



PROFILE OF UNNATURAL FEMALE DEATHS: A RETROSPECTIVE AUTOPSY BASED STUDY

Forensic Science

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ABSTRACT

Unnatural deaths among female can raise serious issues in a community regarding the safety and development of a region. The present study aims to study the pattern of unnatural female deaths in Sonitpur district of Assam, India. A cross sectional retrospective study was done in cases brought for medicolegal autopsy to a tertiary medical college for a period of 3 years. A total of 424 cases were included in the study. Married females constituted the highest number of cases. The age group 21-30 and 31-40 were most commonly involved. Suicides done by hanging (40.56%) and Road traffic accidents (26.42%) were the leading cause of such deaths. Deaths occurred in female more in marriage duration greater than 7 years.

KEYWORDS

Autopsy, Unnatural death, pattern, suicide

INTRODUCTION

In recent times, the issue related to females have been raised and discussed in various fora. Among these issues, the crimes against women have occupied the central stage. They have not only been the concern of the contemporary society but have been intriguing the minds since time immemorial. However, their emphasis has been changing from time to time. The modern society has also been active and alive to the needs and problems confronted by the female population. However with different geographical locations and customs the causes of such unnatural female deaths varies from one place to another. The study plans to delve in to the causes of unnatural deaths among the female population and look into the factors and variables associated with such deaths. Though research studies on female deaths are plenty unnatural female deaths related to the particular region in study are few specially. The study area and population offers the researches unique factors and determinants for unnatural female deaths.

NRCB data from the year 2022 has shown a marked increase in crime against women, some of which has led to the unfortunate loss of precious associated with such deaths. Though research studies on female deaths are plenty unnatural female deaths related to the particular region in study are few specially. The study area and population offers the researches unique factors and determinants for unnatural female deaths.

METHODOLOGY

A Cross Sectional Retrospective study of all female cases brought for medicolegal autopsy to a tertiary referral medical college in Sonitpur district of Assam, India was done for a time period collecting 3 years data from 1st July 2019 to 30th June 2022. Data sources are the autopsy reports, inquest reports and dead body challan available for the cases. Data was fed into a structured data entry form and kept in a coded form so that no personal or identifiable data shall be divulged during the course of study.

Statistical analysis of data was done by using Microsoft Excel and presented in tabular forms. All data was then compared with relevant literature available. Decomposed cases and medicolegal autopsies where the cause of death was natural was excluded from the purview of the study.

RESULTS

There were a total of 1158 autopsies during the study period out of which 466 were those of female. Based on the exclusion criteria a total of 424 cases were included in the study. It represents a 36.61% of total autopsies constituting nearly one third of the autopsies.

A ten year age distribution in the study population showed the highest

number of cases in the age group 21-30 years (35.85%) followed by 31-40 years (32.31%). Extremes of ages were less commonly involved. (Table 1)

Of these cases, the three leading causes of death were hanging (40.56%), followed by road traffic accident (26.42%) and poisoning (15.56%). The fatal poisoning cases were due to consumption of poisons related to agriculture and farming (insecticides, rodenticides, weed killers and fungicides). Railway accident and elephant attack deaths were notable inclusions as cause of death. (Table 2)

Table 1 Showing Age Distribution Of Cases

Age of the deceased(in years)	Number	Percent
0-10	6	1.41
11-20	34	8.02
21-30	152	35.85
31-40	137	32.31
41-50	64	15.10
51-60	24	5.66
Above 60	7	1.65
Total	424	100

Table 2 Showing Distribution Of Cause Of Death

Cause of death	Number	Percent
Hanging	172	40.56
Burns	32	7.56
Poisoning	66	15.56
Road traffic accident	112	26.42
Drowning	21	4.95
Railway accident	4	0.94
Elephant attack	6	1.42
Others including	11	2.59
Total	424	100

The manner of death was suicide in 270 cases (63.68%) followed by accidents involving 143 cases (33.73%). In both the age groups of 21-30 and 31-40 years suicide was the leading manner of death. Homicide was more common in the 21-30 years cohort. There were 11 cases of homicide out of which 6 involved sharp edged weapons and the rest blunt weapons. The principal method of suicide was hanging followed by poisoning. There were both accidental and suicidal burns. Accidental burns were common in the kitchen. (Table 3)

Of the study population 328 (77.36%) were married at the time of death. On noting the duration of marriage it was observed that the highest number of cases were of those who had completed 7-14 years

of marriage. (Table 4)

Table 3 Showing Manner Of Death By Age Distribution

Age	Suicide	Accident	Homicide	Total
0-10	0	5	1	6
11-20	22	11	1	34
21-30	96	52	4	152
31-40	96	39	2	137
41-50	38	25	1	64
51-60	15	8	1	24
Above 60	3	3	1	7
Total	270	143	11	424

Duration of marriage in years	Number
0-3	34
3-7	78
7-14	154
Above 14 years	62
Total	328

DISCUSSION

Females constituting less than males in medicolegal autopsy is a common occurrence and in accordance to previous studies.^{2,3}

Unnatural death among females was highest in the age group between 21-30 years and 31-40 years. This is accordance to studies by Pawar CK et al,³ Guntheti BK et al¹ and Sane MR². However few authors have differed with the study results namely Kumar S et al⁶ and Mohanty S et al⁷. This difference can be explained by the fact they have listed death due to dowry as one of the attributes leading to loss of life. The study area and population is different from the authors. The customs and prevalent societal norms in the study area do not encourage the tradition of seeking dowry and hence such deaths are uncommon.

