Original Research Article

An Autopsy Based Study on Pattern of Homicidal Deaths and Profile of Victims In Chennai

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Abstract

As an ultimate and heinous crime against humanity, homicide has ripple effects that go beyond the loss of life and castsseriousrepercussions on the family. The pattern of homicides within a community can reflect its social stressors and provide useful insights for law enforcement strategies. The pattern of injuries can assist in identifying the cause of death and possibly, understanding of the manner of death. Thus, autopsies provide much information about such unlawful incidents as murder in the state. This was a retrospective study carried out in Chennai on 41 homicidal deaths autopsied in the year 2023.

On analysis, the most affected age group was 21-30 years, and the male-to-female ratio was 2.2:1. Epidemiologically, 15 cases (36.5%) were illiterate, 22 cases (53.6%) belonged to low socioeconomic status, 25 (60.9%) were married, 34 cases (82.9%) were brought dead to the hospital, 24 (58.5%) were unemployed, and 13(31.7%) were of personal vengeance. Cause of death was accounted to multiple cut injuries in 16(39%) cases, followed by 10(24.5%) cases of stab injuries.

The study suggested that homicide represents a significant public health burden, and the results indicated the trends of homicides in the region. The study explored the various reasons behind homicides and the possible sociocultural influences, personal enmity or revenge was the predominant one.

Key words: Homicide, Victim profile, Assault, Socio-demographic.

Introduction

Homicide is a widely prevalent serious crime across the globe and in India. Offenses against the human body are now covered in the new Indian criminal code, Bharatiya Nyaya Sanhita (BNS). They include "culpable homicide" defined in section

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100,"murder" in section 101,and "assault" defined in section 130 of BNS.

Homicide is the ultimate crime and has ripple effects beyond loss of human life. Murder is the most extreme form of violence and the highest level of aggression found in all cultures.[1]Though the terms "murder" and "homicide"are used interchangeably, they are distinct from each other; homicide is a common term for the killing of a human being, while murder defines the specific legal category of criminal homicide of a State. Violent crimes like murder get a disproportionate amount of media coverage, which has a significant impact on public policy, public perceptions of crime, and public fear of crime.[2]

Culpable homicide is defined as causing death by an act with the intention of causing death or with the intention/knowledge of causing such bodily injury likely to cause death. Culpable homicide does not amount to murder if the act was done under grave sudden provocation, if in good faith of the right of private defense of person or property, and if caused without premeditation.[3]

With Goal 16 of the 2030 Agenda for Sustainable Development, member states of United Nations (UN) have committed to significantly reducing all forms of violence and related death rates. In 2021 homicide cases registered globally was 458000, averaging 52 individuals per hour. African continent recorded 176000 cases, America 154000 cases and Asia reported 109000 cases. This form of violence has continued to shape the lives and livelihoods of people, and not just of those in armed conflicts. [4]

The latest National Crime Records Bureau (NCRB) data showed that a total of 28,522 murders were reported in 2022. Uttar Pradesh recorded the most murders (2490) followed by Bihar (2930) and Maharashtra (2295). Tamil Nadu with 1690 murder cases registered, was placed seventh from the top behind West Bengal (1696). Crime Rate (calculated per one lakh of population) was 2.2 in the year 2022.[5]

Homicides may result from a variety of injuries and mechanisms involving blunt and sharp force trauma, gunshots and strangulation. Less common methods involve immersion, incineration and poisoning. Methods vary greatly among different communities and countries, often influenced by the availability of a particular weapon. For forensic experts and crime investigators, it is important to be aware of local patterns of homicide.[6]

Homicide statistics are a proxy for violent crime and a robust indicator of levels of violence within states. Medicolegal autopsies not only give the cause of death but also give other details related to legal incidents in the state where conducted. There were fewer studies to analyze the pattern of injuries in homicidal deaths in our region. Through this study, it was anticipated that key personnel involved in criminal investigation would gain much-needed awareness on the socio-demographics of victims of homicide.

