

Spatial analysis and socio-economic burden of road crashes in south-western Nigeria

Olusiyi Ipingbemi*

Department of Urban and Regional Planning, University of Ibadan, Ibadan, Nigeria

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Road traffic accidents are a major health problem in Nigeria. Death and injuries resulting from road crashes in the country have been on the increase over the years. For instance, fatality rate rose from 5.3 in 1970 to 5.8 in 2005. The purpose of the paper is to assess the pattern and socio-economic burden of road crashes on road accident victims in south-western Nigeria. The study relied on the administration of 438 questionnaires to road accident victims in both public and private hospitals in south-western Nigeria. The data were presented using descriptive statistics. Findings indicated that more than 70% of the accident victims were within the productive age group of between 15–45 years, with over 60% of them living below the poverty line. Motorcycles and buses accounted for 70% of the vehicles while about 40% of the victims were pedestrians. Each victim on average spent a minimum of US\$17 per day on medical expenses and had at least one person attached to him/her throughout the period of admission. This has grave implications on the welfare of the families and the socio-economic development of the country. The paper calls for the use of preventive methods and post-crash management initiatives in order to reduce the magnitude and burden of road crashes on members of the society in south-western Nigeria.

Keywords: accident victims; fatalities; injuries; road crashes; safety; speed

1. Introduction

Road safety has become a major challenge in both developed and developing countries in recent times. This is not unconnected with the magnitude of road crashes throughout the world. Globally, more than one million people die through road crashes each year and 50 million others sustain several degrees of injuries (World Health Organization/World Bank, 2004). More than 80% of these casualties occur in developing countries, in which Nigeria is one.

The deaths and injuries that occur through road traffic crashes in Nigeria are worrisome. Apart from the magnitude of the problem, all other indices (fatality rate and severity index) point to a decreasing safety on Nigerian roads. For instance, both fatalities and injuries increased by 630% and 120% respectively between 1960 and 2001 (Ipingbemi, 2006). Most of the causes of these deaths and injuries are traceable to human error, such as reckless driving, dangerous overtaking, speeding among others. Besides this colossal waste of human resources, the psychological, economic and medical costs as well as human suffering of road crashes are also very substantial. It costs each country between 1–2% of their gross national product.

For instance, Evans (2002) put the cost to the US economy at US\$200 billion per annum, while the cost to the Nigerian economy between 1970 and 1997 was put at US\$384 million (Arosanyin, 2000).

Besides these human and economic costs, the socio-economic burden of road crashes is very heavy. Road crashes slow down economic development and perpetuate poverty. At household level, road crashes place a severe financial strain on families, who often have to absorb the direct medical and rehabilitation costs as well as indirect costs created by a victim's inability to continue earning. At national level, road traffic accidents place a heavy burden on the country's economy through both direct and indirect impacts.

While many studies on road crashes in Nigeria and its sub-regions or states have focused extensively on the pattern, causes and magnitude as well as costs of road crashes (Onakomaiya, 1981; Jegede, 1985; Mukoro, 1986; Oduola, 1987; Arosanyin, 2000; Oyeyemi, 2002), few studies if any have addressed the socio-economic burden of road crashes on its victims. This study is undertaken to bring to the fore the pattern and implications of road crashes in south-western Nigeria. The paper is divided into six

*Email: odoile2002@yahoo.com

parts including this introduction. The trend and causes of road crashes in Nigeria are in section 2 while section 3 is the methodology. Results and discussion are in section 4, way forward in section 5 while section 6 is summary and conclusion.

2. Trend and causes of road accidents in Nigeria

The trend of road traffic crashes in Nigeria is alarming. Between 1960 and 2005 more than one million cases of road crashes were reported. A total of 289,952 persons were killed, while 873,492 others were seriously injured during the period (NBS, 2005). The fatality rate (fatality per 100,000 population) between 1970 and 2005 showed a rising trend throughout the first decade (1970–1979). For instance, fatality rate rose from 5.3 deaths per 100,000 population in 1970 to 12.6 in 1979. The second decade (1980–1989) showed a similar pattern. Fatality rate peaked at 16.6 in 1982 but decreased gradually to 10.2 in 1989. Fatality rate fluctuated in the early part of the third decade (1990–2000) but decreased steadily to 3.4 fatalities per 100,000 population in 1997. By 2001, however, fatality rate had risen to 6.7 but came down to 5.8 in 2005. While figures for fatality rate (impact on human population) tend to decrease over the years, in actual fact the magnitude of road accident casualties is on the increase. This may be due to poor population forecast. Therefore, in Nigeria, absolute figures of deaths might be a better analysis for local planning.

