

# **TREND ANALYSIS OF COMMERCIAL MOTORCYCLE (OKADA) TRANSPORT CASUALTIES AND CHALLENGES OF ORTHOPEDIC SECTION OF REGULAR HOSPITAL IN IBADAN, NIGERIA**

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## **Abstract**

*This study evaluates the trends of commercial motorcycle (Okada) transport casualties in Ibadan Metropolis, Nigeria. It also assesses the challenges faced by workers in the orthopedic section of regular hospital in Ibadan. The study used both primary and secondary data obtained from eleven (11) randomly selected hospitals in Ibadan. The questionnaire was structured by the authors to obtain information from the health workers of the selected orthopedic hospitals. Descriptive statistics in form of frequency tables and percentages were used to analyze the data collected. Findings from this study show the accident of Okada is 2,477 within the period of five years. This implies that accident of Okada is very high as reported by the selected hospitals. Hospital records show that fracture (1,324) is the type of injury that most common with Okada accident victims. It was also revealed from hospital workers that an okada accident usually occurs more than four times in a month. The highest proportion of respondents also noted that there is not enough equipment in the regular hospital to tackle the menace of Okada casualties. The study concludes by emphasizing the need to increase the awareness of road-users to safety oriented road behavior; and as well the establishment of a full fledged Orthopedic hospital in the city of Ibadan. This will enhance speedy and appropriate treatment for the victims of Okada accidents.*

*Keywords: Trend Analysis, Commercial Motorcycle, Transport casualties, Hospital, Ibadan, Nigeria*

## INTRODUCTION

Transport is an indispensable element of development and socio-economic growth. As engine of economic integration, transport infrastructure and services facilities constitute a precondition for facilitating trade and the movement of goods and person. Important means of overland transportation include railways, motor vehicles (Cars, Lorries, Buses), as well as motorcycles, tricycles and bicycles (otherwise known as Para-transit). Others include the use of animals (camels, donkeys and horses), and animal drawn carts. The prevailing mode of transportation in a particular territory, locality or country is an indication of the level of the socio-economic development of that territory or locality.

Motorcycle injuries constitute a major but neglected emerging public health problem in developing countries (Rafindadi, 2000; Peden et al., 2002) and particularly Nigeria. They are among the leading causes of disability and deaths, the main victims being motorcyclists, passengers and pedestrians in the young reproductive age group (Solagberu et al., 2006). Injuries related to motorcycle contribute significantly to the number of road traffic injuries seen. In Malaysia, a study reported that motorcyclists constituted about 55-57% of total number of road accidents and 60% of traffic fatalities (Abdul, 2003). Also, a study in a private hospital in Port Harcourt, Nigeria documented that 47.3% of RTAs seen were motorcycle accidents (Ekere and Ibeanusi, 2003). Although the risk of being involved in a road accident is over eight times as great for a motorcycle as for a car, a motorcyclist is 24 times as likely to be killed or seriously injured per kilometer travelled than a car driver (The ROSPA Guide to road safety projects, 2005).

The reported prevalence of motorcycle injuries varies around the world, from 22.8% in China (Zhang et al., 2004) to as high as 62% in Vietnam (Nantulya and Reich, 2002). In Nigeria, prevalence of motorcycle injury ranging from 12.8-60% have been reported in different studies (Okedare, 2004; Nzegwu et al., 2008; Aniekan and Sydney, 2003; Okeniyi et al., 2005). Long established patterns of injury risk suggest that the lower limbs are the body parts most likely to be injured in motorcycle accidents. In Lagos, Nigeria, after the introduction of commercial motorcycles, incidence of reported cases of road traffic accident at Igbobi Orthopedic hospital had a 3000% increase in number of patients with fractured limbs (Idika and Sanni, 2004). Previous studies in Nigeria have shown that limb and head injuries are the commonest causes of morbidity and mortality in motorcycle injuries (Ekere and Ibeanusi, 2003; Oluwadiya et al., 2004). This paper therefore evaluates the trends of commercial motorcycle (Okada) transport casualties in Ibadan Metropolis, Nigeria. It also assesses the challenges faced by workers in the orthopedic section of regular hospital in Ibadan.

## THEORETICAL FRAMEWORK

Whilst understanding the causes of motorcycle crashes (e.g., speed, reckless riding behaviour, conspicuity issues) assists in the development of initiatives aimed at reducing crashes, the role of theory in this context can play a pivotal role in not only explaining, but predicting, and ultimately changing the behaviour that leads to crashes. Theory can provide a basis for understanding the underlying psychosocial mechanisms inherent in risk-taking behaviour and, most importantly, the means for changing these. Theory enables targeted strategies to be put in place which have predictable (theorized) outcomes. If the theory is sound, interventions can be developed with the knowledge that they are reasonably likely to result in behavioural change and, therefore, play a protective role in preventing such crashes from ever occurring. For this reason, this research has been guided by a strong theoretical framework.

