

Trends in Suicidal Deaths Brought for Medicolegal Autopsy at Govt. Rajaji Hospital, Madurai: A Retrospective Study

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Abstract

Suicide is a major cause of death in today's world. The pattern of suicidal deaths in a particular area points not only to the quality of living but also the social and mental makeup of the population.

AIM AND OBJECTIVES: 1. To ascertain suicidal death patterns in and around Madurai. 2. To analyse the data with respect to demographics presentation, methods used for committing suicide. 3. To find out the underlying factors that led to Suicide.

METHODOLOGY: The study was conducted at Govt. Rajaji Hospital mortuary, Madurai which covers almost entire district for medicolegal autopsies. The study period was from 01/01/2021 to 31/12/2021 which amounts to one year study. The study design comprised of thoroughly scrutinised information gathered from autopsy related documents, history of relatives of the deceased, hospital records, concerned investigating officers and laboratory report of viscera and other relevant details available in our department. Suicide notes if any were also included. Data was analysed using standard statistical method.

RESULTS: Out of 986 cases of suicidal deaths majority of the cases were Male belonging to the age group 21-30 years followed by age group 31-40years. Poisoning and Hanging were the most common methods employed. Most of the victims were of lower socioeconomic class belonging to rural background. Economic instability and family conflict were the most common cause that led to suicides.

CONCLUSION: Suicidal deaths are preventable by the combined effort of the Government agencies, adaption of healthy lifestyle, counselling facilities and change in the mindset of the people to adapt to all difficult situations in life.

KEYWORDS: Suicide, Autopsy, Poisoning, Economic instability, Counselling.

Introduction

Suicide (Latin suicidium, from sui caedere, "to kill oneself") is the act of intentionally causing one's own

death. According to Durham, the French biologist, suicide is death resulting directly or indirectly from a positive or negative act of the victim himself,

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which he knows will produce this result. Around 800,000 to a million people die by suicide every year, making it the 10th leading cause of death worldwide. Suicide and attempted suicide, while previously punishable, is no longer in most Western countries. The World Health Organisation (WHO) reported that one individual dies by suicide every 40 seconds¹. The UN's Sustainable Development Goal(SDG)3 is "Ensure healthy lives and promote well being for all at all ages" and the target SDG 3.4 explains "By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well being" under which one indicator (SDG 3.4.2) is the suicide mortality rate². India and Sri Lanka have the highest suicide rate(12.9%) in the Southeast Asia region³. A review reported that compared to other high income countries, Asia has higher average suicide rates⁴. Thus suicide which is very much a by product of the advancements of society needs a careful and refined approach so as to study the factors related to it, the causes and if possible to find ways to prevent such a tragedy. Very few reviews are available on suicide

in South Asia⁵. Present study is an attempt to throw light on such issues.

Material and Methods

The study was conducted at Govt. Rajaji Hospital mortuary, Madurai which covers almost entire district for medicolegal autopsies. The study period was from 01/01/2021 to 31/12/2021 which amounts to one year study. The study design comprised of thoroughly scrutinised information gathered from autopsy related documents, history of relatives of the deceased, hospital records, concerned investigating officers and laboratory report of viscera and other relevant details available in our department. Suicide notes if any were also included. Since the Research study is Retrospective and based on documents verification, Informed consent from the relatives of the deceased is not necessary.

Findings:

A total of 3715 autopsies were carried out during the study period out of which cases were opined to be that of suicides which constituted 26.54% of the total cases (Table 1)

Table No.1: Showing suicides in relation to total autopsies:

TOTAL CASES	SUICIDE CASES	PERCENTAGE	OTHER CASES	PERCENTAGE
3715	986	26.54%	2729	73.46%

Age and sex:

