



## **INJURY PATTERN AMONG ROAD TRAFFIC ACCIDENT VICTIMS: ADO- EKITI AS CASE STUDY**

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### **Abstract**

This paper studies the characteristics of victims of road traffic accidents in Ado- Ekiti, Nigeria. Reports from hospital records were analyzed to obtain the accident characteristics. A total of 1,141 cases were analyzed. There were 802 (70.4%) males, 332 (29.1%) females while the sexes of six were not stated. About 24 (2.1%) of victims died while 11 (1%) refused treatment. A total of 272 (23.8%) were admitted into hospital for treatment while 42 (3.7%) were referred to more equipped hospitals due to the seriousness of their cases. 51 (18.2%) of the number had head injury, 79 (28.1%) had bone injury while 54 (19.2%) had deep cuts. Others had mild bruises. This results show that the characteristic injuries depict some area of concern important for health and safety design measures by road agencies and the need for a review of the approach to implementing traffic regulations.

**Key words:** characteristic injuries, road traffic accident, road safety measures.

## **Introduction**

The process of rapid and unplanned urbanization and the attendant transportation problems has resulted in an unprecedented revolution in the growth of motor vehicles worldwide (1). The alarming increase in morbidity and mortality owing to road traffic accidents over the past few decades is a matter of great concern globally. Currently, motor vehicle accidents ranks ninth in the order of diseases burden and are projected to be ranked third in the year 2020 (2). Worldwide, the number of people killed in road traffic crashes each year is estimated at about 1.2million while the number injured could be as high as 50million. The problem is increasing in the developing countries at a fast rate, while it is declining in all industrialized nations. Furthermore, 90% of road traffic death was found to occur in low income and middle income countries (3) – the group to which Nigeria belongs.

In Nigeria, fatal road accidents were said to be on the rise and a major cause of death in adults less than 50 years old in the country (4). Statistics from the Nigeria Police shows that from 1955 to 1998, the number of people killed in road accidents increased from 489 in 1955 to 6500 in 1998. By the turn of 2004, the number was put at 5351 after falling from an all time peak of 11,382 in 1982. Similarly, there has been a decline in the number of reported accident cases. It first rose from 1413 in 1960 to its highest value of 40,881 in 1976, before declining to 14,361 in 2004. Likewise, the number of persons injured rose continually from 10,216 in 1960 to 30,023 in 1978 and fell to 16,897 in 2004. These statistics are found to be much lower than the estimated values for Nigeria, especially by the World Health Organization (WHO) (5). This may not be unconnected with the poor recording habit in the nation (6). According to WHO (7), almost 16,000 people die from injuries sustained in road mishaps in Nigeria yearly, while several thousands more end up with non- fatal injuries and permanent disabilities. In Nigeria, as in most developing countries, a large number of hospital beds are occupied by road accident casualties, representing high social security cost for often tiny budgets. The personal and social cost of those injuries is enormous and is aggravated by the poor financial status of the people affected by the problem. This number of people with injuries and permanent disabilities is the interest of this study.

Definitely, a few studies have attempted to study the pattern of road traffic accident inflicted injuries in Nigeria. At the very least, it is obvious that the efforts of the Federal Road Safety Commission (FRSC) in policy formulation targetted towards safety improvement are a product of such studies (8). The present study is thus intended to add to the existing knowledge on the pattern of injuries in road traffic accident cases.

## **Materials and Method**

The study was carried out on the records obtained from the State Specialist Hospital in Ado-Ekiti. All road traffic accident victims reporting to the hospital between August 2006 and July 2007 were included in the study. The information about the patients visiting as victims of road traffic accident was obtained from the record of the hospital. Thus the study included a total of 1141 victims of road traffic accidents. Data extracted from the records include age of victim, sex, time of the day, and injury characteristics. Statistical analysis included calculation of percentages and proportions.

## Result

The distribution of study subjects according to their sex and age is depicted in tables 1 and 2. Out of the total of 1141 cases, 802 (70.29%) were males while only 332 (29.09%) were females. It can be observed from table 2 that majority of the victims were in the age group 18 – 35 years, (the most active and productive), constituting about three- fifth of the study victims. This is followed by ages 36 – 50 years, accounting for 17.46%, and then ages 0 – 17 years accounting for 15.61%. Ages above 50 years account for only 5.88% of the total cases.

