ASIAN JOURNAL OF PHARMACEUTICAL AND CLINICAL RESEARCH

INNOVARE ACADEMIC SCIENCES
Knowledge to Innovation

Vol 17, Issue 6, 2024

Online - 2455-3891
Print - 0974-2441

Research Article

ONE-YEAR PROSPECTIVE STUDY OF PATTERNS OF HOMICAL DEATHS- AN AUTOPSY BASED STUDY

SUNNY BASRA, JASPINDER PRATAP SINGH*

Department of Forensic Medicine and Toxicology, Government Medical College, Amritsar, Punjab, India.
***Corresponding author: Jaspinder Pratap Singh; Email: jaspinderpsingh@gmail.com**

Received: 14 February 2024, Revised and Accepted: 25 March 2024

ABSTRACT

Objectives: The aim of the study was to observe the profiling of the homicidal cases for 1 year.

Methods: The present study was a prospective 1-year study of all autopsies alleged to be homicide under 302 Indian Penal Code, performed in the department of forensic medicine and toxicology at Government Medical College, Amritsar, Punjab, India, from January 01, 2021 to December 31, 2021, (1-year period) after taking permission from the institutional ethical committee.

Results: The majority of cases reported were in the age group of 20–49 years, with 24 (61.5%) cases, followed by the age group of 40–59 years, which had 13 (33.3%) cases. 37 (94.9%) cases were males, followed by females 02 (5.1%).The male-to-female sex ratio is 18.5:1; 30 (76.9%) were married, while 09 (23.1%) were unmarried. The deaceased had Sikh religion in 24 (61.6%) cases, followed by Hindus in 11 (28.2%) cases; 26 (66.7%) belonged to the rural area, while 13 (33.3%) belonged to the urban area. The majority of cases where only a sharp weapon was used were 16 (41%), followed by both blunt and sharp in 14 (35.9%) cases, and blunt only in 06 (15.4%). Firearms were used in 03 (7.7%) cases.

Conclusion: Based on the aforementioned observations, we believe there is a pressing need to address issues concerning youth, given their frequent involvement in such crimes. Additionally, enforcing strict nighttime surveillance and rigorously implementing laws against individuals in possession of dangerous weapons can contribute significantly to reducing such crimes.

Keywords: Homicidal deaths, Murder, Culpable homicide, Injuries.

 DOI: http://dx.doi.org/10.22159/ajpcr.2024v17i6.50622. Journal homepage: https://innovareacademics.in/journals/index.php/ajpcr

INTRODUCTION

Homicide, a phenomenon documented since ancient human civilizations and mentioned in religious texts such as the Bible, refers to the act of one person killing another [1]. Within legal frameworks like the Indian Penal Code (IPC), homicide encompasses both unlawful killings and those that may or may not amount to murder, with the latter carrying different degrees of culpability. Murder, under Section 300 IPC, involves the unlawful killing of a human being, with punishment stipulated under Section 302 IPC ranging from the death penalty to life imprisonment, along with fines [2]. Homicide ranks among the prominent causes of unnatural deaths, with various methods such as assault with sharp or blunt weapons, firearms, strangulation, hanging, smothering, drowning, burns, and poisoning contributing to its diverse patterns [3].

The motives driving these killings have remained consistent across time, primarily driven by desires such as wealth, property, romantic interests, and vengeance. The International Classification of Crime for Statistical Purposes (ICCS), developed by the United Nations Office on Drugs and Crime, offers a framework for defining and categorizing unlawful killings, both in conflict and non-conflict scenarios. Within the ICCS, homicide is defined as the illegal death inflicted upon an individual with the intention of causing death or severe injury. This definition includes three key elements: (1) the act of one person causing the death of another (objective element); (2) the perpetrator's intent to cause death or severe harm to the victim (subjective element); and (3) the unlawfulness of the killing (legal element) [4].

The incidence of homicide is on the rise due to various factors, including financial strains, emotional and health issues, and the negative influence of media and entertainment. This upward trend is also influenced by the increased sophistication and accessibility of violent weapons, the urbanization of society, the spread of religious animosity, and the specter of terrorism [3].

