



ORIGINAL ARTICLE

**A Retrospective Study of Demographic Profile of Homicide Cases Autopsied at a Teaching Hospital in Nellore, Andhra Pradesh (2023-24)**

Mopuri Venkateswarlu,<sup>1</sup> P. Pavan Kumar,<sup>2</sup> Subba Rao Pulimi,<sup>5</sup> Yash Gehlot,<sup>3</sup> Zunaid Ali Ahamed Shaik,<sup>3</sup> B. Lakshmi Narayana,<sup>4</sup> and Kattamreddy Ananth Rupesh<sup>5,\*</sup>

<sup>1</sup>Associate Professor of Forensic Medicine, Government Medical College, Ongole.

<sup>2</sup>Assistant Professor of Forensic Medicine, ACSR Government Medical College, Nellore.

<sup>3</sup>Resident, Department of Forensic Medicine, ACSR Government Medical College, Nellore.

<sup>4</sup>Professor and HOD of Forensic Medicine, ACSR Government Medical College, Nellore.

<sup>5</sup>Assistant Professor of Forensic Medicine, Government Medical College, Ongole.

Accepted: 15-July-2025 / Published Online: 4-August-2025

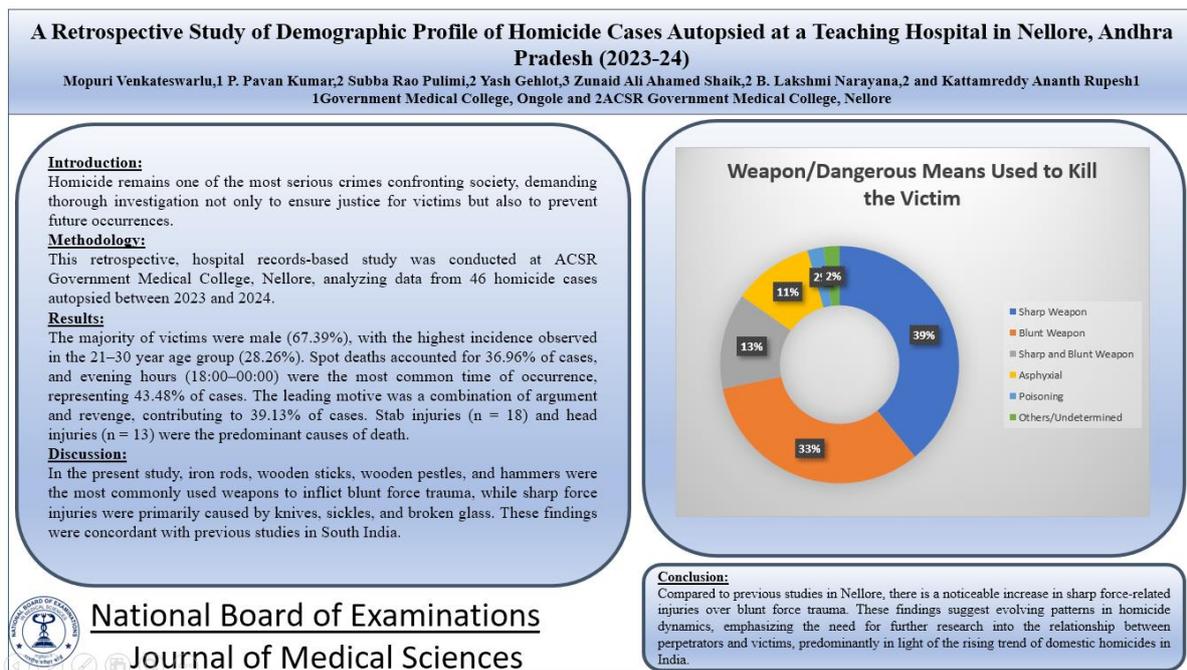
**Abstract**

Homicide remains one of the most serious crimes confronting society, demanding thorough investigation not only to ensure justice for victims but also to prevent future occurrences. This retrospective, hospital records-based study was conducted at ACSR Government Medical College, Nellore, analyzing data from 46 homicide cases autopsied during the years 2023–2024. The majority of victims were male (67.39%), with the highest incidence observed in the 21–30 year age group (28.26%). Spot deaths accounted for 36.96% of cases, and evening hours (18:00–00:00) were the most common time of occurrence, representing 43.48% of cases. The leading motive was a combination of argument and revenge, contributing to 39.13% of cases. Stab injuries (n = 18) and head injuries (n = 13) were the predominant causes of death. Compared to previous studies in Nellore, there is a noticeable increase in sharp force-related injuries over blunt force trauma. These findings suggest evolving patterns in homicide dynamics, emphasizing the need for further research into the relationship between perpetrators and victims, predominantly in light of the rising trend of domestic homicides in India. Understanding these micro dynamics is essential for developing effective preventive strategies and improving investigative approaches.