Studies on road crashes in Nigeria have singled out human error as the most important factor in road crash causation in the country. Onakomaiya (1981) in his study of the causes of road accidents in Nigeria showed that human error accounted for more than 73%. Jegede (1985) traced most of the road crashes in Oyo state to human error, as it accounted for more than 76% of the total road accidents recorded within the period under investigation. Also, human error accounted for 86% of the road crashes in Federal Capital Territory, Abuja in 2001 (Oyeyemi, 2002). These studies from Nigeria and other similar studies in both developed and developing countries (Jacobs & Palmer, 1996; Maunder & Pearce, 2000; Odero, Khayesi & Heda, 2003; Wang et al., 2003) point to the significance of human behaviour in road accident causation. It must be noted, however, that other factors such as poor road design, vehicle condition and environmental factors are also becoming increasingly important.

3. Study area and method of data collection

The study area is the southwest geo-political zone, which is bounded in the north by Kwara and Kogi

states, in the east by Edo and Delta states, in the west by the Republic of Benin and in the south by the Atlantic Ocean as shown in Figure 1. The climate of the southwest is characterised by high humidity and substantial rainfall, which support vegetation and agricultural practices.

The dominant form of transport in the southwest is road transportation. Oyesiku (2002) in his analysis of the condition of roads of some cities in the southwest observed that more than 60% are unpaved. For paved roads, less than 35% are in good condition. In terms of vehicle ownership, the southwest accounted for more than one-third of the vehicles registered in the country in 2005 (The fraud in Lagos, 2007). This large vehicular ownership coupled with the deteriorating road transport infrastructure may partly explain the recent increase in the number of road mishaps in the region.

This study made use of data collected from both primary and secondary sources. With regard to the primary source, the researcher relied on the administration of questionnaires to accident victims in one public hospital and one private hospital in each of the six states. The teaching hospitals visited are those located in Lagos, Oyo, Ogun and Osun states. However, in Ondo and Ekiti states, where there are no teaching hospitals, the researcher made use of specialist and general hospitals respectively; because these hospitals are the next in hierarchy to teaching hospitals in terms of patronage, coverage and service provision. The purpose of the questionnaire is to elicit information on the socio-economic characteristics of the accident victims, number and types of accident, injury sustained, collision manner as well as hospital expenses among others.

Thus, the study included a total of 438 victims of road traffic accidents; 335 road accident victims in public hospitals and 103 victims in private hospitals. A total of 60% of the road accident victims found on beds in both teaching and general/specialist hospitals at the time of visit were interviewed, whereas in private hospitals the percentage is 75. The higher percentage of interviews carried out in private hospitals is due to their smaller size. Using interview technique as tool for data collection, the researcher interviewed road accident victims in casualty wards, surgical wards and male wards as well as female wards. However, such distinction is not apparent in most private hospitals visited. Similarly, secondary information was sought from the both the records and casualty departments of each hospital. The analysis relied on the use of maps, frequency and tables of percentages to depict the pattern and socio-economic burden of road accident victims in the study area.