For the offense of murder to be established, two key elements must be present: mens rea, or the guilty mindset indicating premeditation, and actus reus, the actual execution of the plan. Conversely, culpable homicide not amounting to murder lacks the mens rea component of premeditation. Instead, this offense often occurs in the heat of the moment, sparked by sudden and intense provocation during altercations or disputes [5].

A thorough post-mortem examination is essential in the investigation of homicidal deaths, as it provides crucial insights into reconstructing the crime scene. Autopsy surgeons play a pivotal role in analyzing and scientifically interpreting the findings to determine the cause of death and establish correlations with circumstantial evidence. Additionally, they aid in discerning the methods and means employed in these acts, detailing the inflicted injuries that are instrumental in framing charges [6]. According to the World Health Organization, homicide is defined as any death resulting from a purposefully inflicted injury by another person. The act of killing another individual represents the highest level of aggression observed across various cultures [7].

Aims and objectives

The aim of the study was to observe the profiling of the homicidal cases for 1 year.

METHODS

The present study was a prospective 1-year study of all autopsies alleged to be homicide under 302 IPC, performed in the department

of forensic medicine and toxicology at Government Medical College, Amritsar, Punjab, India, from January 01, 2021, to December 31, 2021, (1-year period) after taking permission from the institutional ethical committee. The data were collected from the records brought by the police, including the inquest papers, any documents of previous history, the hospital record in case the patient was admitted to the hospital, and the autopsy findings. The data were collected, analyzed, and subjected to statistical analysis using the Statistical Package for Social Sciences, and the observations were calculated.

RESULTS AND DISCUSSION

The prospective observational 1-year study was conducted, and a total of 39 cases of homicidal autopsy were conducted in the department. The following observations were noted.

Table 1 depicts the age-wise distribution of the post-mortem cases. The majority of cases reported were in the age group of 20–49 years, with 24 (61.5%) cases, followed by the age group of 40–59 years, which had 13 (33.3%) cases. While only 1 case (2.6%) was reported in the age groups of 0–19 years and 60–79 years.

Table 2 shows the gender-wise distribution of the postmortem cases. The majority of cases, 37 (94.9%), were males, followed by females, 02 (5.1%).The male- to-female sex ratio is 18.5:1.

Table 3 shows the distribution of cases on the basis of marital status. The majority of the cases 30 (76.9%) were married, while 09 (23.1%) were unmarried.

Table 4 shows the distribution of the post-mortem cases on the basis of religion. The majority of the population belonged to the Sikh religion in 24 (61.6%) cases, followed by Hindus in 11 (28.2%) cases. The number of cases that belonged to Muslim and Christians was 02 (5.1%) each.

Table 5 shows the distribution of cases on the basis of area of living. The majority of the cases, 26 (66.7%), belonged to the rural area, while 13 (33.3%) belonged to the urban area.

Table 6 shows the distribution of the cases on the basis of the kind of weapon used for the infliction of the injuries. The majority of cases where only a sharp weapon was used were 16 (41%), followed by both blunt and sharp in 14 (35.9%) cases, and blunt only in 06 (15.4%). Firearms were used in 03 (7.7%) cases.

Table 7 shows the distribution of the type of injury caused. Incised wounds were present in 16 (41%) cases, while in 1 (2.6%) case, each is a present bruise and abrasion.

Table 8 shows the time between injury and death. The majority of the deaths took place within 6 h, while in 03 (7.7%) cases, death took place instantaneously.

Table 9 shows the distribution of cases on the basis of time between death and postmortem examination. The majority of cases 28 (77%) had time since death of 12–24 h, followed by 06 (15.3%) having time since death of 24–48 h. Two cases (5.1%) had a time since death of 6–12 h, and only 1 case (2.6%) had less than 6 h of time since death.

