

Study of suicidal deaths in medicolegal autopsies in Anantnag District of Jammu and Kashmir

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Abstract

Background: Suicide is the second-leading cause of premature death among 15– 29 years age cohort and triggers huge economic, social and psychological burden on families, communities, and countries. With increasing realisation of the public health importance of suicides, the UN Sustainable Development Goals (SDGs) include a one-third reduction in SDR from 2015 to 2030. Suicide problem in India are underestimated neglected by the government, although this problem seems to be universal. Present study was undertaken to study suicidal deaths in medicolegal autopsies conducted at District Hospital Anantnag, Jammu and Kashmir. **Material and Methods:** Present study was prospective and observational, conducted in Department of Forensic Medicine and Toxicology Government Medical college Anantnag, Jammu and Kashmir in cases suggestive of suicidal death. Cases with conflicting manner of death were excluded. **Results:** In present study total 83 suicidal cases were included. Age group 15-29 years had most cases (42 %), followed by age group 30-44 years (27 %) and age group 45-59 years (19 %). Suicides were more in males (55 %) as compared to females (45%). Incidence was comparable in young age group (15-44 years) in males (45%) and females (44%). In present study most common method of death was organo-phosphorus poisoning (46 %), followed by hanging (17%) and burns (16%). Other less common methods were drowning (10%), poisoning (other than organo-phosphorus) (8%) and fall (4%). Financial problems (28%), Family problems (18%) and Educational issues (12%) were common motives for suicide in present study. Other motives were dowry problems (9%), love failure (8%), unemployment (8%), marital disharmony (5%), ill-health/mental illness/psychological (4%), bereavement (1%). 6% cases were undetermined motive. **Conclusion:** Knowledge regarding the pattern of suicide in an area not only helps in early management of such cases but also suggests taking earliest preventive measures. Early interventions can help to reduce these premature, unexpected deaths.

Key Word: Suicidal deaths, poisoning, hanging.

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Received Date: 02/09/2019 Revised Date: 09/11/2019 Accepted Date: 02/12/2019

DOI: <https://doi.org/10.26611/10181311>

Access this article online

Quick Response Code:



Website:

www.medpulse.in

Accessed Date:
04 January 2020

INTRODUCTION

Suicide is the second-leading cause of premature death among 15– 29 years age cohort and triggers huge economic, social and psychological burden on families,

communities, and countries¹. WHO (World health organization) has recognized suicide as public health concern and aims at 10% decrease in the burden of Suicide by 2020¹. With increasing realisation of the public health importance of suicides, the UN Sustainable Development Goals (SDGs) include a one-third reduction in SDR from 2015 to 2030². According to the National Crime Records Bureau (NCRB); state of Tamil Nadu, West Bengal, Andhra Pradesh, Maharashtra and Karnataka have registered a consistently higher number of suicidal deaths during the last few years and together accounted for 56.2% of the total suicides reported in the country. India's National Crime Records Bureau (NCRB) – which report official suicide rates based on police reports – estimated only 135,000 suicides in 2011. One possible reason for under-reporting of suicide by the NCRB is that suicide

How to cite this article: Azia Manzoor Bhat, Vinka Maini. Study of suicidal deaths in medicolegal autopsies in Anantnag District of Jammu and Kashmir. *MedPulse International Journal of Forensic Medicine*. January 2020; 13(1): 01-04.

<https://www.medpulse.in/Forensic%20Medicine/>

remains a crime in India³. Under reporting of suicides in India is due to a complex association of social stigma arising due to a suicide in the family and legal repercussions from reporting suicide⁴. This causes the suicide problem to be underestimated and, thus, neglected by the government, although this problem seems to be universal. In addition, the features of deaths due to suicide are changing constantly, revealing complex social and cultural developments⁵. Present study was undertaken to study suicidal deaths in medicolegal autopsies conducted at District Hospital Anantnag, Jammu and Kashmir.

MATERIAL AND METHODS

Present study was prospective and observational, conducted in Department of Forensic Medicine and Toxicology, Government Medical college Anantnag,

Jammu and Kashmir, over a period of one year from December 2018 to November 2019. Institutional committee approval was taken. Strict confidentiality was kept regarding identity, medical and forensic details of study subjects. All cases suggestive of suicidal death were included. Cases with conflicting manner of death were excluded. The study material comprised of thoroughly scrutinized information gathered from Police, inquest report and hospital treatment records. Necessary information for the study such as autopsy related documents, history from relatives of the deceased, hospital records, concerned investigating agencies and laboratory report of viscera and their contents, fluids, diseased tissues and organs and other relevant suspicious samples, available in our department. Suicide notes if any were also included. Collected data was entered in Microsoft excel and analysed accordingly.

RESULTS

In present study total 83 suicidal cases were included. Age group 15-29 years had most cases (42 %), followed by age group 30-44 years (27 %) and age group 45-59 years (19 %). Suicides were more in males (55 %) as compared to females (45%). Incidence was comparable in young age group (15-44 years) in males (45%) and females (44%).

Table 1: Age wise Distribution of Suicides during Study Period

Age Group (Yrs)	Male (%)	Female (%)	Total (%)
0-14 years	1(1%)	0	1(1%)
15-29 years	16(19%)	19(23%)	35(42%)
30-44 years	13(16%)	9(11%)	22(27%)
45-59 years	10(12%)	6(7%)	16(19%)
>60 years	6(7%)	3(4%)	9(11%)
Total	46(55%)	37(45%)	83

In present study most common method of death was organo-phosphorus poisoning (46 %), followed by hanging (17%) and burns (16%). Other less common methods were drowning (10%), poisoning (other than organo-phosphorus) (8%) and fall (4%).

