

A Study of Homicidal and Suicidal Deaths in Bhopal District of Madhya Pradesh

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Abstract

Background: The pattern of injuries is unique to the mode of death (homicide or suicide) as well as to the causative agent(s). The objective of the present study was to study sociodemographic details and describe the pattern of injury among victims of homicide and suicide. **Material and Methods:** A total of 160 cases of unnatural death were brought for autopsy at the two selected post-mortem centres were included in the present study. Out of them, 15 cases where the manner of death was either suicidal or homicidal were selected. The data relating to socio-demographic variables and circumstances leading to the death of the individual were gathered from documents and detailed interview of the eyewitnesses. **Results:** Burns were the single largest cause of death both among victims of homicide and suicide. Septicaemic shock and craniocerebral injury were the most common cause of death. Most victims of suicide survived for more than 48 hours after the incident. **Conclusion:** Suicide was most commonly seen among young married women secondary to marital disputes.

Keywords: Homicide, Suicide, Death, Injury, Accidents.

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Introduction

Two forms of unnatural, non-accidental, traumatic deaths have always fascinated forensic experts from the world over viz. homicidal and suicidal deaths. Worldwide, homicidal deaths are the third most common cause of deaths due to trauma.[1] Homicide means the killing of one human being because of an act of another.[2] The legal criterion for homicide is to demonstrate that the “lethal

violence arose from an unlawful act, agency, procurement, or culpable omission of another person”.[2] For homicide, the death must be caused either by an act of commission or an act of omission, nevertheless, in every case, it is the responsibility of law enforcing agencies to prove that the death in question is caused secondary to the action (or inaction) of the accused.[2] Patterns of injury in case of

homicidal death vary from region to region and it is influenced by factors like nature of weapons, method of attack, rivalry, cultural, psychological, social influences, and substance abuse.[3] There are two hallmarks of homicidal injury: *defence wounds* and *signs of struggle*. [4] Defense wounds are the result of the immediate & instinctive reaction of the victims to save themselves from the attack.[4] For example, a conscious victim raises his/her arm to protect themselves, resulting in characteristics of wounds on the back of their hand and forearm. Similarly, if a victim tries to grasp a sharp weapon they will incur injuries on the palms and fingers.[5] The presence of defence wounds constitutes strong evidence in favour of homicide, however, their absence does not completely rule out homicidal deaths.[5]

Suicide is one of the most heart-rending manners of death. Victims of suicides often resort to methods like jumping from a height, slicing a wrist, consuming poison, using fire-arm weapons, jumping in front of a train, self-immolation etc.[6] The cause of death in case of suicide depends on the nature of injuring agent viz. loss of blood, shock (hypovolaemic, neurogenic, & septicæmic), head injury, and injury to vital organs (heart, liver, spleen, kidney, lungs etc.).[6] Generally, injuries on the head, neck, chest & abdomen with injury to underlying structures are sufficient to cause death.[6] Medicolegally, it is challenging to differentiate a case of true suicide from homicide or accidental death made to look like a case of suicide.[7] In such cases, it is essential to recreate the circumstances of death, and a meticulously done autopsy can provide precious evidence.[7] Nevertheless, it is important to conduct a thorough autopsy in every case of suicide to rule out any foul play.

In every case of unnatural non-accidental deaths i.e., suicidal, & homicide, a spectrum of medico-legal difficulties are encountered

by forensic experts & autopsy surgeons to reconstruct the scene of death.[8] This is crucial to pinpoint the offenders and to validate theories about the manner, timing, and cause of death. This fact is evident from several cases of homicide or suicide that happened in the last decade which had caught the nation's attention about the exact circumstance leading to the death of the victim.[9] While investigating any unnatural traumatic death, the history of the case, crime scene investigation, forensic examination for evidence, statements of witnesses, interrogation techniques (like polygraphy, brain-mapping) play a very vital role.[10] A meticulously conducted autopsy can genuinely assist the above-mentioned techniques to draw a valid conclusion about the nature and circumstances of death.[11] The objective of the present study was to study and describe the pattern of injuries and draw medicolegal conclusion/opinions in cases of non-accidental fatal trauma.

Material and Methods:

Study Setting:

The present study was carried out at the mortuary of People's College of Medical Sciences, Bhopal and Medicolegal Institute of Madhya Pradesh, Bhopal.

Study Duration:

The total duration of the study was one & a half year; from 1st January 2014 to 30th June 2015.

Sample Size:

For this study, we collected data from a total of 15 out of 160 cases of unnatural death on which the autopsies were conducted during the period of data collection.

Inclusion Criteria:

Deaths due to unnatural non-accidents (only homicide and suicide), who either died before reaching the hospital or were admitted to the

hospital before their death. Exclusion Criteria: (i) deaths due to accidental trauma (ii) Decomposed bodies preventing a valid autopsy, (iii) deaths due to causes other homicide and suicide.

