

Forensic Medicine

KEYWORDS: Previous enmity , hard and blunt weapon , firearms , head injury

EPIDEMIOLOGICAL AND VICTIMOLOGICAL STUDY OF HOMICIDAL DEATHS IN VIDARBHA REGION – A TWO YEAR PROSPECTIVE STUDY



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**ABSTRACT****Background:**

Globally 5,20,000 people die each year because of inter-personal violence. This study was an attempt to probe into socio-demographic patterns of victims of such heinous crimes against humanity.

Aim:

To evaluate the demographic profile and provocative factors in victims of homicidal deaths. Design : Prospective two years study. Materials and Methods : 133 cases which were brought to the mortuary in the Department of Forensic Medicine and Toxicology for medico-legal post-mortem examination during this period of study with alleged history of homicide were included . Information obtained was organised in a pre-designed proforma and evaluated by SPSS4 Software.

Observations and Results:

78.94% victims were males, maximum belonging to the age group of 21 to 30 years. 72.38% male victims consumed alcohol. Hard and blunt weapon (39.09%) was the weapon of offence and previous enmity (38.35%) was the motive of offence in maximum cases. Head Injury (53.33%) in males and burns injury in females (32.14%) was the cause of death in most cases and in 44.36% cases injuries were on head, neck and face. Brain (51.12%) is the most common internal organ affected.

Conclusion:

Young males with alcohol consumption were vulnerable to such crimes. Use of Hard and blunt weapon was more than firearms. Head injury was the most common cause of death and brain was the most common internal organ involved. Among the females, the victims were young and familial disharmony was the provocative factor for homicides, while burns injury was the cause of death in most cases.

INTRODUCTION

Homicide is one of the heinous crimes against humanity and society. It is as old as our civilisation or history of humanity¹ Globally around five lakh twenty thousand people die each year because of interpersonal violence which equates to 1400 deaths every single day². However in various poor countries and war affected regions, these statistics are nothing more than just a tip of an ice berg as majority of violent acts being committed go unreported.³

A meticulous and detailed study will be helpful in providing valuable information for other comparative studies as well as

monitoring of socio-pathological trends in the community. Against this background, the present study was conducted at Government Medical College, Nagpur in Vidarbha region which claims at evaluating a demographic profile in homicidal deaths. It also aims at finding out the method and motives of homicide with the pattern of injuries in homicidal deaths.

MATERIALS AND METHODS

This study was a prospective study carried out in the Department of Forensic Medicine and Toxicology at a tertiary care Hospital in a period of two years. Institutional Ethical Committee clearance for the study has been obtained.

Total 6095 cases which were brought to the mortuary in the Department of Forensic Medicine and Toxicology for medico-legal post-mortem examination during the period of study, 133 cases were brought with alleged history of homicide and those which were later registered as homicide based on Autopsy findings were also included in the study. Cases of Judicial Hanging and those later registered as non-homicidal on the basis of autopsy findings, circumstantial evidences and investigations done by police are excluded.

Information obtained is organised in a pre-designed proforma and evaluated by SPSS4 Software, which is the tabulated and presented.

OBSERVATION AND RESULTS:-

Total of 6095 post-mortem examinations were done in the given study period. Out of which 133 homicide cases were noted. Incidence of homicide in the present study is 2.18%

Table No 1: Genderwise Distribution Of Victims Of Homicide

GENDER	NO OF CASES	PERCENTAGE
MALE	105	78.94
FEMALE	28	21.06
TRANSGENDER	00	00
TOTAL	133	100

In maximum cases, male victims (78.94%) were noted, while in 21.06% cases, female victims of homicide were noted.

Table No 2: Age wise Distribution Of Victims Of Homicide

Age Group	Male	PERCENTAGE	Female	PERCENTAGE
0-10	2	1.90%	1	3.57%
11-20	8	7.62%	4	14.29%
21-30	47	44.76%	13	46.43%
31-40	19	18.10%	6	21.43%
41-50	13	12.38%	4	14.29%
51-60	11	10.48%	0	0.00%
61-70	4	3.81%	0	0.00%
71-80	1	0.95%	0	0.00%

81-90	0	0.00%	0	0.00%
TOTAL	105	100%	28	100%

Maximum male victims (44.76%) belong to the age group of 21 to 30 years of age and maximum female victims (46.43%) also belong to the age group of 21 to 30 years of age.

