

Socio-Demographic Profile of Hanging Cases in Urban Area of West Bengal: An Autopsy Based Retrospective Study

Alakesh Halder^{1*}, Swaraj Haldar², Niloy Kumar Das³

^{1*}Assistant Professor, ²Professor, Department of Forensic Medicine, Jagananth Gupta Institute of Medical Sciences and Hospital, Budge Budge, Kolkata, West Bengal, India.

³Associate Professor, Department of Pediatric Medicine, ESIC Medical College and Hospital, Joka, Kolkata, West Bengal, India.

ABSTRACT

Introduction: Violent mechanical deaths resulting from asphyxia mainly includes Hanging. Death due to hanging is almost instantaneous. It may be suicidal, homicidal or accidental in nature. Suicide by hanging is the commonest, accidental hanging is less common and homicidal hanging is still less common.

Aims & Objectives: The study was aimed towards analysing socio- demographic pattern, precipitating factors for committing suicide by hanging in urban region of West Bengal.

Materials and Methods: A retrospective study was conducted at the mortuary of Nil Ratan Sircar Medical College and Hospital, Kolkata, Dist. West Bengal, India, during the period 01 January 2014 to 31 December 2014 on alleged history of hanging cases brought to the mortuary for post mortem examination and where the cause of death was attributed to hanging. Data was collected with help of history, inquest report, meticulous post mortem examination etc. Results were obtained after tabulating and analysing data with cross sectional study.

Results: Total 90 cases were studied during the study period and shows male preponderance (64.44%). Majority of male (13 cases ie.22.41%) were in the age group of 31-60 years where as females were (20 cases ie. 62.50%) in the age group of 21-30 years. Out of 90 hanging cases, 21 (23.33%) each was labour, house wife and farmers. Pre-disposing factor was

Alcohol consumption in 14 (15.15 %) cases. Depression and psychological problems were the reason for suicide in 08 (08.88%) and 06 (06.66%) cases respectively. In relation to seasonal variation we noted that, maximum number of suicides by hanging in males and females were reported in the month of June 17 (18.88%).

Conclusion: As a method of suicide Hanging is difficult to prevent but psychological counselling, economic support and education can reduce suicide.

Keywords: Hanging, Suicide, Farmer, Depression, Alcohol.

*Correspondence to:

Dr. Alakesh Halder, MBBS, MD

Assistant Professor,
Department of Forensic Medicine,
Jagananth Gupta Institute of Medical Sciences and Hospital,
Budge Budge, Kolkata, West Bengal, India.

Article History:

Received: 08-06-2020, Revised: 05-07-2020, Accepted: 24-07-2020

Access this article online	
Website: www.ijmrp.com	Quick Response code 
DOI: 10.21276/ijmrp.2020.6.4.022	

INTRODUCTION

Asphyxia is one type of tissue anoxia where lungs are deprived of oxygenated air, its literal meaning is pulselessness or without throbbing pulse.¹ Actually asphyxia is best described as an interference with respiration due to any cause- mechanical, environmental or toxic.² Violent deaths resulting from asphyxia chiefly include Hanging. Asphyxial death forms one of the modes of death which may be suicidal, homicidal or accidental in nature. As a rule of thumb, hanging is considered as suicidal unless proved otherwise.³ Apart from autopsy, the place, review of scene of crime, psychological state of deceased, substance abuse, employment etc. may add to the conclusion.

According to NCRB reports the incidence of suicides by hanging increasing every year by India, 31.5% in 2010, 32.2% in 2011, and 37.0% in 2012.⁴ The present study aims towards analysing socio-demographic pattern, causes and precipitating factors for committing suicide by hanging in this region.

MATERIALS AND METHODS

The present retrospective study consists of study of hanging cases that were brought for post mortem examination at mortuary of NRS Medical College and Hospital, West Bengal, India. The study period was between 01 January 2014 to 31 December

2014. All cases of alleged history of hanging and cause of death of hanging were studied. A retrospective s autopsy-based study was conducted during the year 2014, to know the incidence of asphyxial deaths due to hanging at tertiary care center of urban region of West Bengal. During this period total 697 post mortem were conducted at the Centre, out of which 124 (17.79%) deaths were of asphyxial deaths, out of which 90(72.58%) cases of hanging were recorded.

