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# CAUSES OF DEATH;

## "PATTERN OF THE CAUSES OF DEATH IN ADULT MALES-A PERSPECTIVE ON AUTOPSY".

**Ejaz Ahmed Awan[1], Zafar Ali Seenharo[2], Mohammad Ismail Salim Memon[3]**

1. MBBS, DMJ
Associate Professor
Department of Forensic Medicine & Toxicology
Peoples University of Medical & Health Sciences for Women Nawabshah, Shaheed Benazirabad, Sindh, Pakistan.
2. MBBS
Lecturer
Department of Forensic Medicine & Toxicology
Liaquat University of Medical and Health Sciences, Jamshoro, Sindh Pakistan.
3. MBBS, DMJ
Assistant Professor
Department of Forensic Medicine & Toxicology
Khairpur Medical College, Khairpur Mir's Sindh, Pakistan.

**Correspondence Address:**
Dr. Ejaz Ahmed Awan
MBBS, DMJ
Associate Professor
Department of Forensic Medicine & Toxicology
Peoples University of Medical & Health Sciences for Women Nawabshah, Shaheed Benazirabad, Sindh, Pakistan.
forensicawan@outlook.com

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**ABSTRACT… Objectives:** The purpose behind this study was to determine the pattern of the causes of death in adult males - a perspective on autopsy. **Study Design:** Cross sectional study. **Period:** 2015 to 2016. **Setting:** Peoples Medical College Hospital, Nawabshah, Shaheed Benazirabad, Sindh, Pakistan. **Material and Methods:** 73 male patients, whose autopsy were performed through a convenience non-purposive sampling technique to ascertain the causes of death among dead bodies brought at Peoples Medical College Hospital, Nawabshah, Shaheed Benazirabad, Sindh, Pakistan for the purpose of autopsy. Autopsy was performed with consent taken from the family members and hospital administration. Questionnaire was used to collect the limited relevant data and used SPSS version 17 for data entry and analysis. **Results:** Mean age of patients whom autopsy were performed was 37.12 years among them minimum age was 10 year and maximum age recorded was 75 years. Among all, 31 (42.46%) cases were from rural area while 42 (57.53%) cases were from urban area. Overall the most common pattern of death was firearm injury (27.39%) and most of them (17.80%) belongs to younger group (10 – 40 years) of males and the same cause of death was also the most common (9.58%) among older group (≥41 – 75 years). **Conclusion:** Most of the autopsies were performed from urban areas among them most common cause of death was firearm injury in both younger and older group of people.

**Key words:** Autopsy Findings, Area of Residence, Cause of Death, Homicidal death.

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## INTRODUCTION

Death registration systems in Pakistan have improved greatly over the past decades in hospitals. In 2015, the United Nations death registration system recorded adult female mortality rate of 141.74 per 1000 female adults and adult male mortality rate of 178.54 per 1000 male adults. The overall male mortality rate is higher due to several recognizable reasons. There are many reasons which prone males with increased death rates due to underlying disease or caused by other factors such as homicidal deaths or suicidal deaths.[1]

Younger group of people between the ages of 15 to 25 years are reportedly more prone to homicidal deaths and accounted for second most common cause of death among developed and developing countries. While the data taken during the demographic surgery which was conducted during 1992 has shown that in Pakistan homicide including poisoning, violence, and accidents are the second most common cause of deaths among young adults (15 – 39 years) but these data doesn't provide the specific city wise statistics.

A survey conducted by the United Nations Office on Drugs and Crime (UNODC) in 2012 and published the data on 2013 with a name of "Global Study on Homicide" in which they have observed that around 437,000 deaths were due to intentional homicide around the world among them 12,846 were killed with a percentage of 7.7 per 100,000 people and in Pakistan the rate of killing is higher (6.2 over 13000 homicides) than rest of the world.[2-4]

Suicide is one of the ten leading causes of death in the world today, accounting for almost a million deaths worldwide annually. Information on suicide

from Islamic countries is lacking, including those with populations exceeding 100 million people such as Bangladesh, Indonesia, and Pakistan.[5-7]

National annual mortality statistics has not revealed the data regarding suicide for that reason the actual burden of national suicidal rate in lacking and nor even reported to WHO. Because of this, policy makers are unable to make policies regarding monitoring and control of suicide cases which is utmost necessary for the preventing programs to be commenced.