Table No 3 : Distribution Of Victims Of Homicide As Per Consumption Of Alcohol By The Victims

CONSUMPTION OF ALCOHOL	MALE		FEMALE		TOTAL NO OF CASES	PERCENTAGE
	NO OF CASES	PERCENTAGE	NO OF CASES	PERCENTAGE		
YES	76	72.38%	04	14%	80	60.15%
NO	16	15.24%	17	61%	33	24.81%
NOT KNOWN	13	12.38%	07	25%	20	15.04%
TOTAL	105	100%	28	100	133	100%

In maximum male victims(72.38%), consumption of alcohol was noted , while in maximum female victim (61%), no alcohol consumption was noted.

Table No 4 : Distribution Of Cases Of Homicide As Per Motive For Offence

CAUSE OF DEATH	MALE		FEMALE		TOTAL CASES	TOTAL PERCENTAGE
	NO OF CASES	PERCENTAGE	NO OF CASES	PERCENTAGE		
CUT THROAT WITH HEAD INJURY	3	2.86	1	3.57	4	3
DROWNING	1	0.96	1	3.57	2	1.5
HEAD INJURY	56	53.33	6	21.42	62	46.62
INJURY TO VITAL ORGANS	14	13.33	3	10.73	17	12.78
INJURY TO SPINE AND SPINAL CORD	3	2.86	0	0	3	2.26
S & H D/T INJURIES SUSTAINED	13	12.38	5	17.86	18	13.54
BURNS	2	1.9	9	32.14	11	8.27
SEPT D/T INJ SUSTAINED	5	4.76	1	3.57	6	4.51
SHOCK D/T INJURIES SUSTAINED & HANGING	1	0.96	0	0	1	0.75
STRANGULATION	5	4.76	1	3.57	6	4.51
THROTTLING	2	1.9	1	3.57	3	2.26
TOTAL	105	100	28	100	133	100

In maximum male victims (48.57%), previous enemy was the most important motive for offence and in maximum female victims (60.71%), familial disharmony was the motive for offence.

Table No 5 : Distribution Of Homicidal Victims According To Their Cause Of Death

MOTIVE	MALE		FEMALE		TOTAL	PERCENTAGE
	NO OF CASES	PERCENTAGE	NO OF CASES	PERCENTAGE		
CRIMINAL RIVALRY	9	8.57%	0	0.00%	9	6.77%
FAMILIAL DISHARMONY	7	6.67%	17	60.71%	24	18.05%

FINANCIAL CRISIS	2	1.90%	1	3.57%	3	2.26%
GENDER BIAS	0	0.00%	1	3.57%	1	0.75%
LOVE AFFAIR	3	2.86%	5	17.86%	8	6.02%
PROPERTY DISPUTE	8	7.62%	3	10.71%	11	8.27%
PREVIOUS ENEMY	51	48.57%	0	0.00%	51	38.35%
ROBBERY	3	2.86%	0	0.00%	3	2.26%
SUDDEN EMOTIONAL OUTBURST	16	15.24%	0	0.00%	16	12.03%
NOT KNOWN	6	5.71%	1	3.57%	7	5.26%
TOTAL	105	100%	28	100%	133	100%

In Maximum male victims (53.33%), head injury was the cause of death , while burns injury was the cause of death in maximum female victims(32.14%).

