

## ORIGINAL ARTICLE

# An Autopsy based Demographic Profile of Homicidal Deaths in Central India, Indore

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## Abstract:

Homicide is a serious crime committed against humans and its detection and solution is important to the entire society. The present study was taken up to know the incidence of homicides in the city of Indore and to determine the demographic trends in committing homicides. This was an autopsy based prospective study done on alleged homicide cases in Forensic Medicine Department M.G.M. Medical College, Indore from 26 January 2021 to 25 January 2022 (1 year). Data was collected from 57 male homicide cases. Males outnumbered females with a ratio of 4.38:1. Most of the victims belonged to age group 21 to 30 years, unmarried (50.88%), belonged to nuclear family (68.42%), residing in urban area (68.42%). Mostly sufferers were employed (50.88%) cases and self-employed (28.81%) cases. Maximum of the victims (36.84%) were brought dead followed by spot dead (35.89%).

**Keywords:** Male Homicide; Demographic trends; Demographic profile; Brought dead.

## Introduction:

Homicide accounts for one of the most serious crimes and is as old as the human civilization and reported as early as in the Bible. Homicide in general means killing of one human being as a result of conduct of the other.<sup>1</sup> The word homicide has originated from two Greek words "homos" which means human beings and "cidos" which means destruction.<sup>2</sup> The increasing population, urbanization, poverty, unemployment, frustration, illiteracy, prevalent economic, social and political environment, insurgency terrorism, drug addiction, easy availability of weapon, and the widening gap between the rich and the poor are the causes of homicidal death. In our society, it is also clear that most of the crimes are the result of economic crisis.<sup>3-4</sup>

In India rate of homicides varies from as low as 0.4% to as high as 5.1%.<sup>5</sup> According to the data of National Crime Records Bureau 2020 which presented by Indian ministry of Home Affairs it was reported that murder cases in India have shown marginal increase of 1.0% over 2019 (28,915 cases) where a total number of 29,193 cases registered in 2020. In Madhya Pradesh total of 2101 cases of murder were reported in 2020 which showed a massive increase from 1795 as were reported in year 2019. It was found that disputes was the most common motive with the highest number of cases (10404) during the year 2020, followed by personal vendetta or enmity (4034 cases) and gain (1876 cases). Also in Madhya Pradesh 'disputes' (819 cases) was found as a leading motive of murder followed by personal vendetta or enmity (425 cases). Love affairs and illicit relationship (298

cases) was found as the third leading motive of homicide in central India region.

In a metropolitan city, Indore (M.P.) total of 69 cases of homicide have been reported in the year 2020, where similar trends were observed where disputes (30 cases) were found as a leading motive of murder followed by personal vendetta or enmity (15 cases) and love affairs and illicit relationship (09 cases) was found as the third leading motive of homicide. According to age, victims mostly belong to the adult age group (2004 cases) where a higher number of victims were adult males aged between 30 to 45 years (545 cases) in the year 2020.<sup>5</sup>

In the future generation, young offenders are becoming increasingly violent and so homicidal deaths are becoming a threat to modern society in the world. Young and adult generation is mostly involved in the homicidal deaths.<sup>6</sup> All the civilized societies in the world try to control such terrifying incidences leading to un-natural deaths.<sup>7</sup> The goal of a peaceful society cannot be materialized without analyzing the data regarding cause, age, sex involved, weapon used and other demographic studies. Therefore, to analyze various epidemiological and demographical factors associated with homicidal deaths and to establish the incidence and patterns of various forms of homicidal deaths is the aim of the present study.

## Materials and methods:

This study was carried out over a period of one year starting from 26 January 2021 to 25 January 2022 in the Department of Forensic Medicine and Toxicology, M.G.M. Medical College & M.Y. Hospital, Indore, Madhya Pradesh. Being the tertiary health care centre, cadavers are received from the Indore city and outskirts areas of Hatod, Khudel and also neighbouring districts of Ujjain, Dewas, Khargone, comprising population of 32.76 lakhs in Indore metropolitan.<sup>8</sup> Out of the 2379 medico-legal autopsies conducted during the above mentioned period, a total of

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**Table 1. Distribution of study population according to age group (N=57).**

Age group	No. of cases	Percentage
0-10	00	00%
11-20	06	10.55%
21-30	29	50.87%
31-40	13	22.80%
41-50	04	7.02%
>50	05	8.76%
Total	57	100%

**Table 2. Distribution of study population according to marital status.**

Marital Status	No. of cases	Percentage
Married	25	43.87%
Single	29	50.87%
Not known	03	5.26%
Total	57	100%

**Table 3. Distribution of study population according to type of family.**

Type of family	No. of cases	Percentage
Joint	15	26.32%
Nuclear	39	68.42%
Not known	03	5.26%
Total	57	100%

70 established homicidal cases were taken as study material. Cases with alleged history of accident or suicide at time of autopsy, cases which have been turned out to be natural, suicidal or accidental as per further police/magistrate investigation without autopsy findings indicative of homicidal death and unknown, unclaimed skeletonised body with no autopsy findings indicative of homicidal death were excluded from the study.