Data collection:

The detailed medico-legal postmortem examination was carried out in the two selected centres after receiving requisition from a concerned police official, the inquest report & the dead body challan. The socio-demographic data like age, sex, religion, occupation as well as the circumstances leading to the death of the individual were gathered from documents like inquest report, dead body challan and through detailed interview of the friends, relatives, neighbours, eyewitnesses, and police officials accompanying the dead bodies. In cases where the death of the victim occurred in the hospital, the treatment records available were also studied. All medico-legally important findings were documented by taking scaled photographs, whenever & wherever possible.

Data Analysis:

All the data were collected in a paper-based data collection form. Thereafter, the data were coded and entered in Microsoft Excel. The coded data were imported into Stata 15.1 version for analysis. For the continuous data, the author calculated the mean, median, and standard deviation.[12] For discrete data, the author calculated and reported frequency, proportion, and percentage.[12] Any statistical difference between the two proportions will be estimated using the Chi-square test.[13] Any statistical difference between the two means will be estimated using the T-test. [13]

Results:

During the period of data collection, a total of 15 dead bodies fulfilling the selection criteria were brought to the two mortuaries for autopsy. Table 1 gives information about the nature of death.

Table 1: Distribution of study participants by the nature of death (n=15)

Nature of Death	n	%
Homicide	10	66.7
Suicide	5	33.3
Total	15	100.0

Table 2 highlights the sociodemographic details of the victims of homicidal trauma. A total of 10 homicidal cases were included in the present study. The most common mode of death was homicidal burns (60%), followed by an injury caused by hard & blunt object (30%), and stab injury caused by a sharp & pointed weapon (10%). We did not encounter even a single case of death due to firearms or strangulation. We observed that in cases of

assault by a weapon, the victims were all men. Among a total of 6 cases of homicidal burns, 5 (83.3%) were females & only 1 (16.6%) was male. A total of 70.0% of all victims were between 21-30 years old. The mean and the median age of the victims were 38.3 years and 27 years, respectively. The mean age of female victims was less in comparison to a male victim.

Table 2: Distribution of homicidal death by their socio-demographic data (n=10)

Age		
Age group	n	%
21-30	7	70.0
31-40	1	10.0
41-50	1	10.0
51-60	1	10.0
Gender		
Male	5	50.0
Female	5	50.0
Religion		
Hindu	7	70.0
Muslim	3	30.0
Marital Status		
Unmarried	2	20.0
Married	6	60.0
Other	2	20.0
Mode of Assault		
Hard blunt weapon	3	30.0
Sharp weapon	1	10.0
Burn	6	60.0

Table 3: Distribution of suicidal death by their socio-demographic data (n=5)

Age		
Age group	n	%
21-30	3	60.0
31-40	1	20.0
41-50	1	20.0
Gender		
Male	1	20.0
Female	4	80.0
Religion		
Hindu	4	80.0
Muslim	1	20.0
Marital Status		
Unmarried	1	20.0
Married	3	40.0
Separated/divorced	1	20.0
Mode of Suicidal death		
Fall from height	2	40.0
Burns	3	60.0

Table 3 illustrates the details of victims of suicide. During the period of data collection, only 5 cases of death due to suicide were brought for autopsy at selected mortuaries. The majority of victims died by self-immolations (60.0%) followed by jumping from a height (40.0%). There was no case of

self-inflicted injury or hanging. Gender wise, most cases of suicide were seen among female (80%). The most common age group was 21-30 years (60.0%) and the mean age of the victims was 32.7 years. All three cases of self-immolation were seen among female. Most of the victims of suicide were married.

Table 4: Distribution of study participants based on the cause of death and survival after the accident (n=15)

Cause of death	Homicide	Suicide
	n (%)	n (%)
Cranio-Cerebral Injury	2 (20.0)	2 (20.0)
Septicemic Shock	5 (50.0)	3 (30.0)
Hemorrhagic Shock	3 (30.0)	-
Total	10(100.0)	5(100.0)
SURVIVAL AFTER ACCIDENT		
Time	Homicide	Suicide
Brought dead	2 (20.0)	1 (10)
<6	1 (10)	1 (10)
6-12 hour	2 (20.0)	-
12-24 hour	1 (10)	-
>24	4 (40.0)	3 (30.0)
Total	10(100.0)	5(100.0)

Table 4 highlights the cause of death and the time for which the victim survived after the accident. Among victims of both homicide as well as suicide, septicemic shock was the most common cause of death. This was followed by craniocerebral injury. Most patients survived more than 48 hours after the incident. The mean duration of survival was higher in the case of homicide in comparison to suicide.

Discussion:

Ministry of Home Affairs, Govt of India published a detailed report on suicides and accidental deaths in India for the year 2019.[14] As per the report, a total of 1,39,123 suicides were reported in the country, an increase of 3.4% from the previous year.[14] For the last five years, Madhya Pradesh has been consistently among

the top 5 states in terms of total reported suicides in India. In terms of absolute numbers of suicides, Madhya Pradesh ranked 4th in the year 2019 and accounted for 9.0% of the total suicides reported in India. There was an increase of 5.8% in the absolute number of suicides reported from Madhya Pradesh during the year 2019 from 2018. Among the Megacities, Bhopal (study district) reported 1.6% of total suicides from India.[14]

The present study included data from a total of 15 victims of non-accidental unnatural deaths; 10 homicides and 5 suicides, whose dead bodies were brought to selected mortuaries for autopsy, during the period of data collection. Collectively, most deaths were attributed to burns (60% of the total; 6 homicidal burns and 3 suicidal burns). Out of all cases of suicide; 40% jumped from a height & 60% cases were of self-immolations.