The distribution of study subject according to accidents and injury characteristics is shown in table 3. Of the 1141 cases considered, only 281 (24.65%) cases had the injury inflicted recorded. Of this number, 79 (28.11%) had bone injury, 54 (19.22%) had deep laceration, while 97 (34.52%) had mild bruises. Moreover, table 4 reveals that 11 (1%) of the total number refused admission to hospital wards for further treatment, while 272 (23.8%) were admitted for treatment. At total of 42 (3.7%) were referred to more equipped hospitals for further treatment while 24 (2.1%) died.

## Discussion

The present study carried out in Ado- Ekiti revealed that most of the accidents occurred in the age group of 18 – 35 years of the population. This results in a double loss to the country's economy. Firstly, expenditure is incurred in the treatment of these victims and secondly, being the most productive age group, it results in huge productive man-days lost. Earlier studies have also reported a higher incidence in road traffic accidents in similar age group (1, 9). The higher incidence of accidents in this age group may not be unconnected with the fact that those people are at the peak of their lives and are therefore more outgoing and more involved in outdoor activities.

The male- female ratio of 2.4 to 1 can be attributed to the fact above too. This, in their case, is due to the paternalistic nature of the society where males are the breadwinners of their families. Several other studies have observed same (10).

There were no records of the nature of injuries for 859 (75.35%) of the total cases considered. This is unfortunate and makes proper planning for improved policy on road safety difficult as required data are not available. It may therefore be necessary for the FRSC to take up this challenge and provide for laws that mandate collection of all relevant data for accident victims, especially by the police and hospitals. Of the 281 (24.65%) cases having records, bone related injuries were found to be the commonest. A similar study noted that this may be due to the interplay of gravitational force and velocity of the vehicle at the time of accident, resulting in generation of kinetic energy that in turn results in fractures (1). This also puts up another challenge to the FRSC to improve on speed management and enforcement of the use of seatbelt and other injury reducing measures. Though there are no data showing the nature of vehicle involved, it may also be necessary to improve on regulations guiding the use of motorcycles to reduce this type of injuries.

Moreover, the study revealed that as high as 272 (23.8%) of the total cases were admitted to the hospital for further treatment. This is in line with various studies that show that huge economic

resources are usually employed to treat accident victims (5). Better safety measures may be required to reduce the number and hence economic losses resulting from it.

When temporal distribution of the accident was studied, it was observed that 272 (23.8%) cases of accidents took place at night. Records also show that usually more people are involved in each accident occurrence that took place at night. Usually, the first observation is expected as there are more activities on the road during day time such as commercial activities, activities like attending schools, colleges and offices (1). The second observation, however, emphasized the higher risks involved in night travelling in Nigeria at large. This is another important issue for transport agencies and the FRSC to note.

### Conclusion

In conclusion, the present study found that the greater percentage of people involved in road traffic accident is those in their productive age. It also found that fractures were the commonest injury among the victims. It therefore recommends a more aggressive drive to reduce traffic accident by the agencies involved so as to reduce the carnage on the roads.

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Table 1: Age distribution of study subjects

Sex	Casualty no	%
Male	802	70.29
Female	332	29.09
No indication of sex	7	0.63
<b>Total</b>	<b>1141</b>	<b>100</b>

Table 2: Age distribution of study subjects

Age group	Casualty no	%
0 – 17	178	15.61
18 – 35	662	58.07
36 – 50	199	17.46
51 – 60	45	3.95
61 +	22	1.93
No Age indicated	34	2.98
<b>Total</b>	<b>1141</b>	<b>100</b>

Table 3: Pattern of injury distribution of study subjects

Injury type	Casualty no	%
Bone injury	79	28.11
Head injury	54	19.22
Deep laceration	51	18.15
Bruises	97	34.52
<b>Sub total</b>	<b>281</b>	<b>24.65</b>
<b>No without Injury specification</b>	<b>860</b>	<b>75.35</b>
<b>Grand total</b>	<b>1141</b>	<b>100</b>

Table 4 Treatment process distribution of study subjects

Treatment type	Casualty no	%
Placed on admission	272	23.84
Referred	42	3.70
Refuse admission	11	1.00
Died	24	2.11
Treated and discharged	792	69.41
<b>Total</b>	<b>1141</b>	<b>100</b>

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