Aims

Our study aimed to determine the epidemiological characteristics relating to homicidal deaths in central areas of Chennai.

1. To examine the pattern of injuries in homicides and type of weapons producing them.
2. To analyse the victim profile of homicides in the region.

Materials and Methods

Following formal IEC approval, a cross-sectional retrospective study was carried out at Kilpauk Medical College in Chennai from January to December 2023. Out of 3146 postmortem examinations conducted, 47 cases were deemed to be of homicides. Our study focussed on the 41 cases that provided enough background and history regarding the homicidal attack/assault and intent based on key factors. The cases with insufficient information on the motive, inconclusive cases like dowry death, suspected suicidal poisonings and cases of advanced putrefaction were excluded. Thus, the cases of homicidal deaths with adequate history and corresponding findings, were considered for the study.

Socio-demographic data like sex, age, socioeconomic status, occupation etc.and the details of the homicide like nature of injuries& weapons, presence of defence wounds, the time and place of attack were collected. All relevant information was collected from documents in the inquest report or FIR, treatment details, photographs of the scene of the

crime, postmortem reports, forensic lab reports, and final opinion reports. The anatomical distribution of the injuries and their characteristics documented were noted and studied with regards to the weapons used. All gathered data was processed in Microsoft Excel sheets and summarized using descriptive statistics to deduce results of the study.

Results and Discussion

The incidence of homicide deaths in 2023 in the region was 1.5%. The results obtained from the study sample of 41 homicide cases are described here.

1. **Gender wise and age group distribution.**

Among the victims, 28 cases (68.2%) were males and 13 cases (31.7%) were females, giving a ratio of 2.2:1. Violence and violent deaths are more commonly associated with men. Similar ratio was demonstrated by Vij A et al.[7] in Mangalore where 71 were males and 18 were females among the 89 victims of homicide. The fact that men are more likely to be violent and aggressive by nature, and that there are aggravating factors like more involvement in fights, drug and alcohol usage, explain the study's preponderance of male victims.

The common age group affected in our study was 18-30 years, comprising 63.4% of cases, followed by 30 – 40 years with 10cases (24.3%) seen, (Fig.1) which is consistent with a study in Pondicherry in 2021.[8] But a study in Bengaluru differed from ours' where most of homicide victims belonged to 31-40 years, contributing to 40%, while the least age group involved was 11-20 years.[9] This was also reflected in Trivandrum by Dileeph et.al.[10] where young adult males (31–40 years) were the most common group involved (24.9%). Singh OG et al.[11] also reported that maximum number of victims (around 30%) in homicidal deaths were from 21 to 30 years.

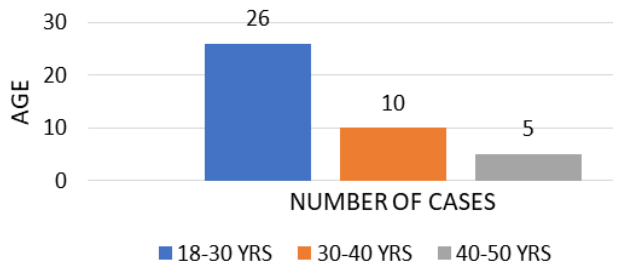

Figure 1: Age group wise distribution of victims.

2. **Marital status and occupation of victims.**

Among 41 victims studied, 25 cases (60.9%) were married, 10 cases (24.3%) were unmarried, and 6 were divorced (Figure 2). By occupation, half of the homicidal victims, 21(51.2%) were unemployed including housewives), 9(21.9%) were employed in companies, and 6(14.6%) were self-employed with shops and small businesses. Only 3 cases (7.3%) involved students. The male victims employed were as diverse as industry workers, drivers, farmers, construction workers, etc doing outskirt work, whereas most of the females were housewives. This had been reflected in a study by Mohanty et al.[12] who found that most of the victims were either labourers (23.73%) or farmers (22.03%) among males and housewives (14.41%) among females.

