Original Research Article

Profile of Suicidal Deaths In Females: A Two Years' Experience At A Tertiary Care Institute (An Observational Study)

DS Bhullar¹, Didar Singh Walia¹, Satinder Pal Singh², Preetinder Singh Chahal², Deepak Kumar³,

¹Associate Professor, ²Assistant Professor, ³Junior Resident

Department of Forensic Medicine & Toxicology, Government Medical College (Rajindra Hospital) Patiala – 147001

Corresponding Author:

Dr. Satinder Pal Singh, Assistant Professor, Department of Forensic Medicine & Toxicology,
Government Medical College (Rajindra Hospital) Patiala – 147001
Mob: 99880-08723; e-mail: docsp423@gmail.com

Abstract:

Suicidal female deaths are always a cause of concern for any civilized society. The present study was conducted in a leading tertiary care institute of North India to study the suicidal deaths among female population as only limited studies have been conducted in this region. This study found that most of the victims were in the third decade of life (44.5%) and married (64.2%). Most of the victims were housewives (56.8%) with rural preponderance (60.5%). Most of victims committed suicide by poisoning (56.8%) followed by hanging (23.5%) and drowning (16%). The study concluded that remedial measures including counselling facilities and counselling from the early young life should be the strategy to prevent and minimize unnatural female deaths.

Key Words:

Suicide, poisoning, hanging, drowning, counselling, National Crime Records Bureau

Introduction

Female suicidal deaths pose a major public health problem worldwide even though the global suicide rates for women have declined by 21% from the year 2000 to 2016. More than 100,000 suicides are committed every year in India. As per W.H.O. data, the age standardized suicide rate for Indian women was 14.5 per lakh population in the year 2016. The reasons behind suicides in India include problems related to career, profession, violence, family, abuse, etc.

Punjab is among the most prosperous states of India. A total of 2357 suicidal deaths were reported in Punjab in 2019 and the suicide rate in the same year was 7.9 against a national average of 10.4[2]. A positive correlation has been observed between the unnatural deaths and the development of state. [3]The females are among the most vulnerable groups that are prone to suicide. Many women lose lives by poisoning, hanging, strangulation, drowning, dowry deaths etc. Such deaths often prove

devastating not only for the families but also the society as a whole.

Keeping in view the situation as above and limited studies in this region, the present study was planned to analyse the pattern of suicidal deaths among the female population of Patiala region of the Indian state of Punjab.

Material and Method

This prospective study was conducted from January 2019 to December 2020 in the mortuary of Rajindra Hospital which is attached with Govt. Medical College, Patiala. The study included autopsy cases on female victims with an alleged history of suicide. Other female deaths such as due to homicides, accidents and natural deaths have been excluded from the study. Hospital deaths as well as brought dead cases which met the inclusion criteria were included in the study. The relevant data for the study was collected from the postmortem findings, police inquest papers, hospital record and relatives

accompanying the dead bodies. This data included details such as age, marital status, educational qualification, occupation, pattern of suicidal deaths. Wherever applicable, histopathology and chemical examinations were conducted and alleged weapons (ligature material, etc.) produced by police were examined. All the above-mentioned preliminary details of the cases were filled in the performa attached and the data statistically analyzed.

Results

Table 1: Distribution of cases based on manner of suicidal death

Suicide	Number of cases	%
Poisoning	46	56.8
Hanging	19	23.5
Drowning	13	16
Railway accident	3	3.7
Total	81	100

The above findings illustrate that suicide is most commonly committed by way of poisoning (56.8%) followed by hanging (23.5%), drowning (16 %) and railway accident (3.7%).

Table 2: Distribution of cases based on age of the deceased

Age (in years)	Suicides	%
0-10	-	-
11-20	17	20.9
21-30	36	44.5
31-40	11	13.6
41-50	9	11.2
51-60	4	4.9
>60	4	4.9
Total	81	100

Maximum number of deaths (33.1%) were reported in the age group of 21-30 years followed by the age groups of 31-40 years (17.9%) & 11-20 years (15.9%). Oldest subject in the present study was 80 years of age. On the other hand, least number of cases were seen in the extremes of age as 0-10 years (3.5%) and above 61 years (7.6%). The youngest victim was aged 6 months in the present study.