The majority of cases reported were in the age group of 20–49 years, with 24 (61.5%) cases, followed by the age group of 40–59 years, which had 13 (33.3%) cases. While only 1 case (2.6%) was reported in the age groups of 0–19 years and 60–79 years. The findings of the present study are in concordance with studies conducted by Pateria *et al*. [8], where maximum cases were reported in the age group of 31–49 years, and Radhakrishna *et al*. [9], which observed the majority of cases in the age group of 20–49 years. In another study conducted by Kumar [10], Goel *et al*. [11] reported similar findings as those of the present study. The findings of the present study differ from the study conducted by Patel *et al*. (2016) [12], Junaidi *et al*. [13], Chaliha [14], Mohan *et al*. [15], and Abdellah *et al*. [16].

The majority of the cases in the present study were males, as males are more involved in crime drama and also prone to more fights among individuals. This male pre-ponderance is consistent with studies done by Hugar *et al*. [17] and Mada and Hari Krishna [18]. The findings are similar to the study by Prasad *et al*. [19], which included 62% males and 38% females; Radhakrishna *et al*. [9], where 75% males were seen; and Kumar [10], where there were 94% males and 6% females.

Table 1: Age-wise distribution of postmortem cases

S. No	Age	Number	Percentage
1.	0–19 years	01	2.6
2.	20–39 years	24	61.5
3.	40–59 years	13	33.3
4.	60–79	01	2.6
5.	Total	39	100

Table 2: Gender-wise distribution of post-mortem cases

S. No.	Gender	Number	Age%
1.	Male	37	94.9
2.	Female	02	5.1
	Total	39	100

Table 3: Distribution of post-mortem cases on the basis of marital status

S. No.	Marital status	Number	Age%
1.	Married	30	76.9
2.	Unmarried	09	23.1
3.	Total	39	100

Table 4: Distribution of postmortem cases on the basis of religion

S. No.	Religion	Number	Percentage
1.	Sikh	24	61.6
2.	Hindu	11	28.2
3.	Muslim	02	5.1
4.	Christian	02	5.1
6.	Total	39	100

Table 5: Distribution on post-mortem cases on the basis of area of living

S. No	Area	Number	Age%
1.	Rural	26	66.7
2.	Urban	13	33.3
	Total	39	100

Table 6: Distribution of cases on the basis of kind of weapon used

S. No	Kind of weapon/force	Number	Age%
1.	Blunt only	06	15.4
2.	Sharp only	16	41
3	Both sharp and blunt	14	35.9
3.	Firearm	03	7.7

Table 7: Distribution of cases on the basis of type of injury caused

S. No	Type of injury	Number	%Age
1.	IW	16	41.0
2.	LW	04	10.2
3.	B	01	2.6
4.	AB	01	2.6
5.	IW, LW, B , AB	08	20.5
6.	LW, B, AB	05	12.8
7.	B, AB	02	5.1
8.	LW, AB	01	2.6
9.	LW, B	01	2.6
	TOTAL	39	100

Table 8: Distribution of case on basis of time between injury and death

S. No	Time since death	Number	Age%
1	Instantaneous	03	7.7
2	<6 h	21	53.8
3	6–12 h	10	25.6
4	12–24 h	01	2.6
5	24–48 h	02	5.1
6	48–72 h	00	00
7	3–5 days	00	00
8	5–7 days	00	00
9	1–2 week	01	2.6
10	>2 weeks	01	2.6
	Total	39	100

Table 9: Distribution of post-mortem cases on the basis of time between death and post-mortem

S. No	Time since death	Number	Age%
1.	<6 h	01	2.6
2.	6–12 h	02	5.1
3.	12–24 h	28	77
4.	24–48 h	06	15.3
	Total	39	100

The majority of the cases belonged to the Sikh religion, probably due to the reason that the area of study has more of Sikh population. The rural population is more present as the educational status varies among the rural and urban population, which leads to variation in the crime graph. The findings are similar with the studies conducted by Mittal *et al*. [20] and Zanzrukiya *et al*. [21], where the area of study was more Hindu population.