The history and sociological aspects of deceased were obtained from the inquest papers, hospital records, other scientific investigation reports available with police, accompanying persons/relatives and police as per the semi structured predesigned proforma by means of a questionnaire. Each homicidal case was examined and evaluated at autopsy, both externally and internally and post-mortem findings were noted carefully. Emphasis was also given on presence of any mechanical injury causing death, pattern of injuries, signs of struggle or defence wounds and evidences supporting homicide.

### Results:

Out of all 2379 medico-legal autopsies, where 70 cases (2.94%) of homicides were studied with 57 males and 13 females. Males outnumbered females with a ratio of almost 4.38:1. All the male victims were taken into consideration in the study group. The age group of the victims 21 to 30 years was most commonly involved 29 (50.87%) followed by age group 31-40 years 13 (22.81%) (Table 1). Victims in most of the cases 29 (50.8%) were unmarried and belonged to nuclear family in 39 (68.42%) cases (Table 3 & 4). There was a predominance seen in the males in urban area 39 (68.42%) cases (Table 4). Maximum of the male victims 21 (36.84%) were brought dead followed by spot dead 20 (35.89%) (Table 5). Mostly sufferers were employed 29 (50.88%) cases and self-employed 13 (28.81%) cases (Table 6).

### Discussion:

Most often homicides are unplanned hence not adequately witnessed. It becomes difficult to cover all the aspects yet to explore the truth which mostly relies on linking the act of crime.

This is a challengeable task for the investigating agencies to explore the mystery. In the case of homicide, autopsy will be incomplete without thorough investigation, sociological analysis and correlating with the scientific interpretation of autopsy findings. It becomes the responsibility of forensic medicine specialist to recognise the medico legal injuries in their right perspective and help the investigating authorities for the aid in justice to reach conclusion.

Out of all medico-legal autopsies, (2.94%) homicidal cases were reported. Males outnumbered females with a ratio of almost 4.38:1. All the male victims were taken into consideration in this study. In our study, age group of the victims 21 to 30 years was most commonly involved 29 (50.87%) followed by age group 31-40 years 13 (22.80%) (Table 1). Similar results were seen in study done by Sumangala,<sup>9</sup> Jainik,<sup>10</sup> Gupta,<sup>11</sup> Aggrawal,<sup>12</sup> Patowry,<sup>13</sup> Batra,<sup>14</sup> Ghangale<sup>15</sup> and Mittal<sup>16</sup> except in the study conducted by Rekhi,<sup>17</sup> Finland<sup>18</sup> where the most common age group was 31 to 40 years. Same results have also been seen in studies done in other countries like Pakistan,<sup>19,20</sup> Malaysia,<sup>21,22</sup> Sri Lanka,<sup>23</sup> Nigeria,<sup>24</sup> Turkey,<sup>25</sup> South Africa,<sup>26</sup> Ireland.<sup>27</sup> This preponderance of adult age group 21-40 yrs. being more commonly victim of homicide may attribute to the fact that this age group bears the trust of responsibilities of various kinds including family, social, economic and status etc. and because of those responsibilities they have to quite often interact with other person and in this process, they are bound to clash with other person upon their interest different from that of others.

In our study most of the 29 (50.88%) cases were unmarried (Table 2) and belonged to nuclear family in 39 (68.42%) cases (Table 3). Similar findings were seen in study done by Rathod<sup>28</sup> where mostly male victim were unmarried. In study done by Mohanty,<sup>29</sup> Sashikanth Z,<sup>30</sup> Vinay,<sup>31</sup> Kumar R,<sup>32</sup> Mada,<sup>33</sup> Vijaykumari<sup>34</sup> and Gambhir<sup>35</sup> mostly homicide victims were married. This could be due to changing trends of late marriages in urban cities.