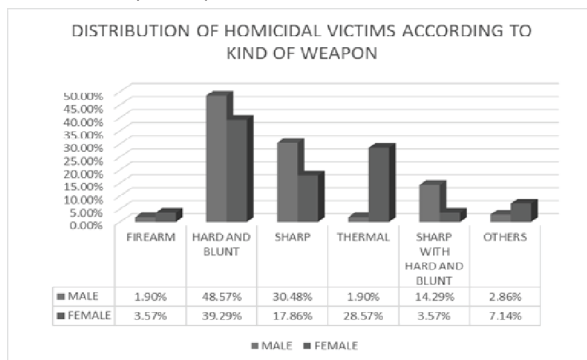


Figure No 1 : : Distribution Of Victims On The Basis Of Kind Of Weapon Used

In maximum male victims (48.57%) and maximum female victims (39.29%), hard and blunt weapon was used.

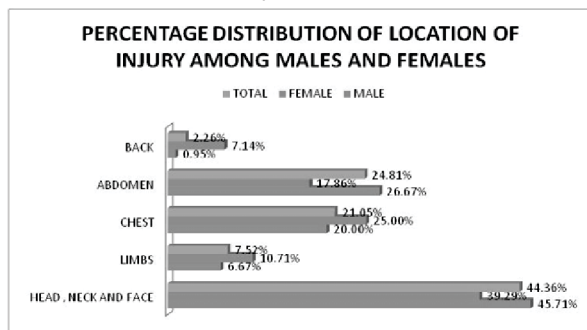


Figure No 2: Distributon Of Vctims According To Locaton Of Njures Over Body

In maximum mae victims (44.36%) and in maximum female victims (39.29%), maximum injuries are noted over head , neck and face.

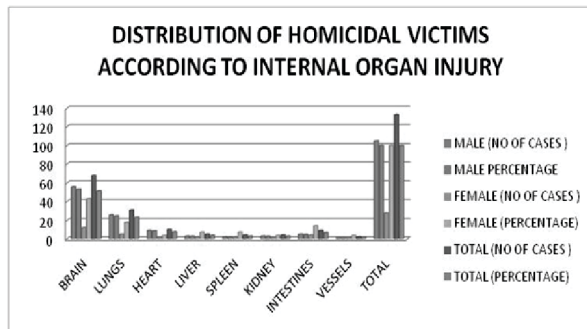


Figure No 3 : Distributon Of Vctims According To Internal Organ Involvement

In maximum victims (51.12%) , brain was the most common organ affected.

DISCUSSION -

In the present study , 78.94 % are male victims and 21.06% are females. Such high percentage of male victims may be attributed to the fact that males are aggressive in nature³⁴ and females are less likely to be involved in brawling incidents but are commonly associated with intentional killing because of jealousy.

Similar findings are noted in Cooper A et al (2011)⁵, Mittal S et al (2007)⁵ and Hugar S et al (2011)⁶ wherein male victims outnumbered female victims.

Maximum homicidal victims are between the age group of 21-30 years followed by 31-40 years, thus, young reproductive population are victimised as this is the most active phase of life wherein there are increased violent tendencies, unsuccessful romantic relationships, arguments under alcohol influence, dowry harassment in newly married couples and hence, increased chances of getting involved in arguments and increased chances of getting victimised of intentional or unintentional homicides.

Similar such findings are noted in the following studies –

Ghangale et al (2003) ⁷ similar findings are noted .
Marri M et al (2006) ⁸ studied that 62 % of the victims belonged to prime reproductive age group 20 to 39 years and less than 10 years of age group.
Hugar B et al (2011) ⁹ noted highest incidence in the age group of 20 to 39 years of age.
Mohanty . S et al (2013) ² found highest number of cases noted in 21 to 30 years (30.51%) age followed by 31 to 40 years (25.43%)

Alcohol is known to influence one's personality and decreases threshold inhibitions and increases the temperament of aggression and makes a person quarrelsome ultimately increasing the chances of getting involved in crime.

Similar findings are noted in the following studies-

Canadian study by Avis SP (1996) ¹⁰ found that 54 % victims were found positive for blood alcohol.
Hugar B et al (2011) ⁹ found 26.25 % of cases were found to have consumed alcohol at the time of incidence.
Mohanty S et al (2013) ² found 51.7 % were addicted to various substances like alcohol and tobacco.