Table 6 shows the distribution of the cases on the basis of the kind of weapon used for the infliction of the injuries. The majority of cases where only a sharp weapon was used were 16 (41%), followed by both blunt and sharp in 14 (35.9%), cases and blunt only in 06 (15.4%). A firearm was used in 03 (7.7%) cases. The higher occurrence of injuries caused by blunt weapons can be attributed to their easy availability and accessibility. In many cases of homicide, particularly those that are spontaneous rather than premeditated, blunt objects are often readily found in various settings compared to sharp or firearm weapons. In addition, blunt weapons tend to be less expensive and can easily be passed off as domestic tools or agricultural instruments when discovered later. Conversely, sharp and pointed weapons are often favored in planned homicides motivated by revenge or robbery.

The majority of the deaths took place within 6 h, while in 03 (7.7%) cases, death took place instantaneously. The findings of the present study are similar to the findings of Sonawane *et al*. [22] where the maximum number of victims (57.57%) were brought dead and no single victim survived for a week. The probable reason was the injury to the vital organs, along with multiple injuries to various regions of the body. The findings were also consistent with the studies by Jhaveri *et al*. (2015) [23] and Hugar *et al*. [17].

The majority of cases 28 (77%) had a time since death of 12–24 h, followed by 06 (15.3%) having a time since death of 24–48 h, which is consistent with the study conducted by Goel *et al*. [11], where the majority of postmortem examinations took place in 12–24 h. Other studies consistent with the present study are Mittal *et al*. [20] and Sonawane *et al*. [22].

CONCLUSION

Based on the aforementioned observations, we believe that there is a pressing need to address issues concerning youth, given their frequent involvement in such crimes. In addition, enforcing strict nighttime surveillance and rigorously implementing laws against individuals in possession of dangerous weapons can contribute significantly to reducing such crimes. Furthermore, the variance in findings among Indian authors can be ascribed to diverse geographical areas, cultural complexities, and localized concerns. Therefore, conducting further studies in various regions is imperative to accurately delineate the profile of homicidal deaths. Young victims tend to exhibit higher levels of aggression and lower tolerance levels. Providing psychiatric counseling to help manage anger and stress in this age group could potentially reduce the homicide rate. In planned homicides motivated by revenge or robbery, sharp and pointed weapons are commonly used. Conversely, in unplanned or unpremeditated homicides, hard and blunt weapons are preferred due to their widespread availability.

It is essential to emphasize the significance of education to the populace and ensure that education is accessible to every individual across the nation. Monitoring and regulating alcohol sales and consumption are crucial, with strict measures enforced against those who violate the law. Law enforcement agencies, including the police, should maintain rigorous surveillance over the sale and usage of abusive and narcotic substances. Stringent actions must be taken against individuals found in possession of deadly weapons, and efforts should be made to reduce the availability of such weapons.

AUTHORS CONTRIBUTION

Dr. Sunny Basra: Literature search and help in preparing the manuscript. Dr. Jaspinder Pratap Singh: Data collection applying statistics, rechecking data and validation, and helping in preparing the manuscript.

CONFLICTS OF INTERESTS

None.

AUTHORS FUNDING

None.

REFERENCES

1. Gupta A, Rani M, Mittal AK, Dikshit PC. A study of homicidal deaths in Delhi. Med Sci Law. 2004 Apr;44(2):127-32. doi: 10.1258/rsmmsl.44.2.127, PMID 15176625
2. Narayana Reddy KS. The Essentials of Forensic Medicine and Toxicology. 29th ed. Hyderabad: Medical Book Company; 2010. p. 259-60.
3. Parikh CK. Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology for Classrooms and Courtrooms. 6th ed., Sec. 1. New Delhi: CBS Publishers and Distributors; 1990.
4. UNODC. International Classification of Crime for Statistical Purposes (ICCS). Version 1.0. Vienna: UNODC; 2015.
5. Verma L, Punia RK, Sharma DK, Pathak D. An analysis of weapons used in homicides in Jaipur region-a three years study. J Evid Based Med Healthc. 2018;5(16):1362-5.
6. Ambade VN, Godbole HV, Keoliya AN. Types of trauma in homicides.

