



## Original Work

### Pattern of gunshot deaths in a Nigerian Tertiary Health Institution

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**ABSTRACT:** The present study was aimed to determine the pattern of injuries, manner of death, and demographic parameters of gunshot deaths in a Nigerian teaching hospital. This was a prospective descriptive autopsy study of gunshot deaths seen in the University College Hospital (UCH), Ibadan, over a period of twelve months from January to December 2006. All the coroner autopsies for the period involving gunshot deaths were reviewed with emphasis on the sex, age, occupation, circumstances surrounding the event, manner of death, likely motive in cases of homicidal or suicidal gunshot, type of gun used and site(s) of injury. Gunshot deaths formed eleven (1.6%) of the 697 coroner cases performed at UCH in 2006. Ten of the 11 cases were male, and the overall age range was 10-60 years. The manner of death in ten of such cases was homicide, and unascertained in one case. Rifled weapons were used in 64% of the cases and shotguns, illegally acquired, accounted for the remaining 36%. Most were victims of armed robbery attacks. The head, abdomen, chest and lower limbs were sites of injuries in descending order of frequency. Gunshot deaths were the commonest form of homicide in the period under review. Young males and victims of armed robbery attacks are most susceptible. It is important to note the absence of suicidal gunshot deaths in this study.

**KEY WORDS:** *Pattern of injuries; Gunshot deaths; Demographic parameters; Nigeria*

## INTRODUCTION

Since the end of Nigeria's Civil War in the 1970s, firearms have become widely available, especially in the hands of criminals. Armed robberies and contract killings are almost daily occurrences in our cities, rural areas, and on our highways where people are gunned down indiscriminately.<sup>1,2</sup>

The level of global small arms violence is enormous and the scale of human suffering it causes is immense, although difficult to quantify. It causes at least hundreds of thousands of deaths and more than a million injuries each year, as well as permanent physical and psychological damage, destruction of families, lost productivity, and diversion of resources from basic health services.<sup>3</sup>

Local studies have looked at the contribution of gunshot deaths to mortality at various centres in Nigeria. In a study done at Ilorin by Solagberu et al

gunshot injuries accounted for 8.3% of trauma deaths.<sup>4</sup> In a related study at Ife, Nigeria, by Adesunkanmi *et al*, gunshot deaths accounted for 6.8% of deaths at the Accident and Emergency Unit of the hospital.<sup>5</sup> An earlier study by Nwosu and Odesanmi, from Ife, found a male to female ratio of 4.6:1 and the modal age group of the victims was between 20 and 40 years; 37% of deaths involved firearms.<sup>6</sup> A prospective autopsy study in Rivers State, Nigeria, undertaken to evaluate the patterns of deaths involving rival gang clashes within a four-year period found a high preponderance of young adult male victims and firearms were the most common method applied for the killings.<sup>7</sup> Similarly, gunshot injuries were most common among young males and armed robbery was the cause of gunshot trauma in a majority of cases in a study of civilian gunshot injuries in Irrua, South-West Nigeria.<sup>8</sup>

There has been no previous study from Ibadan, Nigeria aimed at specifically investigating the pattern of gunshot deaths.

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**METHODOLOGY**

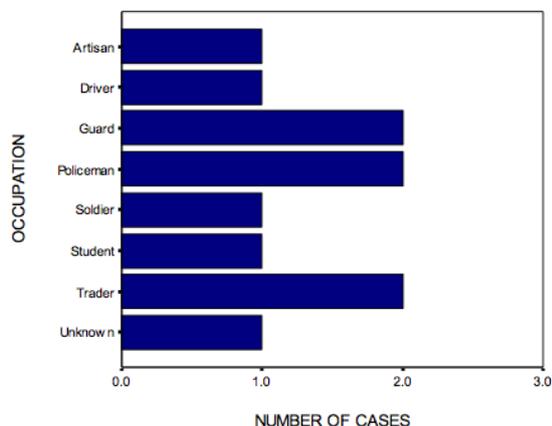
This was a prospective descriptive autopsy study of gunshot deaths seen in University College Hospital (UCH), Ibadan between January and December 2006. All the coroner autopsies for the period involving gunshot deaths were reviewed with emphasis on the following: sex, age, occupation, circumstances surrounding the event, manner of death, likely motive in cases of homicidal or suicidal gunshot, type of gun used and site(s) of injury.