In our study, the majority of victims of suicide were female (80%). Our findings were just opposite of the national trend where the male to female ratio among suicide victims was 70:30. There can be several reasons for the same; Bhopal is a small district with less than 15 % of land under agriculture thus, suicide among farmers (mostly male) due to financial distress was less prevalent here. However, even nationally the proportion of female victims were more in 'Marriage Related Issues' (specifically in 'Dowry Related Issues'), and 'Impotency/Infertility'. A total of 75 % of women who committed suicide in our study were married and the cause of suicide was a marital dispute (dowry, extramarital affairs etc.,). Similar to our findings, nationally, in the year 2019, housewives accounted for 51.5% of the total female victims of suicide. Moreover, the majority of suicides committed in India by house-wives were reported in Madhya Pradesh (2,938 out of 21,359 suicides) followed by Maharashtra (2,737 suicides) and Tamil Nadu (2,025 suicides) accounting for 13.8%, 12.8% and 9.5% of total such suicides during 2019 respectively. As per the same reports, in Bhopal during the year 2019, a total of 26 people committed suicide citing marital problems, 21 out of these victims were female.[14] Therefore, with respect to suicides among housewives our findings were similar to state and national trends.

In our study, the most common age group among victims of suicide was 21-30 yrs (60%). As per the Ministry of Home Affairs report, the age group (18 – to 30 years) and 31 to 45 years of age were the most vulnerable groups resorting to suicides. These age groups accounted for 35.1% and 31.8% of suicides respectively. Gender wise among three cases of suicidal burns all the victims were females. Among the 2 falls from height cases, there was 1 male & female each. Nationally, the most common means adopted for committing

suicide was hanging (53.6%) followed by consuming poison (25.8%) (most commonly insecticides), self-immolation was used by only 3.8% of total victims of suicides. The number of male victims were more than females in all means of suicide except those who committed suicides by 'Fire/Self-immolation' where share of female victims was more (3,295 out of 5,234). Similarly, out of a total of 653 people in Madhya Pradesh who committed suicide by self-immolation, 72.0% were female.[14]

Among the 6 cases of homicidal burns, 5 (83.3%) were females & only 1 (16.6%) was male. Further, in our study, all 5 cases of homicidal burns among female were concerned with domestic abuse & dowry demands. Singh A et al. reported that among all cases of homicidal and suicidal burns majority (55.91%) were females.[15] Similar to our findings, the majority of victims in a study conducted by Singh A et al. were in the age group of 20-40 years and most (88.18%) victims were Hindus and were married. Moreover, similar to our findings, Singh A et al. also reported that most cases of either homicidal and suicidal burns were seen among housewives. Furthermore, Singh A et al. noted that the majority of the females were married < 5 years. The high prevalence of suicide among married women is either because of a dispute in a family or a dowry-related issue. Nationally, the proportion of female victims were more in 'Marriage Related Issues' (specifically in 'Dowry Related Issues'), and 'Impotency/Infertility'. [14] H. Maghsoudi et al.[16] also observed female predominance among the suicidal burn victims. In the present study, 10 homicidal cases were included; the majority being homicidal burns (60%) and 40% assaults by weapons (3 assaults by hard & blunt weapons and 1 assault by sharp & pointed weapon). There was no case of homicidal deaths due to either strangulation or firearms. Other studies

conducted in Madhya Pradesh also reported that the use of firearms was rare in homicidal deaths.[17]

In the case of homicidal deaths due to assault weapon, all victims were men. Similar findings (male preponderance) have also been reported by Rastogi AK et al[18], Shah JP et al[19] & Prajapati P et al[20]. This male predominance in mechanical injuries can be explained by the fact that males by nature get involved more in violent activities as compared to females. Further, the most common weapon of choice, among deaths due to mechanical injuries was 'hard & blunt' objects e.g. stone, sticks. This may be due to fact that most homicides occurred as a minute dispute which blew out of proportion in the heat of the moment. Similar observation and interpretation have been reported by Prajapati P et al[20] & Rastogi AK et al[18]. However, Shah JP. et al[19] in their study found that 31% where only sharps were used; 26% where hard & blunt weapon was used & burns were resorted to in only 3% cases. The most commonly involved age group was 21-30 yrs, which is in agreement with the findings of other studies by authors like Shah JP. et al[18], Rastogi AK et al[17] & Prajapati P et al[20]. This may be due to the reason because people of this age group are the main earning members of the family, generally more aggressive by nature, more commonly affected by stress & less mature to handle any adverse situations.

Conclusion:

The suicidal deaths were most commonly observed among young, married women and were secondary to a domestic/marital dispute(s). Burns were the most common mode of injury both among homicidal and suicidal victims. However, our findings were not in accordance with national trends, this may due to demographical, cultural, economical, and geographical difference between the study site and the country as a

whole. However, our finding was similar to trends seen in Madhya Pradesh.

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