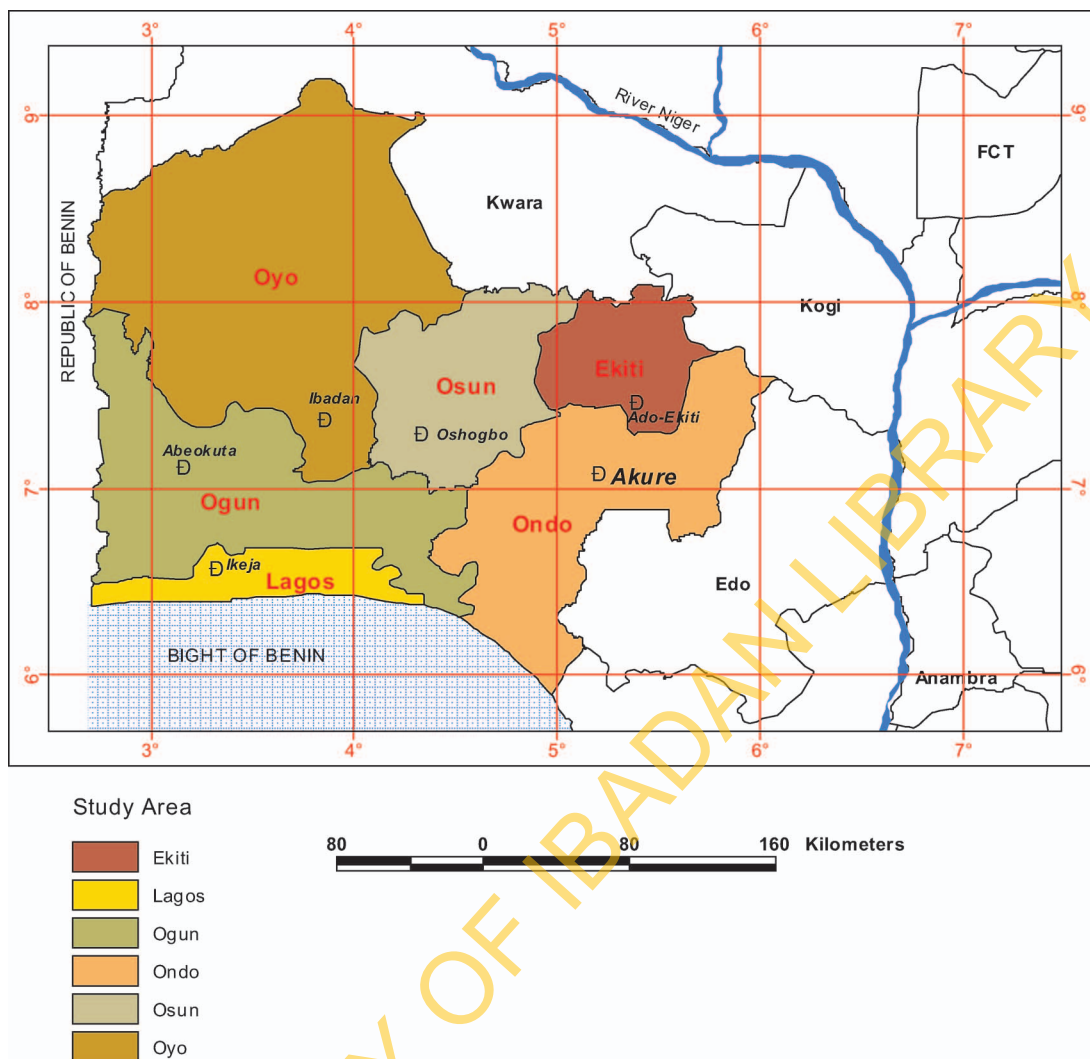


Figure 1. Map of south-western Nigeria. (Available in colour online.)

4. Results and discussion

4.1. Demographic and socio-economic implications of road traffic accidents

As stated earlier, this section is on the socio-economic characteristics of road accident victims in selected hospitals in south-western Nigeria. Six public hospitals as well as six private hospitals were selected for this purpose.

4.2. Age distribution of the accident victims

The age distribution of the road accident victims showed that 5.5% of the respondents were within the age bracket of 0–15 years, 33.6% between 16–30 years and 40.4% between 31–45 years old. Also, 16.4% of the respondents are within the age bracket of 46–60 years, while persons who are 60 years and above

constitute 4.1%. It can be deduced from the above that the productive age group (15–45 years) constitutes more than 70% of road accident victims. This has a lot of implications not only on human resources but also on the socio-economic development of the country. Studies in other countries reveal similar findings. For example, Odero et al. (2003) found in Kenya that more than 75% of the road traffic casualties are among the productive age group of between 15–45 years. In Bangladesh, Global Road Safety Partnership (2004) observed that the most common road death was among males in their prime of life (16–45 years). Similarly, World Health Organization/World Bank (2004) noted that more than two-thirds of the road traffic crashes occur among the productive age group of between 15–44 years. The state-to-state variation is not apparent. This age group serves as a pillar for each family and the future leader of this great country. But

their dreams and lives are cut short by road crashes. Their contributions to their respective families or the nation at large become nil or even negative when they die, become handicapped or completely disabled as a result of road crashes.

4.3. Sex structure of the accident victims

The sex distribution of the accident victims showed that males are more involved in road traffic accidents than females. The male constitutes more than 80% of the respondents in sampled hospitals in the southwest. However, there are variations from one state to another. For example, the percentage in Lagos state is about 88.8, in Ogun state 87.9, in Oyo State 76.7 in Ondo state 66.7 and in Ekiti state 78.7 as shown in Table 1. The high representation of males is expected because most of them are heads of households or breadwinners who must provide for themselves and their families. Also, the male population is more mobile than their female counterparts. Studies by World Health Organization/World Bank (2004) showed that, globally, more than 73% of road traffic fatalities are males. As heads of households or breadwinners, any injury or permanent disability will place a great burden on the rest of the family members and, in the event of death, it could drive them into perpetual poverty. This was confirmed by the Global Road Safety Partnership (2004) study in both Bangladesh and India, which showed that road crashes impacted negatively on household welfare and consequently deepened their level of poverty.

