PATTERN OF SUICIDAL DEATHS- A REVIEW OF AUTOPSY CASES IN 2015 AND 2016

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ABSTRACT

BACKGROUND

Suicide is high in societies that are socially isolated, mobile and disorganised. Differences exist in countries in the most common means of suicide depending on the availability of various methods. Different suicide risk factors are present in different age groups. 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.

The present study was designed to study the pattern of suicidal deaths in the years 2015 and 2016.

MATERIALS AND METHODS

The post-mortem registers of Government Medical College, Thrissur during the study period, the post-mortem detailed notes and Kerala Police Form 102 and laboratory investigations of the cases whose cause of death was suicide during the study period.

RESULTS

Out of 3074 autopsies done, 994 cases were suicidal deaths. Hanging was the most common method of suicide (49.8%). Suicidal deaths were found to be more among males (59.5%), married (60.2%) and in the age group 31 – 50 (34.4%).

CONCLUSION

In our study, most of the victims were married males with mental instability belonging to age group 31 - 50 years and majority died due to hanging.

KEYWORDS

Suicide, Hanging, Poisoning, Drowning, Burns.

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BACKGROUND

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, which he knows will produce this result.^[1]

Suicide is high in societies that are socially isolated, mobile and disorganised. It is lower in countries or subcultures, whose religious or cultural morals proscribe suicide. Different suicide risk factors are present in different age groups. The teenager cannot compete, in the young and middle-aged adult there is a lack of accomplishment of life goals along with failure in social relationships, while in the elderly there is loss of friends and loved ones, health and financial problems and idea of death.^[2]

Differences exist in countries in the most common means of suicide depending on the availability of various methods. According to National Crime Record Bureau the common means adopted for suicide in India are poisoning, hanging, drowning, jumping from height, jumping against moving train, firearm and burns, etc.

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In England and Wales men use hanging, poisoning by gas or vehicle exhaust and women are more likely to take an overdose, but in USA the most common method of suicide is firearm,^[3] while in Singapore jumping from a height is the commonest mode.^[4]

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. The objective of this study is to characterise the pattern of suicide cases reported to Govt. Medical College, Thrissur, over the years 2015 and 2016 and to describe the pattern of suicide in these cases with respect to socio-demographic profile.

MATERIALS AND METHODS

A retrospective descriptive study was conducted at Department of Forensic Medicine, Government Medical College, Thrissur in two years (2015 and 2016). The cases of suicides were identified and their detailed post-mortem notes, Kerala police form 102 and laboratory investigation reports were examined. From these records, data regarding age, gender, religion, marital status, risk factors, methods of suicide and special cases (like dowry deaths, suicidal pacts, etc.) were collected and entered in MS Excel software and analysed using SPSS software.

RESULTS

Out of the total 3074 autopsies done (1528 in the year 2015 and 1546 in 2016), there were 520 cases of suicidal deaths in the year 2015 and 474 cases in 2016. Study based on age-

wise distribution of cases showed maximum number of cases, 342 (34.4%) in the age group 31 - 50 followed by the age group 11 - 30 (28.9%). Gender based study showed that maximum number of cases were of males 591 (59.5%). Suicidal deaths were more common in married, i. e. 598 cases (60.2%) compared to unmarried 103 cases (10.4%). Study based on religion was of no significance since majority of population in Kerala comprised Hindus. Study also showed that the most common method of suicide was hanging, 495 cases (49.8%) followed by poisoning 246 cases (24.7%). The suicidal deaths were associated with presence of incurable diseases in 146 cases (14.7%) and family problems in 96 cases (9.7%). Suicidal pact was present in only few cases 17 (1.7%). Maximum number of deaths, 365 cases (36.7%) occurred within 12 hours of suicidal attempt.