The rational of this study was to determine the actual burden of different causes of deaths found on autopsies during the period of one year presented at Peoples Medical College Hospital, Nawabshah, Shaheed Benazirabad, Sindh, Pakistan.

## PATIENTS AND METHODS

A cross sectional study was conducted on 73 male patients between 2015 to 2016 whose autopsy were performed through a convenience non-purposive sampling technique to ascertain the causes of death among dead bodies brought at Peoples Medical College Hospital, Nawabshah, Shaheed Benazirabad, Sindh, Pakistan for the purpose of autopsy. Autopsy was performed with consent taken from the family members and hospital administration. All the deceased having age more the 10 years and less than 75 years only males were included.

## DATA COLLECTION AND ANALYSIS

Before commencement of the study, the study protocol was reviewed and approved by the Hospital ethical review committee and informed consent was taken from every deceased family or from hospital ethical committee before collection of the data. After collection of data like age, area of residence, and cause of death analyses were conducted by using Statistical Package for the Social Sciences (SPSS) version 17. Mean and standard deviation were calculated for quantitative variables like age. Frequency and percentages were computed for qualitative variables like area of residence and cause of death find on autopsy.

## RESULTS

A total of 73 patients were included for final analysis after meeting the inclusion and exclusion criteria having mean age of was 37.12 years among them majority were urban dwellers 42 (57.53%) than rural 31 (42.46%), respectively. Figure-1.

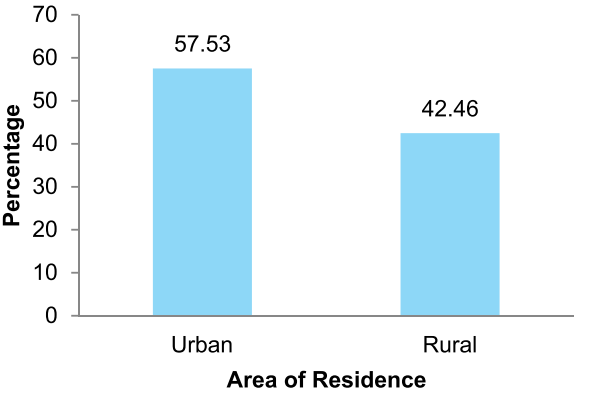


**Figure-1. Area of residence among autopsied male (N=73)**

Table-I shows frequency of causes of death among 73 autopsies performed. The most common cause of death among our study subjects was firearm injury 27.39% (N = 20), followed by assault 17.80% (N = 13), death caused during police encounter 15.06% (N = 11), and homicide death 12.32% (N = 10). Rest of the descriptive statistics mentioned in Table-I.

| Cause of Death | Age in Years | |
|---|---|---|
| | 10 - 40 | 40 - 75 |
| | Frequency (%) | |
| FAI | 13 (17.80%) | 7 (9.58%) |
| Assault | 7 (9.58%) | 6 (8.21%) |
| Fai Injury in Police Encounter | 9 (12.32%) | 2 (2.73%) |
| Homicide Death | 7 (9.58%) | 3 (4.10%) |
| Train Accident | 3 (4.10%) | 3 (4.10%) |
| RTA | 2 (2.73%) | 4 (5.47%) |
| Strangulation | 1 (1.36%) | 0 (0%) |
| Drowning | 1 (1.36%) | 0 (0%) |
| Electrocution | 1 (1.36%) | 0 (0%) |
| Head Injury | 0 (0%) | 1 (1.36%) |
| Sudden Death | 0 (0%) | 1 (1.36%) |
| Suicide | 1 (1.36%) | 0 (0%) |
| Suspected Poison | 0 (0%) | 1 (1.36%) |