4.4. Marital status of the accident victims

In terms of marital status of road accident victims, 32% of them were still single, 64% married and 2.0% separated. Similarly, 1.3% of the respondents were divorced while 0.7% were widowed. However, variations occur from state to state. For instance, the percentage of those who were married in Lagos state is 75.3, in Ogun state 59.1, in Oyo state 65.1 and in Ondo state 50. The large proportion of the married accident victims has serious implications for their immediate

families. Many of them are not only heads of their different families but persons who offer both financial support and moral advice to other members of their various communities. Similarly, the money that is supposed to have been used for other productive ventures is used to settle medical bills. In case of death, it may drive the whole family into perpetual poverty.

4.5. Educational background of accident victims

Furthermore, the educational attainment of accident victims showed that 5.5% of the victims had no formal education, 23.3% with primary education, 51.4% with secondary education and 21.9% with tertiary education. The higher percentage of literate persons is expected because southwest Nigeria has the highest number of long-established schools in the country. State-to-state analysis shows a similar pattern except for Lagos state, where tertiary education accounted for more than 40% of the respondents. The large involvement of people with secondary education implies that many of them would have to stay away from school during the period of recovery and this has negative consequences on school attendance and students' performance and, ultimately, on human capital development.

4.6. Occupational characteristics of the respondents

The occupational characteristics of the victims showed that farming accounted for 2.7%, civil service 26.3%, unemployed 13.0% and studentship 14.2%. Others include trading 13.2% and artisan 26.3%, as shown Table 2. The low proportion of farming population is expected because farmers rarely travel to other locations besides their farms. Also, they do this on foot or through the use of bicycles. Only a few farmers go to their farms by motorised vehicles. Similarly, the survey points are mainly urban areas where the farming population is negligible. The reason for the large percentage being accounted for by artisans is not clear but may not be unconnected with the number of commercial motorcyclists (who are mostly artisans) who get involved in road accidents, especially

Table 1. Sex structure of the accident victims.

Sex	Lagos		Ogun		Oyo		Ondo		Ekiti		Osun		Average	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Male	79	88.8	73	87.9	66	76.7	32	66.7	37	78.7	64	75.3	351	80.1
Female	10	11.2	10	12.1	20	23.3	16	33.3	10	21.3	21	24.7	87	19.9
Total	89	100	83	100	86	100	48	100	47	100	85	100	438	100

Source: Author's fieldwork, 2006.

Table 2. Occupational characteristics of road accident victims in south-western Nigeria.

Occupation	Lagos		Ogun		Oyo		Ekiti		Ondo		Osun		Average	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Farming	–	–	–	–	4	4.6	–	–	1	2.1	7	8.2	12	2.7
Civil service	39	43.8	25	30.1	16	18.7	15	32.0	8	16.6	12	14.1	115	26.3
Unemployed	5	5.6	10	12.0	16	18.7	12	25.5	5	10.4	9	10.6	57	13.0
Student	6	6.7	15	18.1	10	11.6	3	6.4	10	20.8	18	21.2	62	14.2
Artisan	28	31.5	15	18.1	20	23.1	10	21.3	15	31.3	27	31.8	115	26.3
Trading	6	6.7	15	18.1	16	18.7	5	10.6	7	14.6	9	10.6	58	13.2
Pensioner	5	5.7	3	3.6	4	4.6	–	–	1	2.1	3	3.5	16	3.7
House help	–	–	–	–	–	–	2	4.2	–	–	–	–	2	0.5
Others	–	–	–	–	–	–	–	–	1	2.1	–	–	1	0.2
Total	89	100	83	100	86	100	47	100	48	100	85	100	438	100

Source: Author's fieldwork, 2006.

in the cities. On the other hand, students constantly move either to their schools or visit friends while the unemployed persons are constantly on the road in search of jobs. Similarly, civil servants move to their different places of work on a daily basis. The implications of this large representation of civil servants in the whole analysis may mean absenteeism from work and the attendant effect of loss of productive time on the economy. For the artisans, the effects are felt by the victims' immediate families as inability to go to work means little or no income for the day, because a substantial number of them depend on daily income to sustain their lives.

4.7. Monthly income of accident victims

The issue of disposable income is always very sensitive in any society, because the disclosure of the actual amount earned is erroneously believed as the basis for higher taxation. The researcher encountered this problem in the field as many accident victims initially declined to answer the question. The researcher had to embark on a full explanation of this study before this question was satisfactorily answered by some of them.