Out of a total of 133 victims of homicide , in 51 (38.35 %) victims previous enmity is the motive for the crime, in 24 victims (18.05 %) familial disharmony is the motive , in 16 cases (12.03 %) sudden emotional outburst is the motive , in 11 victims (8.27 %) property dispute is the motive, in 9 cases (6.77%) criminal rivalry is the motive , in 8 cases (6.02 %) love affair is the motive , in 3 victims (2.26 %) financial crisis and robbery is the motive , in only 1 case (0.75%) gender bias is the motive.

Similar results were found in the following studies -

Edirisinge et al (2009) ³ found that maximum cases 47 % cases were due to previous enmity.
Gadge S et al (2011) ¹¹ observed that previous enmity was found to be the motive in maximum cases.
Mohanty S et al (2013) ² reported that in about 35.59 % cases previous enmity was an important motive for crime.

Contradicting results were noted in the following studies –

Falzan.A.L et al (1998) ¹² found that robbery was an important motive in cases of homicide.
Buchade D et al (2011) ¹³ found that revenge and property disputes are important motives in maximum cases of homicide.
Shah P et al (2013) ¹⁴ observed that in maximum cases property disputes is the motive in 24 % cases.

Hard and blunt weapons are used in maximum cases (39.09%) as they are easily available³⁰. Use of firearms as weapons for the crime

are found in 3% cases in the present study which could be attributed to the fact that unlicensed firearm sales are effectively discouraged by the state government.

In Mittal S et al (2007)⁵ found that 50.88% were victims of homicides by a blunt weapon .Maximum cases 41.1% were victims of head injury in a study by Ambade et al (2007)¹⁵, which is similar to results found in Rathod SN et al (2013)¹⁶ wherein hard and blunt weapons were used in maximum homicidal victims. Gadge et al (2011)¹¹ suffered maximum injuries due to blunt weapon which is similar to findings of Kominato et al¹⁷ wherein maximum injuries were due to hard and blunt weapon (38.1%)

Findings are similar to Oberoi S.S. et al (2011)¹⁸ in which blunt weapons were used in 52.5 % cases.

Maximum female victims in the present study 8 (28.57%) suffered from thermal injuries , which is a finding consistent with Mohanty M.K et al (2010)¹⁹ and Delhi study by Aggarwal NK et al²⁰. These could be attributed to the fact that females are prone to family arguments and harassment and availability of thermal injury mediums at residence.

Contrasting studies are as follows –

Sinha et al (2003)²¹ observed in served that firearms are most commonly used weapons for homicide.

Pakistan study done in 2006 , Marri M Z et al¹⁷ noted that firearms are used in 85.96% cases.

In 2009, Sri Lankan study by Edirisinghe et al³ shows firearms as the cause of death in 31 % cases.

Mohan M K et al (2010)¹⁹ noted that sharp weapons (37.7%) were used in most of the cases which were similar to the findings of Shivkumar et al (2011)²² which reflects use of sharp weapon in maximum cases.

Out of 133 victims , in maximum cases , 59 cases (44.36 %) , injuries are noted over head , neck and face , in 33 victims (24.81%) injuries are noted over abdomen , in 28 cases (21.05%) injuries are noted over chest region, in 10 victims (7.52 %) injuries are noted over limbs and in minimum cases, 3 cases (2.26 %) injuries are noted over back. Similar such findings have been observed in the following studies –

Buchade D et al (2011)¹³, noted that maximum injuries are observed to be over head, neck and face region. Metwally et al (2014)²³ showed similar injuries over head, neck and face collectively of 42.1%. Parmar D J et al (2015)²⁴ concluded that maximum injuries over head, neck and face are 54.29%.

These observations could be because of the fact that , hard and blunt weapon is the most common weapon used in most of the studies and head, neck and face are the most frequently exposed parts of the body.

Contrasting studies –

Mohanty S et al (2013)² found injuries at sites other than head, neck and face. Marry.M.Z et al (2006)⁸ revealed that chest injuries are common than firearms.