Age Group	Frequency	Percent
11-30	287	28.9
31-50	342	34.4
51-70	280	28.2
71-90	83	9.3
Above 90	2	0.2
Total	994	100.0

Table 1. Distribution based on Age

Distribution based on Age

Gender	Frequency	Percent
Female	403	40.5
Male	591	59.5
Total	994	100.0

Table 2. Distribution based on Gender

Marital Status	Frequency	Percent
Unmarried	103	10.4
Married	598	60.2
Not Known	293	29.5
Total	994	100.0

Table 3. Marital Status

Religion	Frequency	Percent
Christian	94	9.5
Hindu	823	82.8
Muslim	77	7.7
Total	994	100.0

Table 4. Religion Wise Distribution

Cause	Frequency	Percent
Hanging	495	49.8
Poisoning	246	24.7
Burns	190	19.1
Drowning	48	4.8
Railway	8	0.8
Firearm injury	3	0.3
Incised wound wrist	3	0.3
Electric shock	1	0.1
Total	994	100.0

Table 5. Cause of Death

Suicidal Pact	Frequency	Percent
No	970	97.6
Yes	17	1.7
Not Known	7	0.7
Total	994	100.0

Table 6. Suicidal Pact

Survival Time	Frequency	Percent
Within 12 hrs.	365	36.7
12 hrs. to 24 hrs.	90	9.1
1-5 days	149	15.0
6-10 days	47	4.7
11-15 days	6	0.6
16-20 days	5	0.5
21-25 days	5	0.5
26-30 days	1	0.1
More than one month	1	0.1
Not known	325	32.7
Total	994	100.0

Table 7. Survival Time

DISCUSSION

In this study hanging was found to be the most commonly adopted method for suicide (49.8%) followed by poisoning (24.7%), burns (19.1%), drowning (4.8%), etc. According to Behera A and Colleagues, Vikram Patel et al^[1,5] the most common method employed to die were poisoning, hanging, burns and drowning in the decreasing order. According to the studies of Meera T et al^[6] Sharija S et al^[7] Vijaykumari N^[8] hanging and self-immolation were the most common methods employed for suicide.

As per this study, the major factor leading to suicide was mental instability which was present in almost all cases followed by presence of incurable diseases in 146 cases (14.7%) and family problems in 96 (9.7%) cases. According to WHO, poverty was the major factor for suicide followed by

stress, mental illness, unemployment and substance abuse.^[9] According to the study of Behera A et al, majority of the victims belonged to lower socioeconomic class.^[1] Economic causes, poverty and familial conflicts are the leading causes in the studies of Behera A et al,^[1] Meera T et al,^[6] Sharija S et al^[7] and Vijaykumari N.^[8] This is also similar to the National Crime Research Bureau^[10] data. 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 al^[6] mentions illness as another important factor.

In this study, maximum number of cases were males, 591 cases (59.5%). According to the study conducted by Meera T et al^[6] highest number of cases were observed in males as the financial responsibility is heaped solely on the males in our society.

In this study, maximum number of cases were noted in the age group 31 - 50, 342 cases (34.4%) followed by the age group 11 - 30, 287 cases (28.9%). According to the studies by Behera A et al^[1] Meera T et al^[6] Sharija S et al^[7] and Vijaykumari N^[8] most of the victims belong to the age group between 21 - 30 and 31 - 40 years.

This study also showed that suicidal deaths were more common in married i.e. 598 cases (60.2%) compared to unmarried 103 cases (10.4%). Studies by Behera A et al,^[1] Meera T et al^[6] Sharija S et al^[7] and Vijaykumari N^[8] shows that majority of cases were married. This study also showed that suicidal deaths were more common in married, i.e. 598 cases (60.2%) compared to unmarried 103 cases (10.4%).

CONCLUSION

In our study, most of the victims were married males with mental instability belonging to age group 31 - 50 years and majority died due to hanging. The result of this study indicates that by not only a strong legal support network but also opportunities for economic independency, essential education and awareness, alternative accommodation and a change in attitude and mindset of society, judiciary, legislature, executive and the most importantly person himself can lower or prevent the suicidal deaths.

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