The pattern of monthly income indicated that 4.8% of the victims earned less than US\$8.5 a month. 11% earned between US\$8.5–17, 38.4% between US\$17–43 and 13% between US\$43–86. About 33% of the respondents earned over US\$86 per month. This is because many of the victims are civil servants, 'businessmen/women' or artisans. The state-to-state analysis showed that, in Lagos state, 50% of the victims earned between US\$17–43 monthly. The corresponding percentage for Oyo state is 23.5, Ogun state 23.5, Ondo state 3.3, Ekiti state 3.4 and Osun state 13.5. The analysis further showed that victims with higher income were found mostly in the teaching hospitals located in Lagos, Shagamu (Ogun state),

Ibadan (Oyo state), and Ife (Osun state) as well as in some of the private hospitals. The majority of the road accident victims in the region could still be regarded as being poor because about 60% of them are still living below the poverty line (persons earning less than US\$1 per day). Since the poor condition of the victims does not protect them from road crashes, in the event of any injury, money has to be spent on medical services, drugs and in some cases for funerals. This is capable of deepening or exacerbating the existing level of poverty of the victims and their family members.

4.8. Period of stay in the hospital and medical expenses

The period of stay of the victims in the hospitals depend on the seriousness of the injury as well as hospital expenses. The analysis showed at the time of visit that 41.1% of them had just spent 1 week, 34.9% 2 weeks, 15.1% 1 month and 7.5% 3 months. Accident victims who had spent between 6 months and 1 year accounted for 1.4%. About 70% of the respondents had spent less than US\$427 at the time of the survey. State-to-state analysis showed a similar pattern. For instance, 31.1% of the victims in Lagos state had expended about US\$427 on treatment at the time the researcher visited the hospitals, 58.8% in Oyo state, 56.8% in Osun state and 70.6% in Ogun state. The percentage is as high as 82.8 in Ekiti state and 93.3 in Ondo state. The large percentage of victims paying less than US\$427 in the two hospitals is due to the fact that these are general hospitals owned by the state governments, which heavily subsidise the costs of hospital bills for their citizens. Moreover, victims with complicated injuries are generally transferred to teaching hospitals for better medical attention. At this point, such victims may be charged higher for the cost of treatment than in the general hospitals.

Further analysis showed that the percentage of victims who spent more than US\$427 is high in both

Lagos and Oyo states as well as in most of the private hospitals. For example, 25% of the victims in Lagos state spent between US\$427 and US\$854, while in Oyo state 29.4% of the victims spent between US\$427 and US\$854. On average, each road accident victim had stayed for 25 days and spent about US\$444. This translates to an average of over US\$17 per day.

4.9. People who take care of accident victims

An analysis of people who take care of accident victims in the hospitals (family members, friends, apprentices permanently staying with the victims in the hospital) showed that about 85% of the victims had one of their family members around them in the hospital. However, further investigations indicated that most accident victims have people staying with them in the hospital on a rotational basis between certain hours of the day. In some exceptional cases, some victims had two people attending to their non-medical needs in the hospital. This accounted for about 10.3%. The victims in this category were people from rich families, very popular individuals or artisans with many apprentices. The implication of the foregoing is that most of these people who take

care of the victims are either students or workers who must give up their education and/or means of livelihoods in order to take good care of the injured. This portends a grave danger to human development with its unquantifiable consequences on both the regional and national economy.

4.10. Main causes of road traffic accidents

The causes of road accidents from the victims' perspective showed that driver error (speeding, wrong overtaking and distraction) accounted for 71.2%, vehicle defects (burst tyre and brake failure) 15.1%, road defects (potholes and slippery surface) 6.2% and weather-related causes (poor visibility and heavy rainfall) 4.8%. Others such as armed robbery and illegal police checkpoints at night accounted for 1.4%. The large percentage accounted for by driver error is expected because studies in Nigeria (Jegade, 1985; Mukoro, 1986; Oyeyemi, 2003; NITT 2004) and elsewhere (Jacobs & Palmer, 1996; Maunder & Pearce, 2000) showed similar findings. The breakdown of the major causes of road accidents is presented in Figure 2. The spatial distribution of the causes showed a similar pattern. For example, in Lagos state, driver error was responsible for 87.5% of the cases, Osun state 93.1%,