Table 2: Distribution according to Method of Suicide

Method used	Male (%)	Female (%)	Total (%)
Organo-Phosphorus Poisoning	19 (23%)	19 (23%)	38 (46%)
Hanging	12 (14%)	2 (2%)	14 (17%)
Burns	5 (6%)	8 (10%)	13 (16%)
Drowning	3 (4%)	5 (6%)	8 (10%)
Poisoning (other than Organo-Phosphorus)	5 (6%)	2 (2%)	7 (8%)
Fall	2 (2%)	1 (1%)	3 (4%)
Total	46(55%)	37(45%)	83

Financial problems (28%), Family problems (18%) and Educational issues (12%) were common motives for suicide in present study. Other motives were dowry problems (9%), love failure (8%), unemployment (8%),marital disharmony (5%),ill-health/mental illness/psychological (4%), bereavement (1%). 6% cases were undetermined motive.

Table 3: Cases According to Motive*

Motivation	Number	Percentage
Financial problems	23	28%
Family problems	15	18%
Educational	10	12%
Dowry	8	10%
Love failure	7	8%
Unemployment	7	8%

Undetermined	5	6%
Marital disharmony	4	5%
Ill-health/Mental illness/Psychological	3	4%
Bereavement	1	1%
TOTAL	83	100%

(* - was decided after thorough evaluation of all available details)

DISCUSSION

Suicide is an increasingly important public health issue: from 1990 to 2010 the number of global suicides increased by 32%. It is particularly important among young adults 15 to 49 years of age among whom it accounts for 4.8% of all female deaths and 5.7% of all male deaths⁶. Eighty-four percent of global suicides occur in low and middle-income countries (LMICs); India and China alone account for 49% of global suicides⁷. This may be explained by the effect of increasing depression among people, which may be aggravated due to social problems such as unemployment, dowry dispute, love affair, illegitimate pregnancy, extra-marital affairs, bankruptcy and spinsterhood. A prospective community-based cohort study of cause of death in the south Indian state of Kerala reported a male suicide rate of 45 per 100,000 and a female suicide rate of 27 per 100,000, which collectively accounted for 6.6% of all deaths⁸. Another retrospective, 4-year autopsy-based study by Mohanty and colleagues reported a suicide prevalence of 12 per 100,000 population⁹. In present study we noted 4.2% incidence of suicidal deaths. In present study suicides were more in males (55 %) as compared to females (45%). The annual suicide rates reported from study from rural area of Tamil Nadu¹⁰ were 71.0 and 53.0 per 100 000 for males and females respectively. Patel et al¹¹. in their Million Death study reported 26.3 and 17.5 per 100 000 annual suicide rates for males and females respectively. Salve et al¹². in rural areas of Haryana reported 26.5 and 21.5 per 100 000 annual suicide rates for males and females respectively. Though the majority of victims of suicide are men, attempted suicide is more common among women¹³. Women's greater vulnerability to suicidal behaviour is likely to be due to gender related vulnerability to psychopathology and to psychosocial stressors¹⁴. In rural areas of India, young women are more vulnerable to suicides due to male dominance, illiteracy and dowry. Married women account for the highest proportion of suicide deaths among women in India. Marriage is known to be less protective against suicide for women because of arranged and early marriage, young motherhood, low social status, domestic violence, and economic dependence^{11,15}. Pattern of suicide in a region depends upon variety of factors, ranging from availability and access of the method to the socio-economic status of the individual and also the prevailing cultural and religious influences. Methods of suicide employed generally reflect

the different avenue available in the community. In present study most common method of suicide was organo-phosphorus poisoning (46 %), followed by hanging (17%) and burns 23 (16%). In a systemic review¹⁶ they noted that, hanging was the most frequently reported method of suicide in most of the studies, accounting for 10 to 72% of all suicides. The second most frequently reported method was self-poisoning (often ingestions of organophosphate pesticides), which accounted for 16 to 49% of all suicides. The proportion of all suicides attributed to drowning ranged from 3 to 39% and the proportion attributed to burning or self-immolation ranged from 6 to 57%. Other reported methods of suicide include jumping off heights (0.5 to 2% of all suicides), being run over by a train (6 to 13% of all suicides) and using a firearm (3% of all suicides). Most cases in present studies were due to poisoning (54%). Poisoning is a major epidemic of non-communicable disease in the present century. Among the unnatural deaths, deaths due to poisoning come next only to road traffic accident deaths. In earlier times, the poisoning deaths from pesticides were mainly accidental but easy availability, low cost and unrestricted sale have led to an increase in suicidal and homicidal cases as well¹⁷. Hanging was second most common method for suicide (17 %). In a study with 7968 autopsy cases in India, deaths due to hanging comprised 3.31% (264 cases) of autopsies¹⁸. Hassan et al¹⁹. in a two year period study in Kuwait reported a total of 118 cases. In another Indian study conducted by Kumar and Verma²⁰, a total of 4405 cases were autopsied in a five year period of which only 10% of cases were due to hanging. Regional socioeconomic and Cultural factors play an important role in Suicidal Hanging. Knowing the pattern of suicide in an area not only helps in early management of such cases but also suggests taking earliest preventive measures. It is necessary for the death investigators to be aware of the common scenarios, risk factors, methods and victims as well as pitfalls that may be encountered. The premature and violent death of the victims has negative repercussions in society and should be prevented whenever possible. The approach to understanding suicide must be multidisciplinary, involving psychologists, psychiatrists, toxicologists, physiologists and physicians, because suicide is a multi-faceted and complex event.

CONCLUSION

Knowledge regarding the pattern of suicide in an area not only helps in early management of such cases but also suggests taking earliest preventive measures. Early interventions can help to reduce these premature, unexpected deaths.

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Source of Support: None Declared
Conflict of Interest: None Declared