There was a predominance seen in the males in urban area 39 (68.42%) cases (Table 4). Similar findings have been observed in study done by Sumangala et al.,<sup>9</sup> Karim et al.<sup>36</sup> and Metwally et al.,<sup>37</sup> whereas my findings were inconsistent with the study done by Kumar R<sup>32</sup>

Maximum of the male victims 21 (36.84%) were brought dead followed by spot dead 20 (35.09%) (Table 5). Total 41 (71.93%) victims died on spot and rest while in transit to hospital pointing towards the lethality of the weapon and motive of assailant to take

**Table 4. Distribution of study population according to type of residence.**

Residence	No. of cases	Percentage
Rural	15	26.31%
Urban	39	68.42%
Not known	03	5.26%
Total	57	100%

**Table 5. Distribution of study population according to survival.**

Hospitalization	No. of cases	Percentage
Spot dead	20	35.08%
Brought dead	21	36.84%
Hospitalized	16	28.08%
Total	57	100%

**Table 6. Distribution of study population according to occupation.**

Occupation	No. of cases	Percentage
Unemployed	2	3.51%
Student	9	15.79%
Self-employed	13	22.80%
Employed	29	50.88%
Not known	4	7.02%
Total	57	100%

away the life of person. Similar results were observed in the study done by Jainik.<sup>10</sup>

Mostly sufferers were employed 29 (50.88%) cases followed by self-employed 13 (22.81%) cases (Table 6). Similar results could not be found in previous research studies. Although study done by Jainik<sup>10</sup> showed labourers (20%) as the most sufferers. It may be said that employed and self-employed persons are more vulnerable to homicides as they are engaged in the monetary exchange, financial disputes or civil disputes with the acquaintances.

### Conclusions:

Homicidal trends differ from country to country, region to region and from time to time. The social and cultural values along with demographic variables affect crime. Here in our study we observed that most sufferers were socially active employed and self-employed young males of urban population. We must keep up to date knowledge of prevailing trends of homicide to prevent law makers preventing homicidal cases. So that certain fruitful steps can be taken to decrease the rates of homicide, like uplifting the social life of people, providing better job opportunities, socioeconomic improvement can aid in strengthening the judiciary system and reduction in crime rates. A wide range of further investigation still needs to be done to measure the effects of surroundings, types of weapon used, inherent characteristics of victim & offender, and psychiatric illness can be carried out on the victims to point out some more predisposing factors which can be used to prevent homicide to a large extent. Therefore, a continuous assessment on socio-economical, cultural and multidirectional before and after effects needs to be researched to prevent the loss of innocent lives. And thus, social norms help to create a sense of safety and order, which contributes to decreasing crime rates in a country.

### References:

1. Parikh C.K. Parikh's Text Book of Medical jurisprudence, Forensic Medicine and Toxicology for Classrooms and Courtrooms. 7<sup>th</sup> ed. CBS Publishers (P) Ltd.; 2014:259-60.
2. Polson CJ, Gee DJ, Knight Bernard. Eds. The essentials of forensic medicine. 4<sup>th</sup> ed. Pergamon Press: Oxford; 1985:476p
3. Hugar BS, Chandra GYP, Harish S, Jayanth SH. Pattern of homicidal deaths. J Ind Acad Forensic therefore prevention efforts should be directed against Med .2010; 32:194-8.
4. Santhosh CS, Vishwanathan KG, Satish Babu BS. Pattern of unnatural deaths - A cross sectional study of autopsies at mortuary of KLES'S Hospital and MRC, Belgaum. J Ind Acad Forensic Med 2011; 33:18-20.
5. National Crime Records Bureau Ministry of Home Affairs. Crime in India. 2021. Available from: <https://ncrb.gov.in/en>. Accessed on: 04/01/2023.
6. Dhiraj B, Shailesh M. Pattern of injuries in homicidal cases in Greater Mumbai: a three-year study. J Ind Acad Forensic Med 2011; 33:46-9.
7. Vernon J Geberth Practical Homicide Investigation 2006; 626-35.
8. Data and Resource. Office of registrar general and census commissioner, India Ministry of home affairs, Government of India. 2011. Available from: <https://censusindia.gov.in/census.website/data/population-finder>. Accessed on: 04/01/2023.
9. 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.
10. 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.
11. Gupta A, Rani M, Mittal A, Dikshit P. A study of homicidal deaths in Delhi. Med Sci Law. 2004;44(2):127-132
12. Aggarwal NK, Bansal AK. Trends of homicides in capital city of India. Medico-legal Update. 2004; 4(2): 41-45.
13. Patowary AJ. Study of pattern of injuries in homicidal firearm injury cases. J Indian Acad Forensic Med. 2005; 27(2): 92-5.
14. 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. 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.
16. Mittal S, Chanana A, Rai H. Blunt force injuries in culpable homicides. Int J Med Toxicol Legal Med. 2007;10(1):27-9.
17. Rekhi T, Singh KP and Nabachandra H. Study on homicidal blunt force injuries. J Forensic Med & Toxicology 2007;24(2):3-5.
18. Waslsten P, Koironen V and Saukko P. Survey of medicolegal investigation of homicide in the city of Turku, Finland. J Forensic Legal Med 2007;14(2007):243-252.
19. Bashir MZ, Saeed A, Khan D, Aslam M, Iqbal J, Ahmed M. Pattern of homicidal deaths in Faisalabad. J Ayub Med Coll Abbottabad. 2004;16(2):57-9.
20. Marri MZ, Bashir MZ, Munawar AZ, Khalil ZH, Iu K. Analysis of homicidal deaths in Peshawar, Pakistan. J Ayub Med Coll Abbottabad. 2006;18(4):30-3.
21. Bhupinder S, Kumara TK, Syed AM. Pattern of homicidal deaths autopsied at Penang Hospital, Malaysia. Malay J Pathol. 2007;32(2):81-6.