FAI = Fire Arm Injury
RTA = Road Traffic Accident

**Table-II. Comparison between causes of death ascertain during autopsy with age (N = 73)**

We have divided the age groups into two categories i) group I (10 – 40 years) ii) Group II (≥41 – 75 years). In table-II, we have compared the common causes of death among these two age groups. In both groups firearm was the most common cause of death (Group I – 17.8% and Group II - 9.58%. while on the other hand, Road Traffic Accident 4 (5.47%), Head Injury 1 (1.36%), and Sudden Death 1 (1.36%) were particularly common in group II.

| Cause of Death | Percentage | Number |
|---|---|---|
| FAI | 27.39 | 20 |
| Assault | 17.8 | 13 |
| FAI in Police Encounter | 15.06 | 11 |
| Homicide Death | 12.32 | 10 |
| Railway Accident | 8.21 | 6 |
| RTA | 8.21 | 6 |
| Strangulation | 1.36 | 1 |
| Drowning | 1.36 | 1 |
| Electrocution | 1.36 | 1 |
| Head Injury | 1.36 | 1 |
| Sudden Death | 1.36 | 1 |
| Suicide | 1.36 | 1 |
| Suspected Poison | 1.36 | 1 |

FAI = Firearm Injury
RTA = Road Traffic Accident

**Table-I. Frequency of causes of death ascertain during autopsy (N = 73)**

## DISCUSSION

A lawful disposal of human dead body is only possible after establishment of proper and valid cause of death. If the cause is obscure, autopsy is the only mean of search. Inadequacy and unavailability of health care facility often makes this situation more complicated in developing countries where many deaths remain undiagnosed. Based on the aforementioned scenario this study has been conducted in an area where there were no any data available to ascertain the cause of deaths among males and with approval of ethical committee we have done autopsy of 73 males for established the cause of their death. In our study the mean autopsy age was quite younger 37.12 years which represents the younger age group is more commonly associated with unnatural deaths due to underlying possible reasons such as poor social class leads to more stress and higher level of anger and rage which results in fights and leading towards killing of oneself or someone else. Our study's findings are consistent with the study preciously conducted in Karachi which also observed that younger males are more commonly observed gender during autopsy with mean age was 32.30.[8] Our study also observed that most of the autopsied males were from urban localization 42 (57.53%). Comparing our data with international studies has shown that death rates due to homicide are higher in urban areas than rural areas[9-11] while there is no data available in Pakistan which shows the related findings.

Many of the previously conducted studies have shown suicidal fire-arm deaths to be the more common cause of autopsy and death common[12,13] but the observed findings of our study is contrary with the findings of previously conducted studies in our study homicidal form of firearm death is most common; this coincides with other studies conducted in different cities of Pakistan.[14] This variation could be due to difference between the developing countries with developed countries as the suicidal rates are higher in developed countries because of higher prevalence of depression.[15,16] On the other hands, cases of homicides in Pakistan are higher due to religious issues like adultery and domestic violence.[17]

Furthermore, when isolated findings observed between younger and older age groups, the younger age group was more commonly affected with firearm injuries while Road Traffic Accident 4 (5.47%), Head Injury 1 (1.36%), and Sudden Death 1 (1.36%) were particularly common in elderly people. The same findings were also observed in larger scaled international studies as well national studies.[18-21]

## CONCLUSION

The results of the study highlight that most of the autopsies were performed from urban areas among them most common cause of death was firearm injury in both younger and older group of people but sudden death, RTA, and head injury were more commonly observed in elderly people.

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From small **seeds** large **trees** grow.

*"Unknown"*

## AUTHORSHIP AND CONTRIBUTION DECLARATION

| Sr. # | Author-s Full Name | Contribution to the paper | Author=s Signature |
|---|---|---|---|
| 1 | Ejaz Ahmed Awan | All authors have contributed equally. |  |
| 2 | Zafar Ali Seenharo | |  |
| 3 | M. Ismail Salim Memon | |  |