**Keywords:** Homicide, Murder, Unnatural deaths, Forensic autopsy, Domestic homicide

\*Corresponding Author: Kattamreddy Ananth Rupesh5  
Email: ananth.kattam@gmail.com

## Graphical Abstract



## Introduction

The word *homicide* originates from the Latin *homicidium*, combining *homo* (man) and *caedere* (to kill), meaning the killing of a human being. Ever since the story of Cain and Abel in the Bible and with parallels in Hindu mythology such as the fratricidal war between the Kauravas and Pandavas in the Mahabharata, or the slaying of Vritra by Indra; the act of murder has existed alongside mankind; be it in mythology or recorded legal history.

Overlooking a homicide during autopsy represents one of the most serious failures in medicolegal practice [1]. Hence, it is necessary for a forensic doctor to approach every death with the presumption of homicide until proven otherwise. If a murder is overlooked during autopsy, it constitutes a serious injustice to the deceased and their family. While other manners of death like suicide or accident also warrant thorough evaluation, the level

of scrutiny demanded by a potential homicide must come first.

Although the National Crime Records Bureau (NCRB) data compiles the crude data on homicides; it lacks the finer details which are of paramount importance about identifying local homicide trends. Micro studies on homicides are essential for better understanding of offences against human body in a region and thereby plan preventive measures.

This study aimed to analyze the forensic and sociodemographic characteristics of homicide cases in Nellore, Andhra Pradesh, during the years 2023 and 2024, based on data from autopsy reports and police inquests. On an average 1000 autopsies are conducted at ACSR Government Medical College, Nellore. The jurisdiction of this centre encompasses Nellore city and its suburban areas.

## Materials and Methods

This retrospective, records-based study was conducted at ACSR Government Medical College, Nellore, Andhra Pradesh, with the objective of analyzing data pertaining to homicide autopsy cases carried out during the calendar years 2023 and 2024. Data were extracted from autopsy reports and police inquest records, focusing on various parameters including the motive and method of homicide, type of weapon or means employed, sociodemographic characteristics of the victims, period of survival, cause of death, and other relevant medico-legal findings. All cases registered as homicides under the Indian Penal Code (IPC) or Bharatiya Nyaya Sanhita (BNS) and were referred to this medico legal centre for autopsy were

included in the study. Cases with incomplete or missing data were excluded to ensure the reliability of the analysis. Basic descriptive statistical analysis was performed using Microsoft Excel, with frequencies and percentages calculated to summarize categorical variables.

## Results

A total of 46 homicide-related autopsies were conducted during the study period 2023–2024, with 21 cases (45.65%) in 2023 and 25 cases (54.35%) in 2024. Of these, 15 victims (32.61%) were female and 31 (67.39%) were male. The age distribution of homicide victims is tabulated in Table 1. Of the total 46 victims, 20 were unmarried (43.48%) and 26 were married (56.52%).

Table 1. Age distribution of Homicide victims

S.No.	Age group in years	No. of victims
1	0-9	2 (4.35%)
2	10-19	0 (0.00%)
3	20-29	13 (28.26%)
4	30-39	9 (19.57%)
5	40-49	8 (17.39%)
6	50-59	6 (13.04%)
7	60-69	5 (10.87%)
8	>70	3 (6.52%)

Among the 46 cases studied, death occurred at the scene (spot death) in 17 cases (36.96%), within less than one day in 12 cases (26.09%), between one to seven days in 7 cases (15.22%), and after more than seven days in 6 cases (13.04%). In 4 cases (8.70%), the survival period following the violent incident could not be ascertained due to unreliable or unavailable history.

Analysis of the time of occurrence of the crime revealed that the majority of cases took place during the evening hours (18:00–00:00), accounting for 20 cases (43.48%). This was followed by afternoon (12:00–18:00) in 11 cases (23.91%), late night (00:00–06:00) in 7 cases (15.22%), and morning (06:00–12:00) in 5 cases (10.87%). In 3 cases (6.52%), the exact

time of crime could not be determined with exactitude.