Table 3: Distribution of cases based on marital status of the deceased

Marital status	Suicides	%
Married	52	64.2
Unmarried	29	35.8
Total	81	100

Majority of the victims (69.6%) were married at the time of death. The unmarried females constituted only 30.4% of the total case load. The ratio of married to unmarried females is calculated to be 2.3:1.

Table 4: Distribution of cases based on occupational status of the deceased

Profession	Suicides	%
Housewives	46	56.8
Student	25	30.8
Labourers	2	2.5
Service	8	9.9
Total	81	100

Table 5: Area-wise distribution of cases

Residence	Suicides	Suicides	
	Number of cases	%	
Rural	49	60.5	
Urban	32	39.5	
Total	81	100	

Table 6: Distribution of cases based on educational status of the deceased

Educational status	Suicides		
	Number of cases	Percentage	
Graduate	23	28.4%	
Sr. Secondary	28	34.6%	
Matric	05	6.2%	
Under-matric	14	17.3%	
Illiterate	11	13.5%	
Total	81	100	

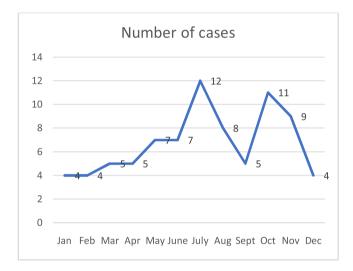


Figure 1: Month-wise distribution of cases

Discussion:

The present study observed that a total of 1865 autopsies were conducted during the study period. There was a total of 81 suicidal deaths out of a total 145 unnatural female deaths. Suicidal deaths constituted 56.08% of the total unnatural deaths in females.

a. Age distribution:

We observed that the most common affected age group was 21-30 years (44.5%) followed 11-20 years (20.9%). Concordant findings were reported from Vadodra [4], Aurangabad [5], Behrampur [6], Lucknow [8], and Jammu [9]. The greater number of

suicidal deaths in these groups could possibly be because of the fact that young women are more exposed to the stresses of life. The third decade of life is generally associated with issues related to family, married life and employment whereas in the second decade of life, the women are more likely to face challenges related to career, love affairs, education, etc. The inability to cope with circumstances may compel people to end their lives. No suicidal death was reported in the 0-10 years group while less than 5 percent women above the age of 60 committed suicide. Suicide in children less than ten years quite uncommon whereas women in seventh decade of life are also less exposed to stress and less inclined towards ending their lives.

b. Area of residence and place of incidence:

The present study has found that more than 60% of cases belonged to rural areas. The findings are supported by the results of studies conducted at Behrampur [6] Lucknow [8] and Kolhapur [10]. Punjab is an agricultural state with a large proportion of its population residing in villages. Consequently, a greater number of deaths is expected to be among women with a rural background. It is noteworthy that in the state of Punjab, about 62.51 % resides in rural areas whereas the urban population is about 37.49% [11]. The similarity in finding among various studies is likely to be due to the fact that most regions of India have a greater proportion of rural population which may be over represented.

c. Seasonal variation:

The authors found that most of the cases were reported in the summer months. Similar observations were made by studies conducted at Vishakhapatnam [17](37.57%) and Varanasi [18](36.64%) which showed that unnatural death peak during summer months.

While the summers in this part on India are prominently experienced from second half of April to end of June, the winters generally span from early December to end of February. The harsh summers might have a role in keeping people more irritated and promoting frequent quarrels. This relationship between weather and suicides has also been observed by many studies across India.

d. Pattern of suicidal deaths:

It was observed that the most common method employed for suicide is poisoning (n=48, 59.25%) followed by hanging (n=19, 23.45%) and drowning (n=12, 14.81%). Similar results were observed by studies done at Kolhapur[16] (Poisoning, 39.65 %; hanging, 27.51% and drowning, 0.11%); Kenya [19](poisoning,91.54%; hanging, 7.98%); Surat [20] (poisoning, 40.5%; hanging, 36.03%; burns, 13.4%; drowning, 9.49%) Manglore[21] (poisoning,64.29%;hanging,17.86%, burns, 10.71% and drowning, 7.14%) and Manipal[22] (poisoning, 31%; hanging, 26%; firearm,16% and burns,11%). The presence of various poisons, ligature materials (such as rope, dupatta, etc.) provide an easy way to end life. Patiala is also richly supplied by Bhakra Canal, which is why suicidal drowning deaths are common.

e. Occupation:

The authors found that maximum number of fatalities were among housewives (n=46, 56.8%), followed by students (30.8%) and service class (9.9%). Concordant findings were observed with the studies conducted at Behrampur as 66.5% [6]; South Banglore as 62.9% [13], Nagpur as 71.88% [14].Behrampur have also reported that housewives are the worst affected victims. In addition, the National Crime Records Bureau [2] data also reportshousewives to be worst affected by suicides, i.e., 17.1% of all suicides. The reasons why more housewives are affected can be due to the increased level of stresses faced by them as they are largely confined to indoors and experience greater stresses at the hands of in-laws [15]. They may also be getting ill-treated on the account of insufficient dowry or

financial dependence on the husbands. The National Crime Records Bureau[2] data of 2015 reports that one student commits suicide every hour in India. The deaths in young people such as students can probably be explained due to failure or under performance in exams or high expectations from the parents for the same. Other possible explanation for deaths in this age group could be due to failure in love affairs.

f. Marital Status:

In the present study, married females outnumbered unmarried females in a ratio of 2.3: 1. Similar findings were observed in a study in Berhampur Odisha [6] in 2017 where majority (78.95%) were married and also concluded the same that majority 1087 (78.9%) of deaths, the women were married & unmarried women accounted for 214 (15.5%) numbers of cases. The reason for more unnatural deaths in married ones may be linked to the two most common causes i.e. marital disharmony and financial burden and secondly this is the age group when majority of the females get entered into the married life.

g. Occupation:

The present study found that maximum number of fatalities (61.4 %) were among housewives followed by students (21.4%), private employees (12%), labourers (08%) and government employees (2.8%). Rest were children below 5 years of age (2.8%). The reasons why more housewives are affected can be due to the increased level of stresses faced by them as they are largely confined to indoors and experience greater stresses at the hands of inlaws. They may also be getting ill-treated on the account of insufficient dowry or financial dependence on the husbands.

CONCLUSION

The present study concluded that majority of the suicidal deaths involved young female population aged between 21 to 40 years who were mostly housewives and students and belonging to rural background with incidence of death more during summer season. Poisoning, hanging and drowning were the three major methods for committing suicide. Preventive measures as counselling from the younger age to bear and face different stresses and situations of life and setting up of counselling centers with exert counsellors should be the priority for strategic approach to prevent and minimize such human loss.

Bibliography

- Suicide in the world. Global Health Estimates. World Health Organization. 2019. [cited on 18.7.2021]. Available from: https://apps.who.int/iris/bitstream/handle/10665/326948/WHO-MSD-MER-19.3-eng.pdf
- 2. National Crime Records Bureau, Ministry of Home Affairs, Government of India. Crime in India Accidental Deaths & Suicides in India 2019.2020 [cited 2021 July 18].13 p. Available from: https://ncrb.gov.in/sites/default/files/Chapter-2-Suicides_2019.pdf.
- 3. Panda BK, Mishra US. Unnatural death in India. J Biosoc Sci 2020; 1-12.
- 4. Pathak A, Sharma S. The Study of Un-Natural Female Deaths in Vadodara City. J Indian Acad Forensic Med 2010; 32(3):220–3.
- 5. Zine KU, Mugadlimath A, Gadge SJ, Kalokhe VS, Bhusale RG. Study of some socio-etiological aspects of unnatural female deaths at government medical college, Aurangabad. J Indian Acad Forensic Med 2009; 31(3):210-7.
- 6. Patnaik KK, Panigrahi H, Das S, Mohanty S. Sudden and unexpected deaths among women of reproductive age Qualitative analysis of risk factors. J Clin Diagn Res 2017; 11(10):HC01–5.
- 7. Kulkarni R, Chauhan S, Shah B, Menon G. Cause of death among reproductive age group women in Maharashtra, India. Indian J Med Res 2010; 132(2):150.