Hanging and Road traffic accidents were the leading cause of deaths in our study. This finding is noted in the study of Padubidri JR et al⁸. However other studies have listed road traffic accidents as the leading cause of death.^{4,7} This difference can be attributed to the geographical location of the study area. Homicides constituted 2.39% of total cases.

However Zohlupui BL et al⁹ reported nearly 12.9% cases of homicidal deaths among women. Zaghloul NM et al¹⁰ also reported highest number of homicide cases as manner of death. Poisoning was common as a manner of death in most studies. However Guntheti BK et al¹ and Kitulwatte IDG et al¹¹ reported poisoning as the leading cause of suicide in comparison to hanging. This was also suicide by poisoning can be attributed to the easy availability of pesticides and associated poisons in a agriculture dominant area. Suicide by burns is very rare in our study. However the increased number of suicide cases noted in the study may be due to low socio economic background of the study population. Also since the study period covered a time when Covid restrictions were in place economic hardship coupled with deteriorating mental health could be a reason for increased number of suicidal deaths.

Homicides are common in the age group of 21-30 years in our study. However Padubidri JR et al⁸ and Zohlupui BL et al⁹ reported homicides to be common in the later decades of life.

Deaths among married women being more is common to all studies. Also the number of deaths occurring late after marriage indicates the absence of dowry related crimes in the particular region. However Guntheti BK et al¹ and Sane MR² mentioned that deaths occurred mostly in the early years of marriage involving the first 7 years of marriage.

The study has a few limitations. We have not done a socioeconomic distribution affecting the manner and cause of death. Also educational background of the victims were not easily available.

CONCLUSION

The high number of suicidal deaths among women highlights the need for proper counselling services in the study area. The study also bring forth the number of problems among married females specially developing during later years of marriage which is an area to be looked for by social scientists. Also the reasons for married females dying of unnatural causes makes it imperative that multi organizational and related research is the need of the hour to prevent such deaths to the greatest asset of the country.

Ethical Approval

Ethical approval has been obtained from the Institutional Ethical Committee.

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REFERENCES

1. Crime against women, 2022. [Internet] National Crime Records Bureau, Ministry of Home affairs, India. [Cited on 13/06/2024, time- 03:00 PM] Available from: <https://ncrb.gov.in/uploads/nationalcrimerecordsbureau/custom/1701607577CrimeInIndia2022Book1.pdf>
2. Sharma BR, Singh VP, Sharma R, Sumedha B. Unnatural deaths in northern India a profile. *Journal of Indian Academy of Forensic Medicine*. 2004;26(4):321-326
3. Pawar CK, Bhullar DS, Oberoi SS, Aggarwal KK. Profile of unnatural deaths in females a retrospective study. *Journal of Indian Academy of Forensic Medicine*. 2014;36(2):122-124
4. Bharath Kumar Guntheti, Uday Pal Singh. A study of Unnatural Female Deaths reported to a tertiary care hospital in Khammam, Telangana. *Journal of Indian Academy of Forensic Medicine*. 2016 Jan 1;38(4):460-464
5. Mandar Ramchandra Sane, K Ananda. Unnatural Deaths of Adult Females in South Bangalore an Autopsy Study. *Journal of Indian Academy of Forensic Medicine*. 2014 Jan 1;36(2):130-132
6. Kumar S, Verma AK, Ali W, Pandey A, Ahmad I, Singh US. A study of unnatural female death profile in Lucknow, India. *Am J Forensic Med Pathol*. 2013 Dec;34(4):352-6
7. Mohanty S, Sen M, Sahu G. Analysis of risk factors of dowry death--a south Indian study. *J Forensic Leg Med*. 2013 May;20(4):316-20
8. Padubidri JR, Menezes RG, Pant S, Shetty SB. Deaths among women of reproductive age: a forensic autopsy study. *J Forensic Leg Med*. 2013 Aug;20(6):651-4.
9. Zohlupui BL, Sungoh JDW, Meera T. Pattern of female deaths in Manipur: An autopsy-based cross-sectional study. *Indian J Forensic Community Med* 2020;7(4):183-186.
10. Zaghloul NM, Megahed HM. A descriptive medico-legal study of female deaths in cairo governorate, Egypt. *J Forensic Leg Med*. 2019;66:25-32.
11. Kitulwatte IDG, Edirisinghe PAS, Mendis HP, Wijesinghe PR, Fernando A, Abeyratne A. Study on the pattern of unnatural deaths of women brought for medico-legal autopsy. *Sri Lanka J Forensic Med, Sci Law*. 2017;8(1):13-22.