After reviewing case papers, post mortem reports, the cases were studied to know the incidence of asphyxial deaths due to hanging with respect to age group, sex, occupation, month, place of occurrence, marital status, reasons related etc. After analyzing of inquest report and meticulous post mortem examination of

hanging cases the observations and result of the study is presented here. The data were collected from police requisition form, postmortem report, and forensic science lab report and it was tabulated by cross observational study.

OBSERVATIONS AND RESULTS

The autopsy-based study was conducted on total 90 cases of alleged history of hanging that were brought to mortuary of NRS Medical College and Hospital, West Bengal, India, for post mortem examination. The period of study was from 1st January 2014 to 31st December 2014. During this period total number of autopsy conducted were 697. The table and results are self-explanatory.

Table 1: Distribution of study cases according to age.

S. No.	Age Group (in years)	No of Cases	Percentage (%)
1	0-10	Nil	Nil
2	11-20	10	11.11
3	21-30	32	35.55
4	31-40	16	17.77
5	41-50	12	13.33
6	51-60	11	12.22
7	>60	09	10.00
	Total	90	100

Table 2: Distribution of study cases according to Sex.

S. No.	Sex	No of cases	Percentage (%)
1	Male	58	64.44
2	Female	32	35.55
	Total	90	100

Table 3: Distribution of study cases according Age and Sex

Age Group (in years)	Male		Female		Total cases	
	Number	Percentage	Number	Percentage	Number	Percentage
0-10	Nil	Nil	Nil	Nil	Nil	Nil
11-20	4	(06.89%)	6	(18.75%)	10	11.11
21-30	12	(20.68%)	20	(62.50%)	32	35.55
31-40	13	(22.41%)	3	(09.37%)	16	17.77
41-50	10	(17.24%)	2	(06.25%)	12	13.33
51-60	10	(17.24%)	1	(03.12%)	11	12.22
>60	9	(15.51%)	0	(00.00%)	9	10.00
Total	58	(100%)	32	(100%)	90	100

Table 4: Distribution of study cases according to marital status.

S. No.	Marital status	No of cases	Percentage (%)
1	Married	65	72.22
2	Unmarried	24	26.66
3	Widow	01	1.11
	Total	90	100

Table 5: Distribution of study cases according to month wise occurrence

S. No.	Month	No of cases	Percentage (%)
1	January	03	03.33
2	February	07	07.77
3	March	06	06.66
4	April	04	04.44
5	May	10	11.11
6	June	17	18.88
7	July	07	07.77
8	August	08	08.88
9	September	14	15.55
10	October	06	06.66
11	November	05	05.55
12	December	03	03.33
	Total	90	100

Table 6: Distribution of study cases according to occupation.

S. No.	Occupation	No of cases	Percentage (%)
1	Farmer	21	23.33
2	Labour	21	23.33
3	Housewife	21	23.33
4	Student/Education	12	13.33
5	Retail businessman	05	05.55
6	Unemployed	06	06.66
7	Not known	04	04.44
	Total	90	100

Table 7: Distribution of study cases according to place of occurrence.

S. No.	Place of occurrence	No of cases	Percentage (%)
1	Home	55	61.11
2	Tree at Farm	29	32.22
3	Bathroom	01	01.11
4	Rented Room	03	03.33
5	In shade at Farm	01	01.11
6	Tree behind home	01	01.11
	Total	90	100

Table 8: Distribution of study cases according to Reason for Hanging/Precipitating factor.

S. No.	Reason for Hanging	No of Hanging cases	Percentage (%)
1	Alcohol	14	15.55
2	illness	10	11.11
3	Financial stress	09	10.00
4	Unknown stress	07	07.77
5	Examination stress	07	07.77
6	Depression	08	08.88
7	Psychiatric illness	06	06.66
8	Anxiety neurosis	01	01.69
9	Family dispute	01	01.69
10	Not known	27	30.00
	Total	90	100

Table 9: Distribution of study cases according to religion.

S. No.	Religion	Cases	Percentage
1	Hindu	75	83.33%
2	Muslim	15	16.66%
3	Christian	00	00.00%
4	Total	90	100

DISCUSSION

In this study, cases were divided in seven age groups. Maximum deaths were reported (32 cases ie. 35.55%) in 21-30 age group followed by (16 cases ie.17.77%) 31-40 years age group. 12 cases (13.33%) were from 41-50-year age group and 11 cases (12.22%) were from 51-60 years age group shown in (Table 1). Similar finding was mentioned by Sharija S et al.⁵ as male preponderance was noted in her study group, also as well preponderance of female victims was noted in the younger age groups. Males committed suicide a little bit later, between 21 to 60 years.