22. Kumar V, Li AK, Zaniel AZ, Lee DA, Salleh SA. A study of homicidal deaths in medico-legal autopsies at UMMC, Kuala Lumpur. *J Clin Forensic Med.* 2005;12(5):254–7.
23. Edirisinghe PA, Kitulwatte ID. Extreme violence–homicide; an analysis of 265 cases from the offices of JMO Colombo and Ragama—a study from Sri Lanka. *Leg Med (Tokyo).* 2009; 11:363–5.
24. Eze, U.O., Akang, E.E.U. and Odesanmi, W.O. (2011) Pattern of homicide coroner's autopsies at university college hospital, Ibadan, Nigeria: 1997-2006. *Medicine, Science and the Law*, 51, 43-8.
25. Hilal A, Cekin N, Gulmen M, Ozdemir M, Karanfil R. Homicide in Adana, Turkey. *Am J Forensic Med Pathol.* 2005;26(2):141–5.
26. Meel B. Trends in firearm-related deaths in the Transkei region of South Africa. *Am J Forensic Med Pathol.* 2007;28(1):86–90.
27. Lee-Gorman M, Macneill S, Rizet D, Mcdermott SD. Homicide/suspicious death statistics for cases submitted to the forensic science laboratory in the Republic of Ireland for 2004-2008. *Med Sci Law.* 2011;51(3):146–50.
28. Rathod VV, Choudhary UK, Ghormade PS, Ajay Narmadaprasad K. Study of socio-demographic profile of victims in cases of deaths due to homicide. *Indian Journal of Forensic and Community Medicine.* 2020;7(2):66–71.
29. Mohanty S, Mohanty SJ, Patnaik KK. Homicide in southern India-A five-year retrospective study. *FMAR* 2018;1(2):18-24.
30. 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.
31. Vinay HN, Shivakumar P. Study of crime pattern in homicidal deaths. *J Indian Acad Forensic Med* 2017; 39:339-42.
32. Kumar R. Study of the pattern of homicidal deaths in Varanasi region of India. *J Evol Med Dent Sci.* 2013;2(43):8393–418.
33. Mada P, Harikrishna P. A comprehensive study on homicidal deaths in Hyderabad. *J Indian Acad Forensic Med* 2013 35(4):312-6.
34. Vijaykumari N, Magendran J, Meiyazhagan K. Pattern of homicidal deaths at a tertiary care centre, Chennai- A prospective study. *Indian journal of forensic medicine and toxicology* 2013;7(1):121-4.
35. Gambhir O and Gupta BD. Evaluation of mechanical injury in homicidal deaths; *J Indian Acad Forensic Med* 2007;23(3):18-22.
36. Karaim A, Afridee HK, Abid MH. Pattern of fatal injury and weapon used in homicidal deaths on autopsy in Peshawar. *Med Forum* 2017; 28(7): 123-5.
37. Metwally ES, Madboly AG. Homicidal Deaths Analysis in Two Egyptian Governorates (Gharbia and Qalubia): A Five-Year Retrospective Comparative Study (2006-2010). *Egypt J Foren Sci Appl Toxicol*, 14 (1): 143-59.