The most common motive identified was a combination of argument and revenge, accounting for 18 cases (39.13%). Arguments alone were the motive in 8 cases (17.39%), followed by revenge in 7 cases (15.22%). Motives related to property disputes and dowry harassment followed by homicide were observed in 2 cases each (4.35%), while financial reasons were implicated in 1 case (2.17%). In 8 cases (17.39%), the motive could not be clearly established due to factors such as the accused being at large, the victim's identity remaining unknown, or insufficient circumstantial evidence. The category "others" largely included cases of murder for gain and vendetta arising from illicit relationships.

The weapon or dangerous means used to kill the victim is illustrated in Figure 1. Sharp force injuries were inflicted using both single-edged and double-edged knives. Blunt force injuries resulted from the use of sticks and hammers. Cases

involving ligature strangulation or throttling were categorized under asphyxial deaths. The sole criminal poisoning case involved an agrochemical substance, paraquat. In a few cases [4] the weapon/means remains undetermined.

As per the available history, the victim had consumed alcohol prior to the incident in 3 cases (6.52%), had not consumed alcohol in 40 cases (86.96%), and in 3 cases (6.52%), no reliable history regarding alcohol consumption could be obtained.

The legal sections under which the cases were registered included Section 302 IPC or Section 103 read with other relevant provisions of the Bharatiya Nyaya Sanhita (BNS) in 23 cases, Section 302 read with 34 IPC or Section 103 read with 3(5) BNS in 12 cases, Sections 302 and 201 IPC in 2 cases, and Section 302 IPC along with other sections in 9 cases. The cause of death distribution is shown in Table 2. Of the total 46 homicide cases recorded during 2023–24, 27 were from urban areas and 19 from rural areas.

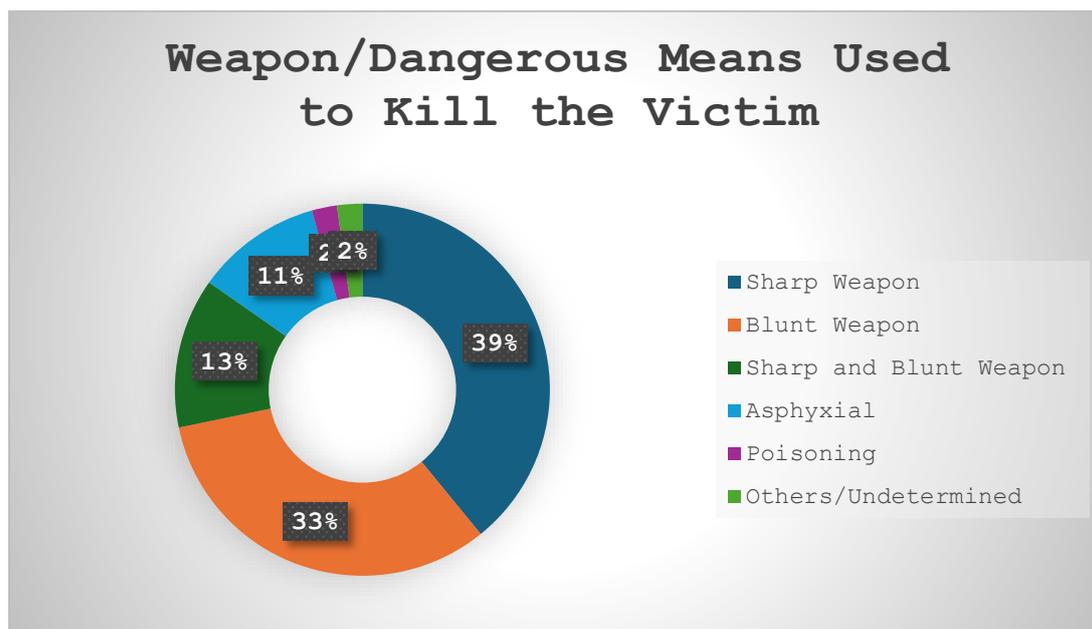


Figure 1. Weapon/Dangerous Means Used to Kill the Victim.

