

An Epidemiological Study of Homicidal Cases Autopsied in the Mortuary of the Department of Forensic Medicine and Toxicology, North Bengal, Darjeeling

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Abstract

Homicide is regarded as a notorious crime against the society that causes intentional killing, aggravated assaults resulting in death. This brings a massive burden on national economies, law enforcement and lost productivity. The present study highlighted the epidemiological profile of homicidal deaths which accounted (3.9%) of all unnatural deaths autopsied. Overall trend shows high male predominance with low economic background where illiteracy, poverty and other social circumstances play a considerable role. Homicidal records have their importance in interpretation of socio-economic implications and overall administrative attributes on executing law and order in respect to time, place and conditions.

Keywords: Forensic medicine, homicidal cases, epidemiology.

Introduction

Homicides are heinous crime against the society and there has been a global increase in homicide that causes over 5000,000 deaths per year worldwide [1]. It includes premeditated murder, intentional killing, and aggravated assaults causing death. It may be a result of arguments between acquaintances, domestic violence, robberies, drug addiction and terrorism [2]. Homicides are regarded as one of the oldest crimes in human civilization. It is a common end point of many different behavioral

pathways [3]. Grossly, death that occurs from violence also encompasses a wide range of physical, sexual, reproductive and mental health problems that imposes massive burden on national economies, law enforcement and lost productivity. In addition, homicide results in significant personal, social and economic loss [4].

As homicides comprise a major portion of medico-legal autopsies, they get special importance for general criminal profile of the society [5]. Medico-legal autopsies provide statistical significance related to legal incidents in the society along with the cause and manner of death [6]. In the present day world, violence is recognized as a global public health problem. It accounts for 9% of global mortality and 12% of all disability adjusted life years (DALY) [7].

As per Global Burden of Armed Violence Report (2011), the average annual global violent death rate between 2004 and 2009 were 79 per million. Globally

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around 520,000 people die each year as a result of interpersonal violence which equates to 1400 deaths every single day [8]. Although official data from the National Crime Records Bureau (NCRB) shows that murder rate in India has been steadily declining over the past two decades [9], still it needed to be assessed from time to time.

There is a pressing need for socio-demographic studies on homicidal cases with rising trends of organized crimes being executed in a professional manner. Although quite a good number of work have already been done in different parts of India and in other countries, not much work have been reported from North Bengal regions. The present study shows the different aspects of homicides in relation to victims with special emphasis on its epidemiologic profile.

Materials and Method

In the present study all homicidal cases brought for medico-legal autopsies in the mortuary of North Bengal medical college and hospital (NBMCH) attached to the Department of Forensic Medicine and Toxicology, West Bengal, during the period of 1st May, 2018 to 30th April, 2019 were evaluated. This cross-sectional study included a total 94 cases of homicidal deaths. Autopsies on all cases of alleged homicidal deaths were included in the study, whereas, all cases of natural, suicidal deaths and either decomposed or unidentified bodies where autopsy findings were not suggested to homicidal mode of death even with the history of homicide were excluded from the study.

Parameters used in the study were police/ magistrate inquest report, history obtained from family members and autopsy findings. A descriptive study was designed to explore the epidemiologic profile of homicidal cases. Data was analyzed using SPSS software.

Results

In the present investigation of total 2423 unnatural deaths autopsied during the study period 94 cases (n=94) were homicidal (3.9%).

As per distribution of age (as shown in Table 1), it was found that 39.6% of victims were in the age group of 31-40 years. 23.4% victims were aged between 51-60 years. 18% victims were aged between 41 to 50 years. 7.4% victims were young adults aged between 21-30 years of age group. Only 3.1% victims were aged above 70 years.

As per distribution of sex (as shown in Table 2), it was observed that most of the victims (76.6%) were male and few (23.4%) were female. As per month and year wise distribution of victims (n= 94), the incidences of homicide were maximum (20.2 %) in the month of December 2018, followed January 2019 (17.1 %), March 2019 (10.6%), May 2018 and April 2019 (8.5%), October 2018 (6.4%), August 2018 (5.4%), November 2018 (5.3%), September 2018 (4.2%), June 2018 (3.2%) and July 2018 (2.1%).

Regarding seasonal variation, homicidal incidences were maximum in winter (51%) in the months of Nov-Feb, followed by summer (30.9%) and Monsoon (18.1%) as shown in Table 3. As per religion wise distribution, incidences of homicides were maximum in Hindus (69.14%) followed in Muslim (27.65%) followed Buddhist (2.12%) and Christian (1.06%). As per demographic distribution, rural cases comprises 66% and 34% belonged to urban area.

