

ORIGINAL ARTICLE

Assessment of Violence as Cause of Death Affecting Both Genders: Hidden ViewFARIHA TARIQ¹, SUMAIRA SARWAR², SUMMYIA SADIA³, KHALID MUKHTAR⁴, SHAHID NADEEM², HUMERA REHMAN², TALHA LAIQUE⁵¹Department of Forensic Medicine, King Edward Medical University, Lahore-Pakistan²Department of Forensic Medicine, Sahiwal Medical College, Sahiwal-Pakistan³Department of Forensic Medicine, Sargodha Medical College, Sargodha-Pakistan⁴Department of Forensic Medicine, Sheikh zayed Medical College, Rahimyar Khan-Pakistan⁵Department of Pharmacology, Allama Iqbal Medical College, Lahore-PakistanCorrespondence to Dr. Talha Laique, Email: talhalaique51@gmail.com Tel: +92-331-0346682**ABSTRACT****Background:** Autopsy can lead to the cause of death most accurately in both natural as well as unnatural deaths.**Aim:** To determine the correlation between gender and different parameters like cause of death, region involved and manner of death seen on autopsies in government hospitals of Pakistan.**Study design:** Retrospective study.**Methodology:** Patients (n=186) were enrolled in present study held at Forensic department, Sheikh Zaid Hospital, Rahim-yar Khan-Pakistan. Cases were included irrespective of gender in present study. Data analyzed by SPSS 22.0v.**Results:** Males were 67.9% while females were 32.1% in present study. Among these 186 cases of autopsy, manner of death was homicidal in 83(44.6%) autopsies, accidental in 49(26.3%) and suicidal deaths was in 54(29%). There was no correlation between gender & cause of death by weapon. There was correlation between gender & manner of death. There was correlation between area & cause of death by weapon.**Conclusion:** This study concluded that mostly males of our population were involved in medico-legal cases and criminal activities. Major cause of death remained to be firearms. Gender was correlated with manner of death but not related with cause of death by weapon. However, government needs to play its due role in-order to stop criminal acts through law enforcement.**Keywords:** Autopsy, Audit, Manner of Death and Cause of Death.**INTRODUCTION**

Autopsy or postmortem examination is a special examination of dead victim taken under the laws of the State in-order to protect its citizens and to identify the guilty as a cause of unnatural deaths¹. Mostly cause of death seems obvious as in accidental deaths leading to mechanical injuries. It is crucial to have knowledge regarding underlying cause as well as the immediate cause and manner of death. Cause of death is a factor which produces an effect or its a combination of factors invariably resulting in an effect². Autopsy predicts the cause of death most accurately in both natural as well as unnatural deaths. Mostly cause of death seems obvious as in accidental deaths leading to mechanical injuries.

“Gold standard” in the determining the cause of the death is clinical autopsy. Clinical autopsy referral rates have been in decline for several decades in Europe as well as in the USA. Forensic Autopsy is needed in suspected like suicide, homicide, accidental deaths or among drug abusers. Any disease or mechanical injury leading to morbid events and death is labeled as ‘cause of death’. Studies have shown that in around 1/3rd deaths the presumed cause of death is later found wrong².

Homicide is killing of a human by another human. According to the Pakistani Law, it is a murder¹. Various patterns of homicidal deaths include assault using sharp, blunt, or fire-arm weapon; strangulation or homicidal hanging; smothering, drowning, burns, poisoning³.

With rise in the population and urbanization, number of homicidal death is also increasing. Other factors include poverty, un-employment, and illiteracy that has added to its incidence. Some evil factors like terrorism and drug addiction are significant factors for some specific populations. Major contributor behind all the cases of autopsy is ‘economic crises’, which is the leading cause of all crimes in our society^{3,4}.

Young offenders are becoming increasingly violent and this is a cause for concern, as they are future of any nation². Literature review showed that in many studies, cause of death revealed after autopsies were cardiovascular and cerebrovascular lesion in around 40% and 20% among all, respectively; and in more than 30% of cases, wrong declaration regarding cause of death before autopsy was made^{5,6}.

The objective of the study was to determine the correlation between gender and different parameters like cause of death, region involved and manner of death seen on autopsies in government hospitals of Pakistan.

METHODOLOGY

Patients (n=186) were enrolled in present study held at Forensic department, Sheikh Zaid Hospital, Rahim-yar Khan-Pakistan. Cases were included irrespective of gender in present study. The Ethical Committee of the hospital approved this research. The data was collected on written Performa from the records of Forensic medicine, Sheikh Zaid hospital, with permission of the authorities. Autopsy cases in which cause of death was determined either by external and internal examination or by histological

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examination/chemical analysis of viscera were also included in this study. Partially decomposed, advanced decomposed or skeletonized bodies were included in the study. Gender, cause of death, area and manner of death with regions affected were noted at the start of study.

Statistical analysis: Data analyzed by SPSS 22.0v. Parameters including gender, area, cause of death, region involved and manner of death were expressed as frequency and percentages. Quantitative data was expressed as mean±SD. Spearman's rho Tests of Correlation was applied and p-value <0.05 was taken as significant.

RESULTS

Distribution of cases with respect to parameters like gender, area, cause of death, manner of death and various regions involved during victimization were seen on forensic autopsy. Various causes of deaths through weapons, burns, drowning and poisoning were shown in table-1.