Table 2. Cause of Death in Homicide Cases

S.No.	Cause of death	No. of cases
1	Stab injuries	18
2	Head injury	13
3	Strangulation/Throttling/Chokehold	5
4	Insufficient data/Pending reports	4
5	Cut throat	2
6	Blunt Trauma Abdomen	2
7	Multiple Injuries	1
8	Blunt Trauma Chest	1

### Discussion

The present study aimed to understand the forensic characteristics of murder cases autopsied at a tertiary care hospital. Among the victims, 67.39% were male, and 28.26% were within the 20–29 years age group, indicating a higher propensity for young males to become victims of homicidal violence. This trend may be attributed to developmental factors, as individuals in this age group are typically undergoing a phase of individualisation which is often marked by immature decision-making, increased risk-taking behaviour, and increased exposure to interpersonal conflicts [2]. Our results in this aspect were concordant with most of the studies published in literature including Sweekriti et al. [3] and Sumangala et al. [4].

In 36.96% of cases, death occurred at the scene of the incident, indicating the severity and fatal nature of the injuries sustained. A total of 13.04% of the victims survived for more than one week. Most sharp force injuries resulted in rapid fatality due to haemorrhagic shock. Similarly, victims of strangulation typically succumbed immediately to asphyxial mechanisms. In contrast, individuals who sustained blunt force trauma often survived for a variable duration up to a week. The survival period statistics were similar to the

findings reported by Jainik et al. [5] and Sweekriti et al. [3].

A total of 43.48% of the crimes occurred during the evening hours, specifically between 06:00 PM and 12:00 AM. This time period coincides with increased social activity, off-work hours, and a higher likelihood of alcohol consumption, all of which may contribute to interpersonal conflicts and escalation of violence [6]. In contrast, only 10.87% of the incidents occurred during the morning hours between 06:00 AM and 12:00 PM, a period typically associated with structured activities, employment, and lower social interaction, thereby reducing the probability of violent encounters. Evidence from existing literature suggests that stable employment [7] and strong family or social support systems serve as protective factors against involvement in violent behavior [8].

Vengeance and arguments was identified as the most common motive, accounting for 71.14% of the cases, which aligns with findings reported in previous studies [9,10]. Although not identified as prime motive in this study; there appears to be a rising trend in homicides linked to illicit relationships, particularly involving women accused of murdering their younger husbands, often in the context of extramarital affairs [11]. This shift is a grim

reminder of the increasing complexity of intimate partner dynamics and their role in the causation of domestic homicides.

The increased use of sharp force weapons observed during the present study period contrasts with the findings of an earlier study conducted at the same centre in 2019–2020 by Sashikanth [12], which reported blunt force trauma in 48% of homicide cases. Similarly, the previous study [12] at the same centre as mentioned above noted head injuries as the most common type, whereas in the current study, stab injuries were more prevalent, showing the shift in patterns of homicidal violence over time. This could be attributed to increased floating population and expansion of the city over recent years.

The legal classification of the cases in the present study indicates an increased involvement of multiple perpetrators, along with attempts to conceal the crime. The involvement of alcohol in victims is minimal in this study whereas usually it is the accused who is under the influence of alcohol when they resort to violent behaviour [13].

In the present study, as stated earlier, iron rods, wooden sticks, wooden pestle, and hammers were the most commonly used weapons to inflict blunt force trauma, while sharp force injuries were primarily caused by knives, sickles, and broken glass. These findings were concordant with previous studies in south India [14,15].

### **Conclusion**

The present study, conducted on homicide cases autopsied at a teaching medico-legal centre in Nellore during the years 2023–2024, identified a total of 46 cases, with the majority of victims being male and aged between 21 and 40 years.

The peak hours for homicides were observed between 18:00 and 00:00, indicating a temporal pattern in the occurrence of these crimes within Nellore city. A notable shift was observed in the method of homicide, with sharp force injuries surpassing blunt force trauma, which had been more prevalent in previous studies conducted at the same centre. Vengeance and interpersonal arguments remained the predominant motives for murder, and most deaths occurred at the scene of the crime. These findings underscore the need for a deeper exploration of the micro dynamics between perpetrators and victims, which may offer valuable insights for developing targeted strategies to prevent future homicides.

### **Limitations**

The relationship between the accused and the victim, as well as the socioeconomic status of the victims, were not assessed in the present study. Also, the precise location of the crime scene was not documented.

### **Acknowledgments**

We would like to express our sincere gratitude to the teaching and non-teaching staff of the Department of Forensic Medicine and Toxicology, ACSR Government Medical College, Nellore, for their valuable support and cooperation during the conduct of this study.