Milestone. 2004;3:99-103.
7. Rastogi AK, Singh BK, Dadu SK, Thakur PS, Lanjewar AK, Raput PP. Trends of homicidal deaths in Indore (MP) region one year retrospective study. J Indian Acad Forensic Med. 2013;35(4):343-5.
8. Pateria D, Thakur PS, Agrawal R, Singh BK, Tomar J. Autopsy based profile of death in burn cases-One year prospective study. Indian J Forensic Community Med. 2018 Oct;5(4):236-9.
9. Radhakrishna KV, Makhani CS, Sisodiya N, Chourasia S, Sarala M, Khan RN. Profile of medicolegal autopsies conducted at tertiary medicolegal centre in southwestern India. Int J Healthc Biomed Res. 2015 Jan;3:70-5.
10. Kumar R. Study of the pattern of homicidal deaths in Varanasi region of India. J Evol Med Dent Sci. 2013 Oct 28;2(43):8393-418. doi: 10.14260/jemds/1473
11. Goel N, Kumar A, Kumar S, Prasad M. An autopsy based study of chest injuries in fatal road traffic accidents conducted at IGIMS, Patna, Bihar. Int J Med Res Prof. 2017 Jan;4(1):109-11.
12. Patel JB, Chandegara PV, Patel UP, Parkhe SN, Govekar G. Profile of autopsy cases at New Civil Hospital, Surat: A retrospective study. Int J Med Sci Public Health. 2015 Jan 1;5(1):10-3.
13. Junaidi KA, Pujar SS, Honnungar RS, Jirli PS, Koulapur VV, Ali K, *et al*. Profile of medicolegal autopsy cases at tertiary care centre in Belagavi, Karnataka. A one year retrospective study. Med Legal Update. 2020 Apr 9;20(1):170-4.
14. Chaliha R. Pattern of medicolegal autopsy at Kamrup, Assam: A retrospective study. Int J Sci Res. 2018 Sep;7(9):1-3.
15. Mohan M, Shreedhara KC, Yadav A, Lohith Kumar R. Pattern of homicidal deaths in autopsies conducted at rural tertiary care centre. Indian J Forensic Med Pathol. 2018 Oct;11(4):265-69.
16. Abdellah N, Ghandour N, Ali H. A Retrospective study of autopsy cases carried out in Qena, Luxor and Aswan governorates, Upper Egypt during the Period of 2008-2011. Zagazig J Forensic Med. 2018 Jan 1;16(1):76-90. doi: 10.21608/zjfm.2018.16577
17. Hugar BS, Chandra GY, Harish S, Jayanth SH. Pattern of homicidal deaths. J Indian Acad Forensic Med. 2007;32(3):194-98.
18. Mada P, Hari Krishna P. A comprehensive study on homicidal deaths in Hyderabad. J Indian Acad Forensic Med. 2013;35(4):312-6.
19. Prasad CS, Shubhendu K, Gawasker SP, Singh NK. Profile of burn injuries among autopsies conducted in dept. of fmt, rims, Ranchi. IOSR J Dent Med Sci 2017;16(8):53-7.
20. Mittal S, Garg S, Mittal MS, Chanana A, Rai H. Homicides by sharp weapons. J Indian Acad Forensic Med. 2007;29(2):61-3.
21. Zanzrukiya K, Tailor C, Chandegara P, Govekar G, Patel U, Parkhe S. Profile of homicidal death cases at government medical college & new civil hospital, Surat. Int J Med Sci Public Health. 2014 Jul 1;3(7):885-9. doi: 10.5455/ijmsph.2014.170420142
22. Sonawane SS, Sukhdeve RB, Tyagi S, Kolle SR. Autopsy evaluation of homicidal deaths in Western Mumbai region-2 years prospective study. Sch J Appl Med Sci. 2017 Dec;5(12):4840-6.
23. Jhaveri S, Raloti S, Patel R, Brahbhatt J, Kaushik V. Profile of homicidal deaths: A three-year study at Surat Municipal institute of medical education and research, Surat during 2011-2013. Natl J Community Med. 2014;5:406-9.