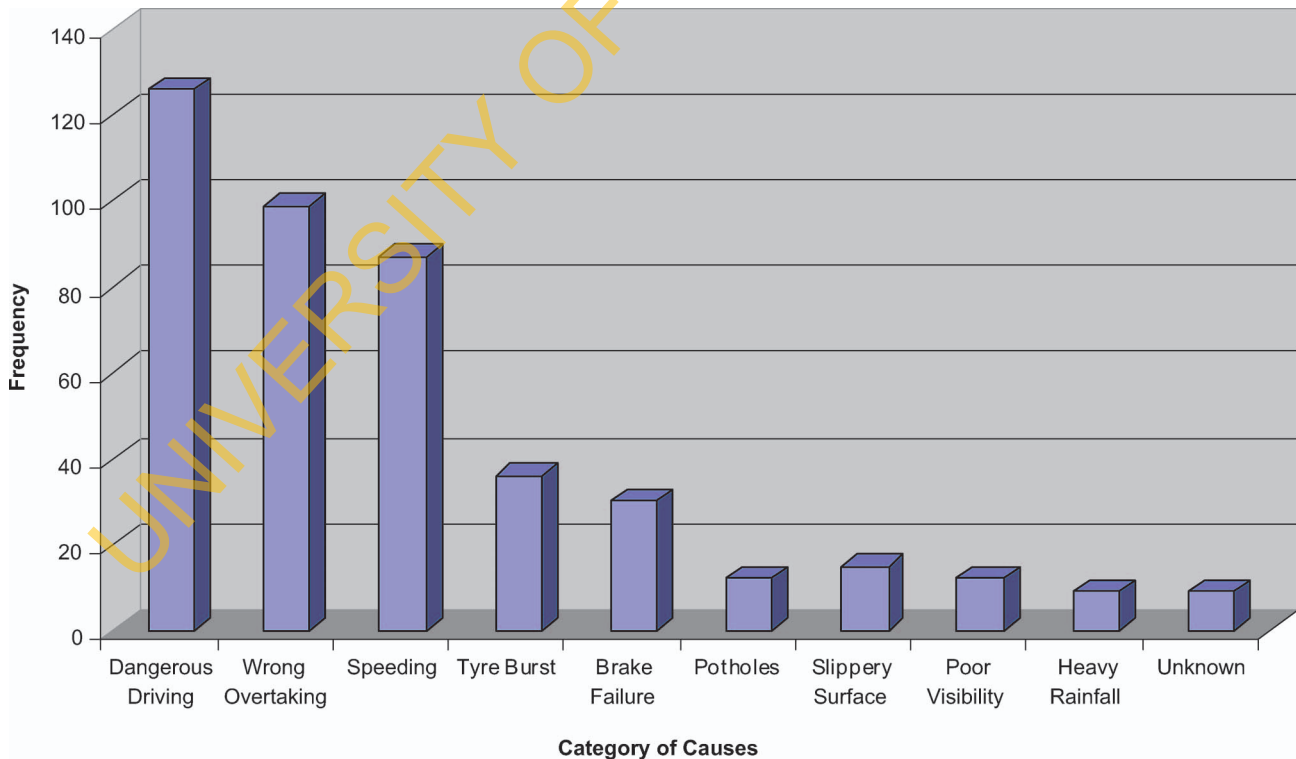


Figure 2. Breakdown of causes of road traffic crashes from the viewpoint of road traffic crashes victims' interview. Source: Author's fieldwork, 2006. (Available in colour online.)

Ondo state 73.3% and in Oyo State 79%. Other causes such as poor vehicle condition, faulty road engineering design as well as environmental issues are, however, becoming increasingly important.

4.11. Type of injury sustained by accident victims

With regard to injury type, leg injury accounted for 37.4% of all the injuries sustained by the victims. This is distantly followed by multiple injuries, which accounted for 15.0%, dislocation 14.1% and head

injury 12.9%. The state-to-state analysis also depicted a similar pattern. For instance, in Osun, Lagos, Ekiti and Ondo states, leg injury accounted for 43.5%, 37.1%, 42.6% and 41.7% respectively. This is shown in Figure 3. The large percentage of leg injury of all injuries sustained may not be unconnected with the high accident rate among commercial motorcyclists popularly called ‘Okada’ throughout the Federation. For example, over 80% of those who sustained leg injury in Ekiti, Ondo and Osun states were motorcyclists.