### **Conflicts of interest**

The authors declare that they do not have conflict of interest.

### **Funding**

No funding was received for conducting this study.

### Ethics committee approval

The study has received ethical clearance from the Institutional Ethics Committee of ACSR Government Medical College, Nellore, Andhra Pradesh vide Ref: No: ECR/961/Inst/AP/2017/RR-20/94-09/25-06-25.

### References

1. Santelli S, Berti L, Giovannini E, Pelletti G, Pelotti S, Fais P. Homicide, suicide, or accident? Complex differential diagnosis. A case series. *Leg Med (Tokyo)*. 2024;66(102357):102357. Available from: <http://dx.doi.org/10.1016/j.legalmed.2023.102357>
2. Popham LE, Kennison SM, Bradley KI. Ageism, sensation-seeking, and risk-taking behavior in young adults. *Curr Psychol*. 2011;30(2):184–93. Available from: <http://dx.doi.org/10.1007/s12144-011-9107-0>
3. Sweekriti, Ps T, Vs B, Sk S, Lk. S. An autopsy based demographic profile of homicidal deaths in central India, Indore. *J Indian Acad Forensic Med*. 2024;46(1):3–6. Available from: <http://dx.doi.org/10.48165/jiafm.2024.46.1.1>
4. Sumangala CN, Raksha L, Venkata Raghava S. Pattern of homicidal deaths autopsied at Victoria Hospital, Bangalore – A one-year study. *J Indian Acad Forensic Med* 2019; 41(3): 163-6.
5. Jainik PS, Vora DH, Mangal HM, Chauhan VN, Doshi SM, Chotiyal DB. Profile of homicidal deaths in and around Rajkot region, Gujrat. *J Indian Acad Forensic Med*. 2013;35(1):33-36.
6. Uttley J, Canwell R, Smith J, Falconer S, Mao Y, Fotios SA. Does darkness increase the risk of certain types of crime? A registered report protocol. *PLoS One*. 2024;19(1):e0291971. Available from: <http://dx.doi.org/10.1371/journal.pone.0291971>
7. van Koppen V, van der Geest V, Kleemans E, Kruisbergen E. Employment and crime: A longitudinal follow-up of organized crime offenders. *Eur J Criminol*. 2022;19(5):1097–121. Available from: <http://dx.doi.org/10.1177/1477370820941287>
8. Nevisi HM. The role of the family in preventing youth crimes. *Mathews Journal of Forensic Research* 2022;3(1). Available from: <http://dx.doi.org/10.30654/mjfr.1009>
9. Batra AK, Dongre AP. A preliminary analysis of medicolegal autopsies performed over five years in a rural health district of Maharashtra state of India. *J Forensic Med Toxicol*. 2003;20(1):82-5. 15.
10. Ghangale AL, Dhawane SG, Mukherjee AA. Study of homicidal deaths at Indira Gandhi medical college, Nagpur. *J Forensic Med Toxicol*. 2003;20(1):47-51.
11. Online ET. “Husband killers”: From Indore to Meerut, the chilling murder cases that sparked national outrage. *Economic Times*. 2025. Available from: <https://economictimes.indiatimes.com/news/new-updates/husband-killers-from-indore-to-meerut-the-chilling-murder-cases-that-sparked-national-outrage/articleshow/121718377.cms>
12. Sashikanth Z. A comprehensive study on homicidal death in a tertiary health care institution in Nellore, Andhra Pradesh. *Indian Journal of Forensic*

- Medicine & Toxicology  
2021;15(4):2927-36.
13. Sontate KV, Rahim Kamaluddin M, Naina Mohamed I, Mohamed RMP, Shaikh MF, Kamal H, et al. Alcohol, aggression, and violence: From public health to neuroscience. *Front Psychol.* 2021;12:699726. Available from: <http://dx.doi.org/10.3389/fpsyg.2021.699726>
  14. Prashanth Mada, P. Hari Krishna. A Comprehensive Study on Homicidal Deaths in Hyderabad. *J Indian Acad Forensic Med.* October-December 2013; 35(4): 312-316.
  15. Shiva Kumar BC, Vishwanath D, Srivastava PC. Trends of homicidal deaths at a tertiary care centre, Bengaluru. *J Indian Acad Forensic Med.* April June 2011;33(2):120124.