Waghmare P B. et al.⁶ also mentioned that, most commonly affected age group was between 21 to 30 years. Reason for that was Productive younger age group commonly vulnerable. Ashok Kumar Samantha et al.⁷ also mentioned that age range of the victims from 11 – 40 years, where victims were under increased pressures and burdens of life. Shrinivas Reddy et al.⁸ states that, asphyxial deaths were more in age group of 21–30 years (34.93%) followed by 11-20 years (20.10%) and 31–40 years (17.80%) respectively. However, Tanuj Kanchan⁹ mentioned that 3rd to 5th decades were the most affected age groups, together accounting for 75.7% (n=53) of the total hanging deaths, which is almost similar in our study as second most common was age group of 31-40 years.

Among of 90 cases of hanging, 58 were males (64.44%) and 32 were females (35.55%). Male-female ratio was about 2:1 shown in (Table 2). Similar findings were shown by Tanuj Kanchan⁹ as majority of the victims were males (n=53, 75.7%). Sharija S. et al.⁵ mentioned that, Majority of male victims were manual laborer's (45%). Shrinivas Reddy et al.⁸ also mentioned that, incidences of asphyxial death among males were 259 (59.14%) deaths and in females were 179 (40.86%) deaths. The study conducted at our hospital and authors study at respective place shows co- relation between the male and female pattern affected.

Among females, maximum number of cases 20 (62.50%) were found in 21-30 age group followed by 6 cases (18.75%) in age group 11-20 years, 03 cases (09.37%) from age group 31-40 years, 2 cases (06.25%) were in age group of 41-50 years and no case from age group below 10 years shown in (Table 3). Similar findings were noted by Sharija S.⁵ Waghmare P B et al.⁶ states that, out of 21 married women, 10 women had committed suicide within 07 years of marriage. The study conducted at our hospital and authors study at respective place shows co- relation between the female age group affected.

According to marital status, in our study 65 cases (72.22%) were married, 24 cases (26.66%) unmarried including one case (1.11%) was widow shown in (Table 4) Similar findings were noted by Waghmare P B et al.⁶ and they mentioned that, prevalence of suicide was more in married people. He noted that, out of 21 married women, 10 women had committed suicide within 07 years

of marriage. However, Sharija S et al.⁵ mentioned that, marriage does not seem to be a protective factor particularly for the males in Kerala unlike western data, where 55.8% of victims were married.

In our study, we found that, maximum number of cases 17 (18.88%) were reported in month of June followed by September 14 cases (15.55%), May 10 cases (11.11%), August 08 cases (08.88%), February and July 07 (07.77%) cases each, March and November 06(06.66%) cases each shown in (Table 5) Similar findings were mentioned by Tanuj Kanchan⁹ she noted that, peak incidence of suicidal hanging among males was in June (n=8, 15.1%) and for females in September (n=5, 29.4%). Waghmare P. B. et al.⁶ mentioned that, relatively fewer cases occurred in monsoon season. The study conducted at our hospital and authors study at respective place shows co-relation with seasonal variation.

By occupation, most of deceased were Laborer, farmer and housewife 21 cases (23.33%) each. There were 12 cases (13.33%) of students shown in (Table 6). Similar findings were mentioned by Sharija S et al.⁵ she noted that, as majority of male victims were manual laborer's (45%); majority of females were housewives (53.8%). Only a very small proportion of females were working women in the society. Unemployed persons constituted 15.5% of the victims, probably due to lack of social/financial support. Increased stress of daily life, faced by persons belonging to lower socio-economic status could have been the precipitating event. Kachare Rajesh et al.¹⁰ in their study reported that, 514 (82.90%) cases were of farmers followed by house wives 55 (8.87%). The study conducted at our hospital and authors study at respective place shows co-relation with occupation of victims.

Place of occurrence of suicide was mainly at home seen 55 cases (61.11%), tree at farm in 29 cases (32.22%) and 03 cases (03.33%) were at rented rooms shown in (Table 7). Waghmare P B et al ⁶ reported home as a place of choice for committing suicide. Sharija S et al.⁵ reported one case of youngest victims, a 11-year-old boy and a girl who committed suicide at home, problems at school being cited as reason. They were not from the same school and were from different areas of the same city. The study conducted at our hospital and authors study at respective place shows co-relation with place of suicide.