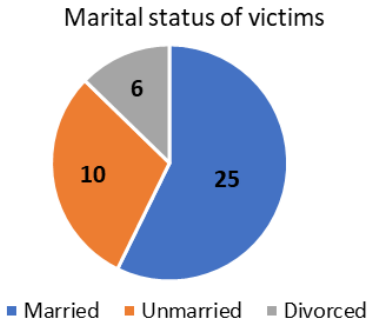

Figure 2: Marital status of victims.

3. **Education and socio-economic status of the victims.**

About 15 cases (36%) were illiterate and 8 cases (19.5%) completed primary education, 12 cases (29.2%) had completed high school and 6(14.6%) had been to college (Figure 3). As homicide victims maximally belonged to the illiterate and low level of education, there might be a strong link between low literacy and high criminal activity rates. But this aspect contrasted with a study in Nagpur[13] where most victims (n-50, 27.9%) had completed only primary school education and 46 cases (25.7%), secondary school education while 14 victims (7.8%) were illiterate. And none of the females had completed even graduation. There can be an association between crime and literacy level, as low literacy rates can make it harder for people to find and keep employment, which also can increase the temptation to turn to illegal means of earning a living.

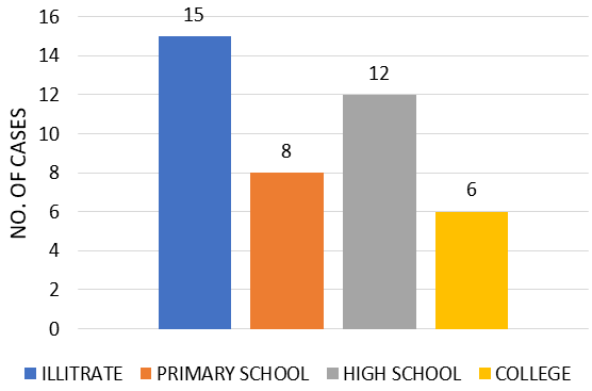

Figure 3: Education level of the deceased.

On analysis, 22(53.6%) belonged to low socioeconomic status, 14(34.1%) were medium, and 5(12.2%) cases belonged to high economic status. Hence, it can be inferred that the maximum victims of homicide were illiterates, workers, and belonged to lower socioeconomic status. These findings are consistent with the studies done by Singh OG [11], Mohanty S, [12] Patel DJ, [14] and Shaw JP et al. [15] This may be explained by high job mobility/joblessness, life frustration, marital discord, ignorance, and poverty in the lower socioeconomic class, all of which can lead to the precipitation of crimes. This holds good especially in big cities owing to the high cost of living, and committing crime becomes a matter of survival, as in gang rivalry.

4. Time and place of occurrence.

It was discovered that, just like the popular belief among public, homicide rates were highest at night and late evening. The number of homicides committed over a 24-hour period is displayed in the graph (Figure 4).

On looking at the time of incidence, 18 cases (43.9%) of homicides were observed to have happened between 6.00 pm and 12.00 am, consistent with studies done by Patel DJ, [14] and Hugar BS. [16] Between 12.00 am and 6.00 am, 8 cases (19.5%) were seen. A study in Rajkot in 2010, had observed more cases (39%), w.r.t time of incidence during 06:01 pm-12:00 midnight, followed by 00:01am-06:00am.

When the place of the incident was examined, 18 cases (43.45%) occurred in the victim's house or surrounding premises, 17 cases (41.46%) on the road, and 6(14.63%) in other places. This depiction was found to be consistent with the study done by Dileeph N, [10] but few other studies[12,17] observed that in 60% cases, the act was committed outside the house of the victims.

