number	Percent
Hanging	117	66.9
Drowning	2	1.1
Poisoning	38	21.7
Burns	14	8.0
Injuries due to Sharp instruments	1	0.6
Injuries sustained in railway traffic occurrence	3	1.7
Total	175	100.0

Table 2. Features of the suicidal note recovered.

Features	Category	Frequency (N = 15)
Language of the suicidal note	English	1
	Malayalam	14
	Hindi	0
To whom	Police	1
	Not Specified	14
Content	Asking forgiveness	1
	Expressing Love	7
	Accusatory	1
	Revenge	4
	Religious Theme	2
Whether the note is signed	Yes	3
	No	12
Whether the note is Well organised	Yes	15
	No	0

from 2000 to 2003, less educated or illiterates were usually the victims.⁶

Marital status: In the present study the majority of the victims were married. This finding was similar to various studies previously conducted in our country.⁷⁻¹¹ In these studies, mortality rates were higher among married persons than the unmarried persons in both sexes. This may be due to more responsibility and increased family conflicts among married people.

Socioeconomic status: There are higher suicide rates in persons of low socioeconomic status (72%). It was similar to previous Indian studies where low socioeconomic status was reported in 50 to 66% of suicide victims.¹²⁻¹⁴

Place of suicide attempt: Majority of the suicides occurred at home (84.6%) and the finding was similar to a study conducted at Bangalore, in which majority of the children who committed suicide were at their homes.¹⁵

Time of suicide attempt:

Around 35% of total population committed suicide during morning hours and 26.3% committed suicide during night. Only

Table 3. Reasons for committing suicide (N=175).

Sl. no.	Risk factors	Number	Percentage
1.	Academic failure	4	2.3
2.	Problems regarding Love affair	9	5.1
3.	Problems regarding Marital life	21	12.0
4.	Family problems	33	18.9
5.	Forced by parents to do something	5	2.9
6.	Psychiatric illness	18	10.3
7.	Physical illness	35	20.0
8.	Financial burden	24	13.7
9.	Alcoholism	20	11.4
10.	Quarrel with neighbours	2	1.1
11.	Others	4	2.3

Table 4. Gender-wise difference in methods used for suicide deaths.

Methods used	Gender			
	Male		Female	
	N	%	N	%
Hanging	83	67	34	66.7
Drowning	0	0	2	3.9
Poisoning	31	25	7	13.7
Burns	8	7	6	11.7
Cutting/Piercing instruments	0	0	1	2
Railway/Road traffic occurrence	2	1	1	2
Total	124	100	51	100

Table 5. Age group wise difference in method used for suicide (N=175).

Method of suicide	Age-groups									
	Below 20 yrs		20-40 yrs		40-60 yrs		60-80 yrs		Above 80 yrs	
	N	%	N	%	N	%	N	%	N	%
Hanging	14	82.3	39	84.8	39	60.0	23	56.1	2	33.3
Drowning	2	11.8	0	0.0	0	0.0	0	0.0	0	0.0
Poisoning	1	5.9	5	10.9	18	27.7	10	24.4	4	66.7
Burns	0	0.0	2	4.3	8	12.3	4	9.8	0	0.0
Sharp instruments	0	0.0	0	0.0	0	0.0	1	2.4	0	0.0
Railway/Road occurrence	0	0.0	0	0.0	0	0.0	3	7.3	0	0.0
Total	17	100	46	100	65	100	41	100	6	100

16.6% committed suicide during evening. In a previous study conducted at Turkey states, large number of young and middle aged people committed suicide more around midnight. Time patterns of suicide varied over time and they cannot be explained by biological rhythm alone.¹⁶

Methods adopted to commit suicide: Approximately 67% resorted to hanging followed by poisoning. These findings were similar to most of the studies conducted in India where hanging was the most frequently reported method of suicide, accounting for 10 to 72% of all suicides,¹⁷⁻³⁰ following self-poisoning (often ingestions of organophosphate pesticides). The easy availability of means of suicide like cloth, rope, variety of poisons might be a reason for this.

Suicidal note among study population: Suicidal notes were the last messages communicated by the dead to the live about their agonies and stressors. In this study, 15 out of 175 cases, accounting for 8.57% of suicides, left a suicidal note before committing suicide, which was similar to a previous study where only a minority of suicide victims, varying between 3-42% leave a note.³¹ In the present study, majority of the suicidal notes were written in the native language of which 7 were expressing love. Social media was also used by a victim to express his suicidal ideation. The content of his Facebook live was an accusatory one which was in local language.

Reasons behind suicide: Physical illness was the most common reason behind suicide. Twenty percent (35 out of 175) of total population committed suicide due to physical illness which included carcinoma, stroke, old age related illnesses like severe myalgia etc. Physical health conditions such as asthma, back pain, brain injury, cancer, congestive heart failure, chronic obstructive pulmonary disorder, diabetes, epilepsy, HIV/AIDS, heart disease, hypertension, migraine, Parkinson's disease, psychogenic pain, renal disorder and stroke had been found as risk factors for suicide.³²

Rest of the study population committed suicide due to family problems, financial burden and marital disharmony. In a country like India, young married girls may have to face serious difficulties after moving to their husband's home. The life and marital circumstances of women make them vulnerable to suicidal behaviour. Stresses may include arranged and early marriage, young motherhood, low social status, domestic violence, problems with in-laws, dowry problems and economic dependence. Some studies state that social, cultural, and religious constraints discourage women from employment, careers, and financial and social independence, and force them to remain within unhappy marriages in dependent living arrangements with extended family.³³⁻³⁶

Expressing suicidal ideation and history of previous suicide attempts: In this study, 49 victims (28%) verbally expressed their suicidal ideation to their close people which included family members, friends, or colleagues in the recent past and 37 out of 175 (21.1%) had history of previous attempts. Communication of suicidal intent is an event that often precedes suicidal behaviour and individuals who have previously attempted suicide are at higher risk for subsequent suicide attempts. Approximately half

of the suicidal victims (48.8%) had verbally expressed their suicidal feelings to at least one of their family members.

Conclusions and Recommendations: Suicide is an escapist measure taken by a person for whom death may appear to be the only immediate remedy for his/her problems. The increasing rates of suicides not only affect a particular individual or his/her family but also the society as a whole. Now it's a challenge for society to tackle this problem.

Few suggestions are to ensure easily accessible and low cost treatment for physical and psychiatric illness by the government, to improve adequate access to the palliative care and counselling for the terminally ill patients, to open more medical centers for proper counselling and conduct awareness camps to make people aware of signs of self-harm. Follow up and social support should be given to those who attempted suicide and survived. Early detection and intervention of people presenting with thoughts or plans to commit suicide is an important step for suicide prevention. So it is necessary to conduct more mental health awareness programs in schools and other educational institutions for students and parents and reform the education system. Unemployment and financial crisis is also an important risk factor that leads to the suicide of youngsters thereby, creating more job opportunities and easy availability of financial services/ loans with low interest rate will be helpful for them so that they do not have to depend upon moneylenders. Other suggestions include: ensure the protection of women through enforcement of strict laws against dowry, rape, body shaming, cyber bullying, domestic violence and restrict the access to the means of suicide such as pesticides, firearms, heights, railway tracks, poisons, licit and illicit drugs, sources of carbon monoxide such as car exhaust or charcoal, etc.

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