In our study, we found that the predisposing factor for suicide by hanging was due to chronic alcoholism 14(15.55%) cases, chronic illness in 10(11.11%) cases, financial stress in 09(10%) cases, and mental disorder in 08 (08.88%) cases. No cause/ predisposing factor could be reviewed in 27 (30%) cases shown in (Table 8). Sharija S et al.⁵ also reported chronic alcoholism as predisposing factor in males (76.1%). Kerala is infamously renowned for high alcohol consumption rate when compared to the other major states of the country. Therefore, this finding could be a reflection of the ill effects of increased alcohol consumption,

on the community. Immediate psychological problems (33.7%), chronic illness (15.5%) and family problems (14.4%) were the other major causes for suicide. Waghmare P B et al ⁶ also mentioned that, ill health due chronic disease contributes to cause of suicide. There is a obvious relation between alcohol consumption and suicidal tendency. However, Ashok Kumar Samantha et al.⁷ mentioned that, with increasing disparity between the poor and the rich and due to high ambitions, these victims fall short of their expectations and who then adopts to commit suicide by hanging.

In our study, out of total 90 hanging cases, 75 (83.33%) cases belong to Hindu religion while 15 (16.66%) cases were Muslims shown in (Table 9). We have mentioned this parameter for academic purpose only. However, no such data which will compare regarding religion wise distribution of cases have been found. However how much significant it is related with socio-demographic profile of victims of hanging cases clearly cannot be pointed out but higher the community in the region, maximum will be the cases.

CONCLUSION

The number of suicidal hanging cases is increasing day by day. A well designed and comprehensive programme is needed to identify the causative factors and prevention of suicidal behaviours. Appropriate education, influencing the media in their portrayal of suicidal news, reporting method, involvement of young generations in suicide prevention campaign may reduce the rate of suicidal death by hanging in future.

Overall poverty, lack of job, family problems, defamation, social withdrawal and alcoholism are the main reason for hanging.

Hanging as a method of suicide is difficult to prevent but cautious screening of susceptible persons, careful watch and monitoring their behaviour and psychological counselling can reduce suicide.

More suicide prevention options exist within controlled environments. Due to the complexity and peculiarity of controlled environments, we recommend suicide prevention assessments by external experts to effectively design in- house structural suicide prevention.

REFERENCES

1. Knight B, Pelck S, Knight. Knight's pathology. London: Arnold; 2004. p. 252–380.
2. Pillay VV. Textbook of Forensic medicine & Toxicology. Hyderabad: Paras medical Publisher; 2016. p. 297–8.
3. Mukherjee J. Forensic Medicine and Toxicology. Calcutta: Academic Publishers; 1981. p. 453–91.
4. National Crime Records Bureau. Accidental deaths and Suicides in India. New Delhi: Government of India; 2012.
5. Sharija S, Sreekumari K, Geetha O. Epidemiological profile of suicide by hanging in southern parts of Kerala. An autopsy based study. JIAFM. 2011;33(3):237–40.
6. Waghmare PB, Chikhalkar BG, Nanandkar SD. Analysis of asphyxial deaths due to hanging. JIAFM. 2014;(4):343–5.
7. Kumar A, Samantha. Soumya Ranjan Nayak. Newer trends in hanging deaths. JIAFM. 2012;34(1):37–9.
8. Reddy S, Kumar R, Rudramurthy. Asphyxial deaths at district hospital, Tumkur, A retrospective study. JIAFM. 2012; 34(2): 146–7.
9. Kanchan T. Day, week and month of suicide by hanging. JIAFM. 2010;30(3):202–6.
10. Rajesh K, Vishwajeet P. Changing trends of suicides in Marathwada region of Maharashtra in central India. A retrospective study⁷. Indian journal of Forensic Medicine and Pathology 2017;10(4):253–7.

Source of Support: Nil.

Conflict of Interest: None Declared.

Copyright: © the author(s) and publisher. IJMRP is an official publication of Ibn Sina Academy of Medieval Medicine & Sciences, registered in 2001 under Indian Trusts Act, 1882. This is an open access article distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Cite this article as: Alakesh Halder, Swaraj Haldar, Niloy Kumar Das. Socio-Demographic Profile of Hanging Cases in Urban Area of West Bengal: An Autopsy Based Retrospective Study. Int J Med Res Prof. 2020 July; 6(4): 98-102. DOI:10.21276/ijmrp.2020.6.4.022