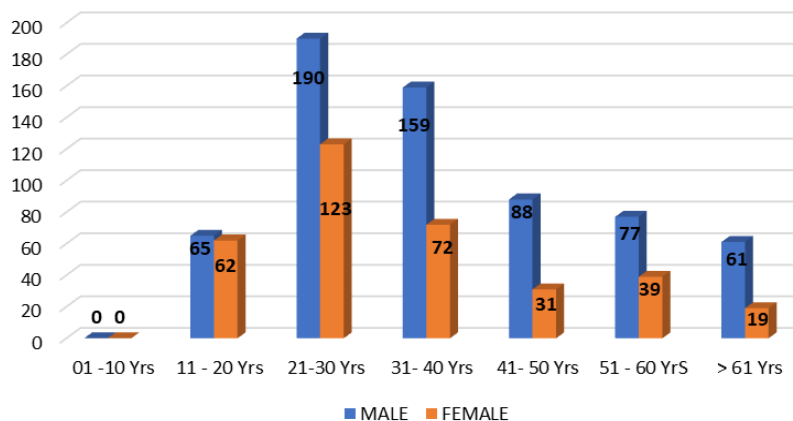
The age group 21-30 years recorded the highest number of cases followed by 31-40 years with males numbering 640 and females 346. In the age group 21-30 males constituted 29.69% of cases and females

35.5% while in the age group between 31-40 males consisted of 24.84% cases and females 20.8%. Least number of cases was observed in the age group above 60 years in both males and females.

Table No.2: Showing suicides in relation to age and sex:

AGE IN YEARS	MALE	PERCENTAGE	FEMALE	PERCENTAGE
1-10	0	0	0	0
11-20	65	10.15%	62	17.91%
21-30	190	29.69%	123	35.50%
31-40	159	24.84%	72	20.80%
41-50	88	13.75%	31	8.95%
51-60	77	12.03%	39	11.2%
>61	61	9.53%	19	5.49%

AGE-SEX DISTRIBUTION



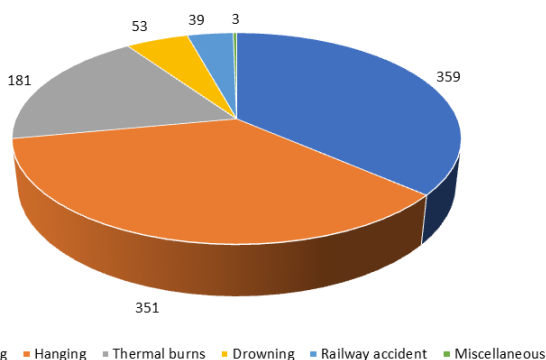
Method of committing suicide:

Poisoning was the method which accounted for the highest number of cases 359(36.4%) followed by hanging 351(35.59%) cases and thermal burns with 181(18.35%) cases. Drowning accounted for 53 deaths.

Table No.3: Showing methods adopted for suicide:

METHODS	NUMBER OF CASES	PERCENTAGE
Poisoning	359	36.4%
Hanging	351	35.59%
Thermal burns	181	18.35%
Drowning	53	5.37%
Railway accident	39	3.95%
Miscellaneous	3	0.3%

DISTRIBUTION OF SUICIDAL METHODS



Location:

The majority of the victims belonged to rural background with 658 cases (66.73%) and 328 cases (33.27%) belonged to those of urban background of victims.

Table No.4: Showing suicides in relation to location:

LOCATION	NUMBER OF CASES	PERCENTAGE
Rural	658	66.73%
Urban	328	33.27%

Socioeconomic status:

The Lower class people were the majority of affected victims with 563 cases (57.10%) followed by the middle class 307 cases (31.14%) and last by the upper class people 116 cases (11.76%)

Table No.5: Showing economic status of victims:

ECONOMIC STATUS	NUMBER OF CASES	PERCENTAGE
Upper class	116	11.76%
Middle class	307	31.14%
Lower class	563	57.10%

Marital status:

Of the 986 cases 801 cases (81.23%) were married while 185 cases (18.77%) were unmarried.