**RESULT**

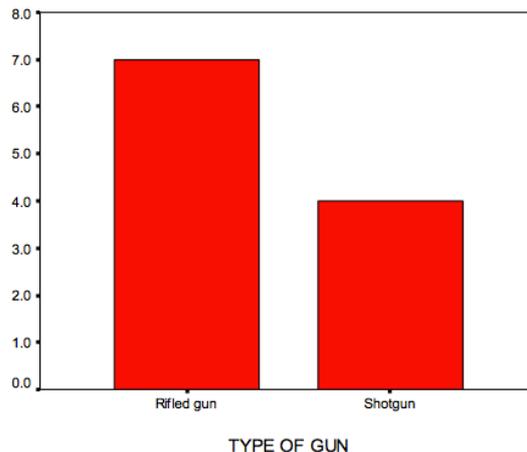
Gunshot fatality formed 1.6% of 697 coroner autopsy cases in 2006. It accounted for 91.7% of all homicidal deaths in the period under review. There were 10 males and 1 female. Victims were mostly young with modal age group between 20 and 40 years and age range of 10-60 years (Table 1). There were ten of Yoruba race and one of Idoma race. Ten of the victims were Ibadan residents, and one lived in Lagos. Most of the victims were private security guards, policemen and traders (Figure 1). Rifled guns were commonly used (Figure 2) and the head and abdomen mostly targeted (Figures 3 to 6).

**Table 1: Age wise distribution**

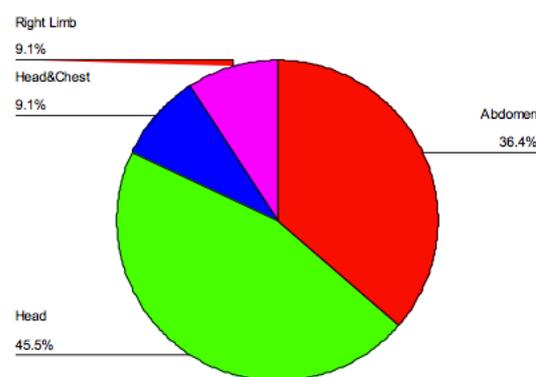
Age range (yrs)	Number	Percentage
10-19	1	9.1
20-29	3	27.3
30-39	3	27.3
40-49	2	18.2
50-59	1	9.1
≥60	1	9.1



**Figure 1: Bar Chart showing occupation of the victims**



**Figure 2: Bar chart showing type of gun used**



**Figure 3: Pie Chart showing Anatomical sites of injury**



**Figure 4: Left facial gunshot wound**

**DISCUSSION**

In this study, gunshot fatality formed 1.6% of 697 coroner autopsy cases in 2006, and accounted for 91.7% of all homicidal deaths in the period under review. This is similar to the findings of Amakiri *et al* and 2006 report of the *International Action Network on Small Arms (IANSA)*.<sup>9,10</sup> Lett *et al* in Uganda also found that gunshot injuries were the

leading cause of death (42.3%) in 397 injury deaths.<sup>11</sup>

There was a marked male predominance in the present series with a ratio of 10:1. Bahebeck *et al* found a male to female ratio of 5.5:1 in Douala and Yaounde, Cameroon.<sup>12</sup> A male to female ratio of 5.3:1 was documented by Wintemute *et al* in California.<sup>13</sup> On the contrary, in Hamburg, Koops *et al* found a slightly higher proportion of women with a male to female ratio of 3:1.<sup>14</sup>

The present study has shown that gunshot deaths are a problem mainly of adult males in the productive age group. Other local and international studies have shown a similar pattern.<sup>6-8,15-17</sup>

The head constituted the major site of gunshot wounds (45.5%). Goren *et al* found 68.3% fatal head injuries in the Diyarbakir study.<sup>18</sup> Bahebeck *et al* found majority of gunshot wounds (46%) in the extremities in their Cameroonian study.<sup>12</sup>



**Figure 5: Multiple left facial pellet wounds with subgaleal hematoma and skull injuries**



**Figure 6: Penetrating gunshot wound at the left forehead with scalp, skull and intracranial injuries**

The manner of death in all but one of the cases was established to be homicidal. Most local and

international studies support this finding.<sup>9,19,20</sup> The absence of suicidal and accidental deaths is remarkable. In African studies, suicidal gunshot deaths are uncommon or absent.<sup>6,8,12</sup> This occurrence may be attributable to cultural practices at the background of strong traditional and religious beliefs, which generally abhor suicide. It is also possible that relative limited access to firearms by the general population may be contributory to the absence of suicide by firearms in this study.

On the contrary, in 2000, in a study from the U.S.A, the vast majority (58%) of firearm fatalities resulted from suicide.<sup>21</sup>

Rifled weapons were used in 63.6% and shotguns in 36.4% of cases. Similar studies show homicidal deaths in firearm injuries inflicted by rifled guns unlike in suicidal or accidental deaths<sup>12,22-25</sup>. Over 90% of our cases are due to homicide.

The study also shows that children are not spared from gunshot fatalities. Interestingly, in the U.S, only motor vehicle crashes and cancer kill more children<sup>26</sup>. In developing countries, firearm fatalities among children are also a significant concern<sup>18,27</sup>. Most of our cases involved traders, guards and policemen and this may have mirrored the increasing insecurity in Nigeria due to, among other criminal acts, the activities of armed robbers who attack people both at home, on the highway and in business premises.

## CONCLUSION

Gunshot deaths were the commonest form of homicide in the coroner's cases that were admitted at the University College Hospital, Ibadan in the period under review. Young males and victims of armed robbery attacks are most susceptible and the absence of suicidal or accidental gunshot deaths is remarkable.

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