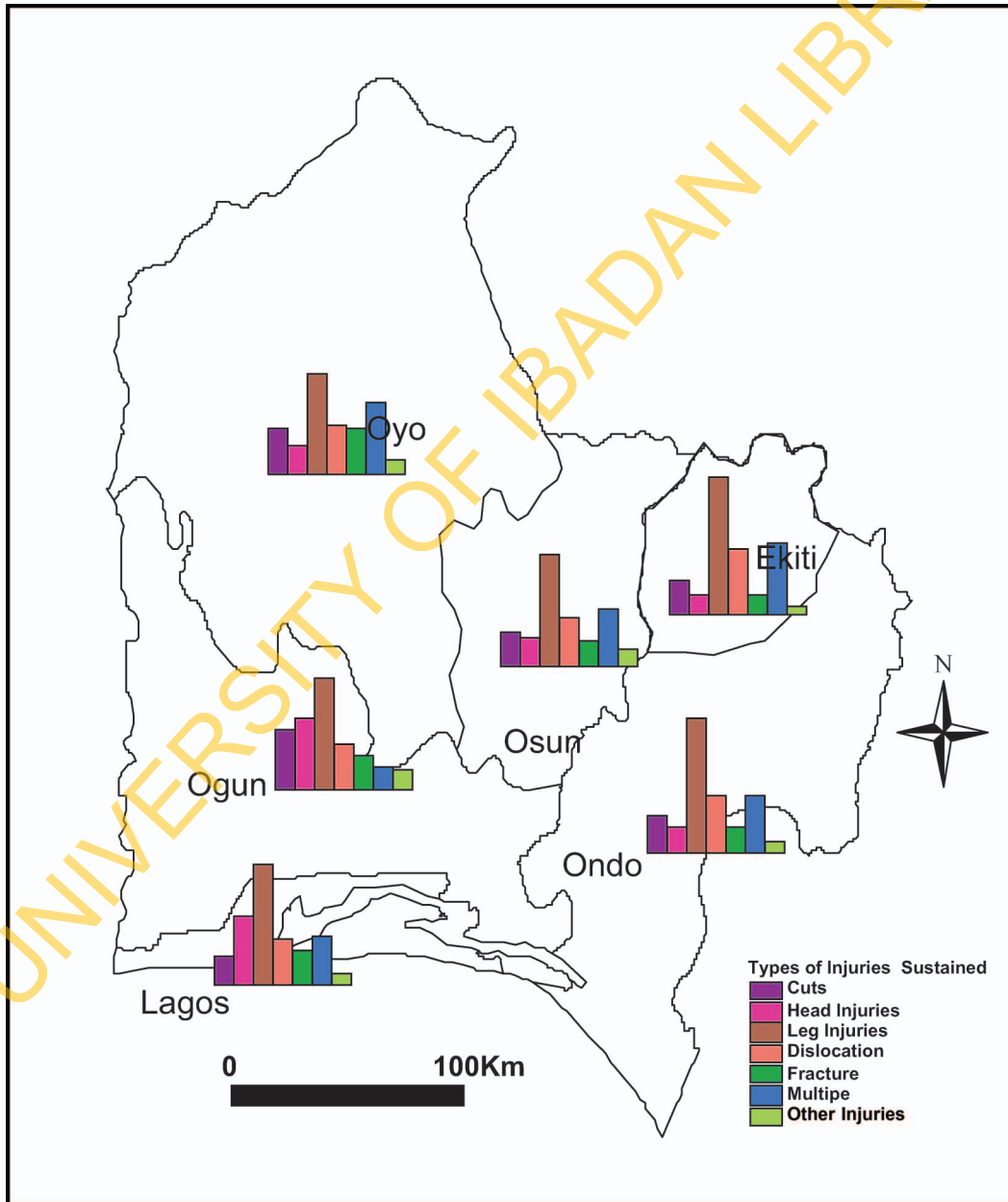


Figure 3. Type of injury sustained by the accident victims. (Available in colour online.)

4.12. Type of vehicles involved and manner of collision

An analysis of types of vehicles involved in road accidents indicated that motorcycles accounted for 42.5% of the total. This is followed by buses 31.5%, automobiles 13.7% and taxicabs 8.2%. Luxury buses accounted for only 4.1%. As noted earlier, motorcycles were mostly involved in road accident cases in Ekiti, Ondo and Osun states. In most of the hospitals visited, especially the private ones, victims of road accidents involving motorcycles had separate wards. This situation has become so serious that authorities of some hospitals are seriously considering not accepting victims of motorcycle accident any longer. Also, side collision accounted for over 40% of all cases. This is not surprising because motorcycle riders who are always in haste usually crisscross dangerously as they manoeuvre themselves among other road users. Also, usually, most motorcyclists collide with other vehicles either from the rear or by the side. Also, since 65% of road crashes occurred at junctions it is expected that side collisions would be very high. The large percentage of lone accidents (27.4%) in the analysis is not unconnected with speeding and careless driving, especially among young unmarried drivers whose driving experience is often very low. Other factors responsible for lone accidents include burst tyres, potholes on the carriageway and slippery road surface. Similarly, over 80% of the head-on collisions were due to wrong overtaking and dangerous driving. This pattern cuts across the six states in the study area.

4.13. Pedestrian involvement

Furthermore, more than 40% of the accident victims were either standing, walking or crossing the road when they were knocked down by vehicles. A substantial percentage of the pedestrian accidents were caused by motorcycles (Okada), which their operations in most cities in the study area has become a 'traffic menace' and is now a major source of concern to transport experts, researchers as well as policy makers.

5. Way forward

The above findings presuppose that road accidents are a fundamental health problem in Nigeria, especially in south-western Nigeria. Therefore, the most effective way of reducing the carnage on the roads and ameliorating the burden of the victims is by combining both preventive and post-crash management initiatives. To this end, the below enumerated initiatives are therefore recommended.