Table No.6: Showing marital status of victims:

MARITAL STATUS	NUMBER OF CASES	PERCENTAGE
Married	801	81.23%
Unmarried	185	18.77%

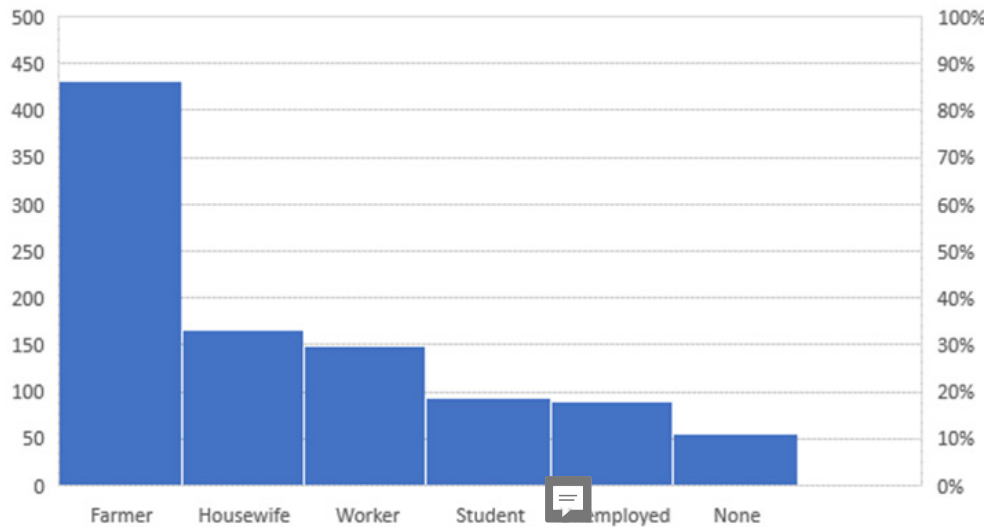
Profession:

The majority of the victims belonged to farmer by profession with 432 cases (43.82%), 166 cases (16.83%) belonged to housewife, 90 cases (9.12%) were unemployed and 94 cases (9.53%) were students.

PROFESSION	NUMBER OF CASES	PERCENTAGE
Farmer	432	43.82%
Housewife	166	16.83%
Worker	148	15.02%
Student	94	9.53%
Unemployed	90	9.12%
None	56	5.68%

Table No.7: Showing Profession of victims:

DISTRIBUTION OF PROFESSION



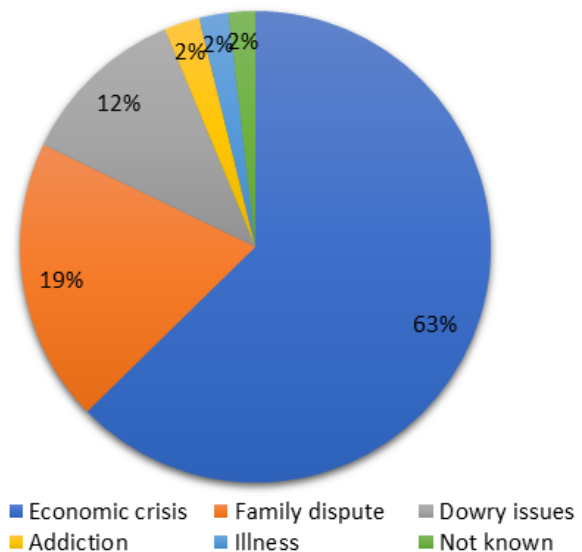
Cause of Suicide:

Economic crisis/poverty was the most common cause involved with 618 (62.68%) cases followed by family related conflicts or problems with 192 (19.47%) cases. Dowry was a cause with 114 cases (11.56%). Addiction, illness were the other causes. In nearly 18 cases sufficient information regarding the cause could not be elicited.

Table No.8: Showing causes of suicide:

CAUSES OF SUICIDE	NUMBER OF CASES	PERCENTAGE
Economic crisis/ Poverty	618	62.68%
Family Dispute	192	19.47%
Dowry Issues	114	11.56%
Addiction	24	2.44%
Illness	20	2.03%
Not known	18	1.82%

CAUSES OF SUICIDE



Discussion

In among the un-natural deaths, suicidal deaths account second leading cause of death next only to road traffic accidents in a developing country like

ours. The increase in the population resulting in lack of job opportunities, frustration in life, chronic diseases / illness, dowry and ill-treatment by husband and in laws, lack of adjustment problems had resulted in enormous number of deaths.

Suicide cases account for nearly 26.54% of cases undergoing autopsy. This is slightly less to the findings of Santosh CS et al¹⁴ who found suicides in nearly 44% of cases autopsied. However the relative large numbers of cases brings fore to the fact that suicide is now an inseparable part of medico legal autopsy.