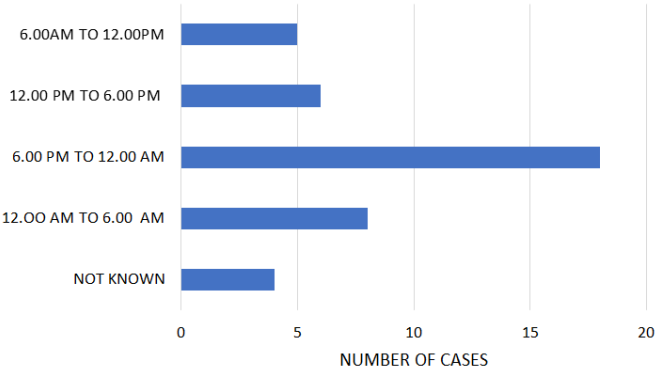

Figure 4: Time of occurrence of the offence among the study sample.

5. The motive behind homicide.

On probing the reasons behind the homicide, 13 cases (31.7%) were consequent to personnel vengeance, 12 cases (29.2%) related to family or marital issues. Both sudden provocation and gang rivalry were accounted for 8 cases (19.5%) each. In 9 cases (21.9%) of homicides, there was a single perpetrator, whereas in 32 cases (78.1%), multiple individuals were involved.

According to a study by Rathod VV, [13] the motives for murder included financial or property disputes in 24% of the cases, while personal conflicts led to homicide in 21% of cases. The most frequent occurrences were found in individuals aged 20 to 40 years. Contributing factors for interpersonal violence in this age group amounted to quarrels in 43% of instances, romantic relationships in 31%, and substance abuse, including alcohol and drugs, in 18% of cases.

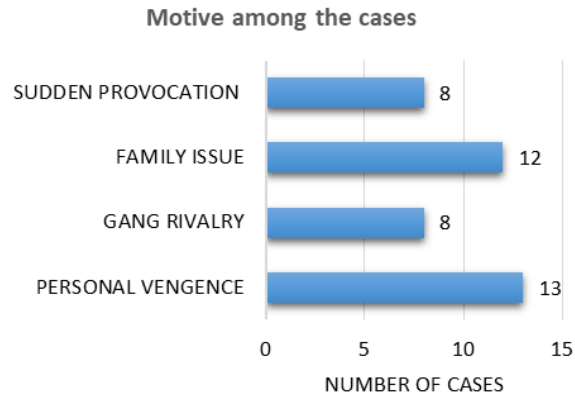

Figure 5: Analysis of precipitating factors in the study group.

6. The pattern of traumatic injury and type of weapon used.

Out of the traumatic cases, 38% of cases were caused by sharp force, while nearly 45% of cases were caused by blunt forces. (Table 2). On probing further, heavy blunt weapons were used in 14 cases, and in 7 cases, heavy sharp weapons were used. Hospital records data revealed that 34 cases (82.9%) were brought dead which is consistent with studies done in regions of Mangalore[7] and Surat. [18] A study by Shaw JP[15] had observed fatal mechanical injuries in 77% homicidal deaths, amongst which, sharp force was used in 31 cases (40.3%) and blunt force was used in 26 cases (33.7%). The violent asphyxia deaths were seen in 14% cases.

The material used or means adopted in homicides included cloth or rope used for throttling in four instances, while poison was employed in one case. A study in Imphal [16] on a total of 97 cases of homicides found that blunt weapon, firearms, and bomb blasts were the commonest methods employed. Multiple injuries and head injuries were the leading causes of death.

Defence injuries were identified in 24 cases (58.5%), out of which cut injuries to the back of the right forearm were found in 10 cases (24.3%) and the back of the right wrist in 12 cases (29.3%). Cut injury at the base of the left thumb was noted in 4 cases. These findings align with the research conducted by Mohanty SS et al. [12] which reported a defence wound incidence of 25.4% among cases. Most of the remaining cases did not present with defence wounds, which may be attributed to factors such as assaults by multiple attackers, being attacked while under intoxication or asleep, and sudden unexpected assaults.