5.1. Preventive methods

5.1.1. Public enlightenment campaign and enforcement of traffic laws

There is need for more aggressive campaigns and public enlightenment by the Federal Road Safety Commission (FRSC) and other relevant traffic agencies on the danger of speeding. This is necessary because the accident victims identified it as the major factor that aggravates road crashes in the area. The enlightenment programme can take the form of workshops and symposia on road safety, where leaflets and posters will be distributed to drivers. Creation of awareness alone may not reduce road accidents; therefore, it must be backed up by effective enforcement of traffic laws and regulations. All traffic agencies (FRSC, the police, Vehicle Inspection Office) must make sure that all motorists respect the speed limit as well as ensuring that all vehicles are roadworthy.

5.1.2. Regulate the use of motorcycles

The government should, as a matter of urgency, regulate the use of motorcycles in the country because of their high involvement in road crashes. For instance, over 40% of accident victims were either knocked down by a motorcycle or were on it when the crash occurred. Although the government has recently banned their operations in the core areas of some cities, this has not been effectively enforced.

5.1.3. Subsidise motor vehicles' tyres

The federal government should provide targeted subsidies, such as a tyre subsidy, to motorists. This could be done by reducing import duties on imported new tyres or on the raw materials for manufacturing tyres. The government can also subsidise the activities of tyre manufacturing industries. This has become necessary because of the total reliance of commercial drivers on fairly used imported tyres known as 'Tokunbo tyres', which, although cheaper than new ones, easily burst under heavy loads and high ambient temperatures of the carriageway. In fact, accident victims identified tyre burst as one of the major causes of road crashes in south-western Nigeria.

5.2. Post-crash management initiatives

5.2.1. First aid training and building of roadside clinics

The government should direct the FRSC to have, as part of its activities, the training of its members on first

aid techniques so as to be able to professionally assist road accident victims at the scene of the accident. This is known at global level as Pre-hospital Trauma Care System. This is so because personal interviews with accident victims in some of the hospitals revealed that most of them did not receive immediate attention at the scene of the accident, thereby aggravating the scale of their injuries. This should be complemented by building roadside clinics staffed with medical personnel along the highways in the study area. These clinics should be at intervals of about 50 km and be staffed with doctors, nurses and other paramedics. Similarly, ambulances fitted with the latest communication gadgets should be provided along these roads to instantly convey road accident victims from the scene of accidents to these clinics, where they will receive first-hand attention before being taken to the hospitals.

5.2.2. Subsidise drugs and related medical services for accident victims

It is very important for the government to subsidise the victims' expenses of drugs and other related medical services because a substantial percentage of them are poor. In other words, they are still living below the poverty line. It is suggested that the government defray by 25% the cost of medical expenses of road accident victims admitted to government hospitals. Similarly, all public hospitals should be directed by law to admit and commence treatment of road accident victims first before payments are made. Some victims complained that they were not attended to until the initial deposit was made. Although the FRSC has made an official pronouncement that any hospital that rejects road accident victims will be fined US\$427, this is yet to have legal backing.

5.2.3. Strengthening of health institutions

All categories of public hospitals (teaching, general, specialist, medical centre) should be strengthened and overhauled by respective governments or their agencies in the study area. Investigations during the course of the survey revealed that most of the hospitals, especially general and private hospitals, do not have enough specialists in various areas in casualty wards. To this end, more specialist doctors (especially in orthopaedics) and nurses who specialise in emergency operations should be recruited. Also, equipment, machines and other facilities needed in both casualty and orthopaedic wards, which will enable them to respond promptly to emergency situations, should be provided in these hospitals.

6. Summary and conclusion

Road accidents are a public health problem in Nigeria. They have claimed several lives and rendered some seriously injured while others are permanently disabled. The study showed that more than 70% are within the productive age of between 15 and 45 years. Most of them are poor because over 60% of them are living below the poverty line (earning less than 1\$ per day) and expend about US\$17 daily on medical expenses.

The implications for the victims and their families are burdensome. A substantial number of them are in their productive age, who had to give up either their jobs or education during the period of admission, recovery and rehabilitation; either as a victim or carer. Similarly, the amount spent daily on medical costs is capable of deepening the existing level of poverty of victims and their families. Also, most of the victims of road accidents who suffered permanent disability are now beggars, found mostly at junctions, markets and major streets in almost all the cities in the southwest. It is therefore imperative to combine both preventive and post-crash initiatives in the management of road accident victims in the southwest region. This is expected to reduce the suffering of the road accident victims as well as the severity and scale of their injuries.

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