Data was analyzed for manner of death of all the autopsy cases and stratified for gender as shown in table-2.

As p-value in Spearman's rho Tests of Correlation is 0.325 which is greater than 0.05, so we concluded that there was no correlation between gender & cause of death by weapon as shown in table-3.

As p-value in Spearman's rho Tests of Correlation is 0.018 so we concluded that there was correlation between gender & manner of death. Also, correlation coefficient was -0.246 showed that there was inverse relation between gender & manner of death as depicted in table-4.

As p-value in Spearman's rho Tests of Correlation is 0.041 so we concluded that there was a correlation between gender & head region injury. Also, correlation coefficient was 0.279 showing there was positive relation between gender & head region injury as shown in table-5.

As p-value in Spearman's rho Tests of Correlation is 0.007 it was concluded that there was correlation between area & cause of death by weapon as shown in table-6.

Table1: General Distribution of Parameters among Cases (n=186)

Gender	Males	120	67.9%
	Females	66	32.1%
Manner of Death	Suicidal	54	29%
	Homicidal	83	44.6%
	Accidental	49	26.3%
Cause of Death	Weapon	103	55%
	Asphyxia	12	6.4%
	Poisoning	1	0.54%
	Drowning	4	2.15%
	Burn	2	1.08%
	Road traffic accident	14	7.53%
	Cause unknown	64	34.41%
Regions	Head	57	30.65%
	Neck	23	12.37%
	Trunk	50	26.88%
	Upper Limbs	32	17.2%
	Lower Limbs	31	16.67%
Area	Urban	56	30.1%
	Rural	90	48.3%
	Unknown	40	21.6%

Table-2: Stratification Of Manner Of Death With Gender

Gender	Manner of Death		
	Suicidal	Homicidal	Accidental
Male	29	53	38
	24.16%	28.49%	31.68%
Female	25	30	11
	37.9%	45.45%	16.7%

*Statistically significant

Table 3: Correlation between Gender & Cause of death by Weapon

Spearman's rho	Cause of death by weapon	Gender
Cause of death by weapon		
Correlation Coefficient	1.000	.107
Sig. (2-tailed)	.	.325
N	93	87
Gender		
Correlation Coefficient	.107	1.000
Sig. (2-tailed)	.325	.
N	87	162

*Statistically significant

Table-4: Correlation between Gender & Manner of death

Spearman's rho	Gender	Manner of death
Gender		
Correlation Coefficient	1.000	-.246*
Sig. (2-tailed)	.	.018*
N	162	92
Manner of death		
Correlation Coefficient	-.246*	1.000
Sig. (2-tailed)	.018	.
N	92	101

*Statistically significant

Table-5: Correlation between Gender & Head Region injury

Spearman's rho	Area	Cause of death by weapon
Gender		
Correlation Coefficient	1.000	.279*
Sig. (2-tailed)	.	.041*
N	162	54
Head region injury		
Correlation Coefficient	.279*	1.000
Sig. (2-tailed)	.041	.
N	54	60

*Statistically significant

Table-6: Correlation between Area & Cause of death by weapon

Spearman's rho	Area	Cause of death by weapon
Area		
Correlation Coefficient	1.000	-.287**
Sig. (2-tailed)	.	.007*
N	167	87
Cause of death by weapon		
Correlation Coefficient	-.287**	1.000
Sig. (2-tailed)	.007	.
N	87	93

*Statistically significant

DISCUSSION

"Gold standard" procedure is autopsy in determining the cause of the death among cases including both natural and un-natural deaths. Forensic autopsy is mostly done in

suspected suicide, homicide, accidental deaths, and in cases with history of drug / alcohol abuse. Any disease or mechanical injury leading to morbid events and eventually death of the victim is labeled as 'cause of death'. Studies have shown that in around 1/3rd deaths the presumed cause of death is later found wrong^{7,3}.

In one local study at Multan, showed homicidal deaths (70%) with male dominance and of the age of 40-60 years. Most common type of weapon on history was firearm (58%), and second most common was blunt objects (21%). Chest was the most commonly involved. These results were similar to our study that showed homicidal deaths (44.6%) with male dominance involving trunk⁸.

The youth in our country is facing medico legal problems along with rape cases. Surveys have shown that the rate of rape cases is 01 in two hours. These incidents are due to socio economic crisis of the young population, leading to even suicidal deaths of rape victims. Steps should be taken to control the criminal activities of our young populations⁹.

Table 4 showed p-value (0.018*) in present study thus indicating that there was correlation between gender & manner of death. Although, correlation coefficient (-0.246) showed that there was inverse relation between gender & manner of death. Similar results were shown in one previous study indicating violent deaths manner among females especially pregnant ladies¹⁰.

Table 5 Correlation showed p-value (0.041*) in present study thus indicating that there was correlation between gender & head region injury. Correlation coefficient (0.279) showed that there was positive relation between gender & head region injury. Similar results were shown by previous study depicting positive relationship between gender and region of body involved in injury.¹¹

Limitations: Present study had number of limitations like small sample size, financial constrains and limited resources.

CONCLUSION

This study concluded that mostly males of our population were involved in medico-legal cases and criminal activities. Major cause of death remained to be firearms. Gender was correlated with manner of death but not related with cause of death by weapon. However, government needs to play its due role in-order to stop criminal acts through law enforcement.

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