7. The location of injury and cause of death.

Upon examining the locations of injuries, head injuries were found in 24cases (58.5%), aligning with the studies by Vij A. [7] and Dileeph N. [10] Conversely, stab wounds to the neck were recorded in 4 cases (9.7%), which contrasts with the research conducted by Jhaveri S et al. [18], where neck injuries (16.8%) were the most prevalent, followed by head injuries (15.9%). In our study, stab injury to the chest was observed in 4 cases(9.75%), and stab injury to the abdomen in 3 cases (7.3%). A combination of injuries by both blunt and sharp weapons were noted in 8 cases (19.5%).

Table 1: Causes of death among study group.

S.NO	CAUSE OF DEATH	NUMBER OF CASES		TOTAL
		MALE	FEMALE	
1	Shock and haemorrhage due to multiple cut injuries (due to blunt force)	13(31.7%)	5(12.2%)	18(43.9%)
2	Shock and haemorrhage due to multiple stab injuries (due to sharp force)	7(17.2%)	3(7.3%)	10 (24.5%)
3	Shock and haemorrhage due to multiple injuries to the head (either blunt or sharp force used)	4(9.7%)	2(4.8%)	6(14.5%)
4	Asphyxia due to throttling	3(7.3%)	1(2.4%)	4(9.7%)
5	Asphyxia due to strangulation	1(2.4%)	1(2.4%)	3(7.3%)
6	Poison ingestion	Nil	1(2.4%)	1(2.4%)
TOTAL		28	13	41

Upon analyzing the causes of death, shock and haemorrhage resulting from multiple cut wounds were found in 17 cases (41.5%), with 13 males (31.7%) and 4 females (12.2%). This finding aligns with a study conducted in Surat [21], where similar observations were noted in 40.5% of cases. Shock and haemorrhage due to multiple stab injuries were seen in 10 cases(24.5%) in our study and due to multiple injuries to the head alone was seen in 6cases (7.3%). Homicides by throttling and strangulation were seen in 4 cases (9.7%) and 3 cases (7.3%) respectively (Table 1). Firearm injuries were not observed in the study sample, comparable toa study in South Kerala. [11]

Pic 1. Scalp chop wounds

Pic 2. Chop wounds – on right shoulder and front of right arm.

Pic 3. Assault wounds on the back of head

Pic 4. Incised wound on forehead.

Summary and Conclusion

1. 63% of victims were of the age group 18–30 years, while 24% belonged to the age group 31–40 years. 68% of all victims were male.

2. 61% of victims were married and51% were unemployed.

3. 36% of victims were illiterate, and 53.6% belonged to low socioeconomic status.

4. 43% of cases happened during 06pm-12 midnight, followed by 19% of cases during 01am-06am.

5. The predisposing factors were personal enmity/revenge and gang rivalry rather than money/property-related issues in the region.

6. In 45% of the cases, the victims had sustained sharp force injuries, while in 38% blunt force injuries. Found dead or brought dead victims were 83%.

7. The head was the most common site of injury in 58% of cases, followed by the neck, the chest, and abdomen.

These findings largely align with most studies in current forensic literature and suggest that homicide represents a significant public health burden. The nature and pattern of injuries are crucial to arriving at the manner of deaths. The results of our study encourage exploring the reasons behind homicide and possible influences on the victims. Probing the sociocultural components is important because they give information about the events and the circumstances that led up to the crime.

Since the study imparts information on the characteristics and overall nature of each murder, the public, researchers, and individuals involved in resolving criminal incidents, its observations cannot be overlooked. An in-depth knowledge of the injury causation and causative factors is essential, particularly in providing the criminal justice authorities with a better comprehension of murder.

Recommendations:

It is essential to enhance our understanding of the factors behind murders and mechanics of homicide and to develop effective evidence-based prevention strategies that address the issue on both individual and macro levels. It is necessary to monitor crime effectively and enforce laws rigorously to maintain a society free from violence. Unless the State takes strong decisive steps, targets under sustainable development goal to significantly reduce all forms of violence and related deaths rates by 2030 will remain unachieved.

Conflict of interest: None

Ethical clearance: Obtained from the Institutional Ethics Committee. (No.1120/2024/IEC, dated 20.2.2024). The confidentiality of deceased's information was maintained.

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