Educational status distribution, the maximum number observed (51.1%) of victims were illiterate followed by primary (34%), secondary (9.6%) and graduate (2.1%). Socio-economic status of the homicidal victims showed majority (70.2%) from low, followed by 25.5% middle class and 4.3% of high class. Of the distribution in marital status married victims were the major (80.9%), followed by unmarried (14.9%) and low among widower (4.2%). Among distribution of occupational status majority of victims were workers (34%), followed by businessman (22.3%), farmers (16%), housewife (12.8%), private employee (7.4%), retired persons (4.3%) and government employee only (3.2%).

As per distribution on time of incidence, most of the incident of homicide happened during late evening (33%) between 7pm to 10pm, followed by evening (23.4%), morning (12.8%), early morning (8.5%), mid-day (7.4%), afternoon and night (6.4%) and late night (2.1%). Distribution on place of occurrence showed majority of the incidence occurred in the public place (62%) and (32%) occurred at home. Majority of the victims (74.5%) did not get any medical care where only (25.5%) victims received it. As per methods of homicidal injury is concerned blunt weapon was used in maximum cases (45.7%), followed by heavy sharp weapon

(23.4%), light sharp weapon and stab injury (9.6%), manual force (6.2%), firearm (3.2%) and strangulation (2.1%). Among the cause of death, instantaneous death (47.9%) was the most common followed by shock and hemorrhage (25.5%), coma (17%) and asphyxia (9.6%). By the distribution of the homicidal victims according to the region of injury, brain was the commonest organ to get injured (36.3%), followed by lungs (10.6%), stomach (7.5%), heart and intestines (6.4%), liver (4.2%), pancreas and kidneys (2.1%) and multiple organ involvement was observed in 22.3%.

Table 1: Age distribution of victims (n=94)

Age in Year	No of Cases	Percentage
0 – 10	00	00
11 – 20	00	00
21 – 30	07	7.4
31 – 40	37	39.6
41 – 50	17	18.0
51 – 60	22	23.4
61 – 70	08	8.5
>70	03	3.1
Total	94	100

Table 2: Sex distribution of victims (n=94)

Sex	No of Cases	Percentage
Male	72	76.6
Female	22	23.4
Total	94	100

Table 3: Season wise distribution of victims

Season	No of Cases	Percentage
Winter (Nov- Feb)	48	51.0
Summer (March – June)	29	30.9
Monsoon (July – Oct)	17	18.1
Total	94	100

Discussions

In the present investigation of total 2423 bodies brought for medico-legal autopsies in mortuary of NBMCH during the period of 1st May, 2018 to 30th April, 2019, 94 cases were sorted for homicidal which accounted (3.9%).

Prior study from Bangalore [10] showed that this age group was accounted for 61.50% cases of homicidal death. The factors responsible for highest incidents in the 18-40 years age groups (64.3%) were due to marital disputes, property disputes, infidelity, dowry death in females, gang rivalry, unemployment and heated arguments. Our study showed highest incidence (39.6%) in age group of 31 to 40 years.

Sex wise distribution showed 3.27 times more in male compared to female. The cause for male predominance may be because of their number, unemployment, jealousy, revenge, lack of patience, intake of alcohol and bad accomplices etc. the lower incidence in females is mainly attributed to custom, social values and preference of females to stay indoors.

In consistent to the study done by Sisti et al. (2012) [11] in Italy, with maximum homicidal death in a bimodal pattern, summer (July and August) and winter (December and January) seasons, our study showed maximum (20.2%) in the month of December with 51% in winter season (Nov-Feb).

The majority of victims (51.1%) were from illiterate backgrounds. This could be related to poverty, unemployment, prevalence of multicausal system of the society and inability to solve the dispute by fruitful peaceful discussions.

Conclusion

However, trends of homicidal deaths differ from country to country, region to region and from time to time based on overall economic turbulences and social circumstances. Still deaths related to homicides are commonly found in low economic class with male predominance where illiteracy, poverty and mistrust definitely play a considerable role.

Therefore, along with the socio-economic improvement, the crime investigating agencies including medico-legal aspects and judiciary system has to be strengthened so that the law can be enforced stringently. Understanding the burden of issue on the socio-economical, cultural and multidirectional implications, continuous research in this field is necessary to validate data from different time, place and conditions.

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Conflict of Interest: Nil

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