- 8. Singh M, Singh R, Kumari S, Singh H, Shiuli, Verma AK. Strangulation Femicide in north India-An autopsy and circumstantial based study. Era's J Med Res 2019; 6(1):33–9.
- 9. Arora S. Profile of unnatural female deaths in Jammu Region: An autopsy based study. Indian J Forensic Med Toxicol 2016; 10(1):25–9.
- 10. Pawale DA, Jagtap NS. Trends in suicidal deaths brought for medico legal autopsy at RCSM medical college Kolhapur: retrospective study. J Forensic Med Sci Law 2015; 24(2):1–7.
- 11. Office of the Registrar General & Census Commissioner, India, Ministry of Home Affairs, Government of India. Census provisional population totals 2011 [Internet]. CensusInfo India [cited 2021 Jan 30]; Available from: http://www.dataforall.org/dashboard/censusinfoindia_pca/
- 12. Uzün I, Büyük Y, Gürpinar K. Suicidal hanging: fatalities in Istanbul retrospective analysis of 761 autopsy cases. J Forensic Leg Med 2007; 14(7):406–9.
- 13. Global status report on road safety 2018 [Internet]. Switzerland: World Health Organization; 2018. Available from: https://www.who.int/newsroom/ fact-sheets/detail/road-traffic-injuries.
- 14. Macharia BN, Iddah MA, Ndiangui FM, Keter A. Pattern of Suicide: A Review of Autopsies Conducted at Moi Teaching and Referral Hospital in Eldoret Kenya. Open Access J Sci Technol 2015; 3:4.
- 15. Zanzrukiya K, Tailor C, Chandegara P, Govekar G, Patel U, Parkhe S. Profile of homicidal death cases at Government Medical College & New Civil Hospital, Surat. Int J Med Sci Public Health 2014; 3(7):885–8.
- 16. Ijomone EA, Uchendu OJ, Nwachokor NF. Pattern of unnatural death among females in niger delta: A retrospective medicolegal study. Ann Trop Pathol 2019; 10(1):6.
- 17. Bagadi J, Pothireddy S. Unnatural Female

- Deaths within Seven Years of Marital Life: An Autopsy based Study. Indian J Forensic Med Toxicol 2020; 14(1):105–9.
- 18. Kumar A. Epidemiological Study of Unnatural Death in Elderly in Varanasi (India). Int J Sci Res 2015; 4(2):787–90.
- 19. Macharia BN, Iddah MA, Ndiangui FM, Keter A. Pattern of Suicide: A Review of Autopsies Conducted at Moi Teaching and Referral Hospital in Eldoret Kenya. Open Access J Sci Technol. 2015; 3. doi:10.11131/2015/101112.
- 20. Zanzrukiya K, Tailor C, Chandegara P, Govekar G, Patel U, Parkhe S. Kalpesh Zanzrukiy, et al. Profile of homicidal death cases PROFILE OF HOMICIDAL DEATH CASES AT GOVERNMENT MEDICAL COLLEGE & NEW CIVIL HOSPITAL,

- SURAT. Int J Med Sci Public Heal. Published online 2014. doi:10.5455/ijmsph. 2014. 170420142.
- 21. Vasudevan OV, Somayaji BV, Monteiro FNP, et al. Victim profile of suicidal deaths: a perspective from tertiary health care centre, Mangalore, southern India. J Evol Med Dent Sci. 2014;3(39):9876-9881. Accessed January 22, 2021. https://go.gale.com/ps/i.do?p=AONE&sw=w&issn=22784748&v=2.1&it=r&id=GALE%7CA467680896&sid=googleScholar&linkaccess=fulltext.
- 22. Shetty CK. Suicide Cases in Manipal, South India: An Autopsy Study. Int J Forensic Sci Pathol. Published online August 19, 2014:50-56.doi:10.19070/2332-287x-1400015