Age and Sex:

Most of the victims belong to the age group between 21-30 and 31-40 years which is similar to the studies by Behera A et al⁶, Singh H et al¹⁰, Meera T et al¹¹, Sharija S et al¹² and Vijaykumari N¹³. This can be explained by the fact this age group is the most active and are entrusted with the responsibilities of the family leading to conflicts and economic distress which forces one to end his or her life.

As in our study the highest numbers of cases were observed in the males. Males being the bread winner of the family and many being farmers which is similar to the study conducted by B R Sharma¹⁵ and Kh. Pradipkumar Singh¹⁶. The higher incidence of males can be attributed to the demographic distribution in the area and also the financial responsibility heaped solely on the male in our society.

Methods of committing suicide:

In our study the most common method employed to die were poisoning, hanging, burns and drowning in the decreasing order which is similar to the study by Behera A and colleagues, Vikram Patel et. Al¹⁷. Though the study by S K Dhatarwal¹⁸, B R Sharma¹⁵, were similar with regard to poisoning as the leading cause of death, burns was the second leading cause of death in their study. This distribution can be explained by the geographical location of the study area which is agriculture based and hence comes with more number of agriculture poison use. Hanging is easily managed with use of garments and kerosene being commonly used kitchen oil is also used.

Location:

Maximum number of people who committed suicide was from rural background in our study, which is similar to the study by B R Sharma¹⁵ where many committing suicide were from rural area. This reflects that majority of people still live in villages than the cities.

Economic Status:

Majority of the victims belonged to lower socioeconomic class in our study. This is similar to the study of Behera A et al⁶. This is due to the fact that economic crisis leads to poor quality of life leading to suicide

Marital Status:

Majority of the cases in our study were married which is similar to the studies of Behera A et al⁶, Singh H et al¹⁰, Meera T et al¹¹, Sharija S et al¹², Vijaykumari N¹³ and Santosh CS et al¹⁴. This is due to more responsibility and increases familial conflict among married people.

Profession:

In our study the highest numbers of cases were observed in farmers by profession followed by housewives and unemployed. In farmers more deaths are due to economic imbalance, insufficient infrastructure, lack of support system to provide assistance and easy availability of pesticides. These findings are not similar to any study due to geographic and demographic variations.

Causes of suicide:

In our study economic causes, poverty and familial conflicts are the leading causes which are similar to the studies of Behera A et al⁶, Singh H et al¹⁰, Meera T et al¹¹, Sharija S et al¹² and Vijay kumari N¹³. This is also similar to the NRCB data⁹. This finding is relevant as economic instability and indebtedness leads to the person being termed an outcast in the society which leads to suicide. Also Meera T et al¹¹ mentions illness as another important factor which is not consistent in our study The rising economic costs associated with treatment and insufferable misery leads the person to commit such a step.

Conclusion

Suicide is an escapist measure taken by a person whose cognitive abilities are completely masked and clouded by confusion and in whom death may appear to be the only immediate certainty upon which he can lay hands on. With the growing menace of this event the challenges lie ahead not only on the individual but also the society as a whole to tackle this problem.

A few suggestions are made:

- Creation of more employment opportunities for the weaker sections of the society
- Easy availability of credit services for the poor so that they do not have to depend upon moneylenders for credit.
- Cooperation between Government and Non-Government agencies in implementation and awareness of welfare programmes for the poor.
- To understand the need for psychiatric help and proper counselling for people showing signs of self-harm
- To reform the education system this puts a heavy price on marks and not on skill of a person.
- Stringent dowry laws which prevents familial conflict regarding the same.
- Better and vigilant policy of the Government on the sale and storage of pesticides and agriculture poisons.
- Though it is not possible to bring back those lives which are often lost in such a tragic manner but identifying the underlying factors in the social system which promote suicidal tendencies and improving the mental health of the community can certainly prevent such incidence further. As such a multidisciplinary approach is required to prevent the loss of many valuable lives and the recognition of suicide not as an unfortunate event but as a 'social epidemic'

CONFLICT OF INTEREST: NONE DECLARED

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ETHICAL CLEARANCE: Ethical committee approval obtained from Institutional Ethical Committee, Government Rajaji hospital, Madurai.

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