Out of 133 victims, in maximum cases , 68 (51.12%) brain injury was reported , in 31 cases (23.30%) lungs are an important organ involved in injury , in 10 victims (7.51%) reported injury to heart , 9 victims (6.77%) are reported to have suffered from injury to intestines , 4 (3%) victims suffered from injury to spleen and kidney each , minimum cases (2, 1.5 %) showed injury to vessels.

Brain (51.12%) is thus, most common organ suffering from injuries. It is a vital organ and thus the perpetrator may use this site to affirm definitive death.

Similar findings were reported by Jhaveri S et al (2014)²⁵ stated that brain(26.42%) being the most vital organ ,it is the commonest to be injured followed by lungs (10.38%) and heart(8.49%).

Contrasting findings were noted in Prajapati et al (2010)²⁶, who concluded that lungs were the most common organ involved followed by vessels.

Buchade et al (2011)¹³ found that neck structures (36.6%) are the most commonly involved internal organ followed by brain (28.3%).

Out of a total of 133 homicidal victims , 62 (46.62%) victims suffered from head injury followed by 18 victims (13.54%) who suffered from shock and haemorrhage due to injuries sustained , 17 victims (12.78%) suffered death due to injuries to vital organs , 11 victims (8.27%) suffered death due to burns , 6 victims (4.51 %) suffered death due to septicaemia due to injuries sustained and strangulation each, 4 victims (3 %) suffered from cut throat with head injury , 3 victims (2.26%) suffered from injury to spine and spinal cord and throttling each and only one victim (0.75%) of shock due to injuries sustained and hanging.

Head, neck and face is the most common part of the body involved in injuries and also hard and blunt weapon is the most common type of weapon which is used , hence , head injury is the most common cause of death.

Similar studies are noted –

Rathod SN et al (2013)¹⁶ reported that head injury (57.7%) is found in most of the victims.

Gadge S et al noted in 2011¹¹ noted that 57.1% injuries over head which corroborated with the study of Shah JP et al (2013)¹⁴ who said that 43% of fatal injuries were head injury.

CONCLUSION –

Out of 133 homicidal victims , 105 (78.94 %) are males and 28 (21.06 %) are females.

Maximum homicidal victims are between the age group of 21-30 years followed by 31-40 years , thus , young reproductive population are victimised.

Out of 105 male victims of homicide, maximum male victims 76 (72.38%) consumed alcohol.

Out of 28 female victims of homicide , maximum female victims 17 (61 %) did not consume alcohol.

Out of 133 homicide victims , maximum victims 80 (60.15 %) have history of alcohol

Out of a total of 133 victims of homicide , in 51 (38.35 %) victims previous enmity is the motive for the crime , in 24 victims (18.05 %) familial disharmony is the motive , in 16 cases (12.03 %) sudden emotional outburst is the motive , in 11 victims (8.27 %) property dispute is the motive , in 9 cases (6.77%) criminal rivalry is the motive, in 8 cases (6.02 %) love affair is the motive , in 3 victims (2.26 %) financial crisis and robbery is the motive , in only 1 case (0.75%) gender bias is the motive.

Out of 133 total homicidal victims , maximum victims 52 (39.09%) were due to hard and blunt weapon.

Out of 133 victims , in maximum cases , 59 cases (44.36 %) , injuries are noted over head , neck and face..

Brain (51.12%) is thus, most common organ suffering from injuries. It is a vital organ and thus the perpetrator may use this site to affirm definitive death.

Head, neck and face is the most common part of the body involved

in injuries and also hard and blunt weapon is the most common type of weapon which is used , hence , head injury is the most common cause of death.

Out of 105 male victims , maximum male victims 56 (53.33%) died due to head injury .

Out of 28 female victims , maximum female victims 9 (32.14 %) died due to burns injury.

Conflict of Interest–

No conflict of Interest associated with this work.

Contribution of Authors –

We declare that this work was done by the authors named in this article and all liabilities pertaining to claims relating to the content of this article will be borne by the authors.

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