Road safety research typically uses a multidisciplinary approach, drawing on disciplines as diverse as psychology, information technology, and engineering. As this particular program of research is to determine extent of accidents through commercial motorcycle operation, theoretical perspectives used in existing studies of motorcyclist and driver behaviour were considered for their applicability to this research. These theories draw mainly on the disciplines of sociology and psychology; in particular, social psychology.

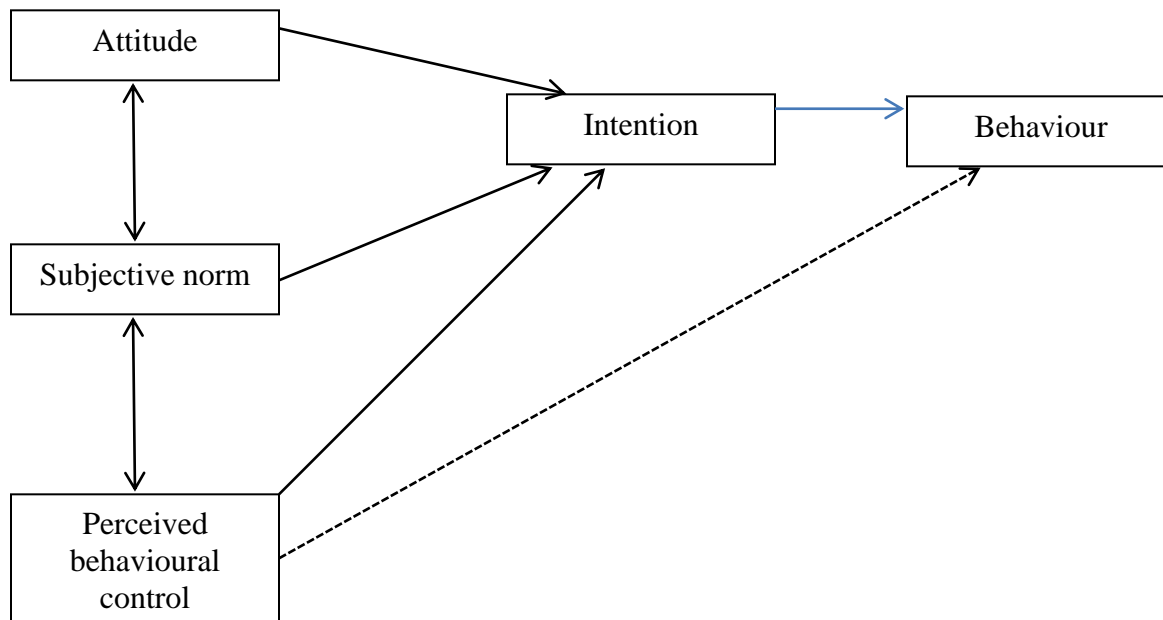
### Theory of Planned Behaviour (TPB)

The theory of planned behaviour (TPB) has been used as the basis of a number of road safety studies in an attempt to understand issues such as speeding and other traffic violations (Newnam, Watson & Murrar, 2004; Parker, Manstead & Stradling, 1995; Parker, Manstead, Stradling, Reason & Baxter, 1992; Parker, Stradling & Manstead, 1996), bicycle helmet use (Lajunen & Räsänen, 2004; Quine et al., 1998; Quine, Rutter & Arnold, 2001), pedestrian behaviour (Evans & Norman, 1998), transport modal choice (Bamberg, Ajzen & Schmidt, 2003; Forward, 2004), drunk driving (Gordon & Hunt, 1998; Sheehan et al., 1996) and seatbelt use (Gordon & Hunt, 1998).

Ajzen (1985; 1988; 1991) formulated the TPB to take account of behaviours which are subject to factors over and above an individual's motivation to perform the behaviour; that is, factors which may be outside the volitional control of the individual (see Figure.1). Essentially, like the TRA, the TPB assumes that a person's salient beliefs underpin behaviour. With the TRA, beliefs influence the attitudes and subjective norms, which in turn are determinants of intention, which then leads to the resulting behaviour. The TPB introduces a third determinant, perceived behavioural control (PBC). PBC is also underpinned by beliefs and is included to take account of factors which are perceived to be not completely under an individual's control.

Ajzen (1991) argues that the predictive value of the determinants of intention and behaviour will vary across situations and individuals. For example, for some situations, attitudes may be a more important predictor than normative influences. In others, or for other individuals in the same situation, perceived behavioural control may be the best predictor. In short, the theory hypothesizes that these three factors (attitude, subjective norm, and perceived behavioural control) influence the behaviour of most people, although the exact amount of influence exerted by any one of these factors varies according to the particular person and the particular situation. In most people, however, the strength of intention in conjunction with estimates of perceived behavioural control (PBC) will determine the behavioural outcome. Where a person has sufficient actual control over the behaviour in question, intentions alone will predict this behaviour.

Figure 1: The Theory of Planned Behavior



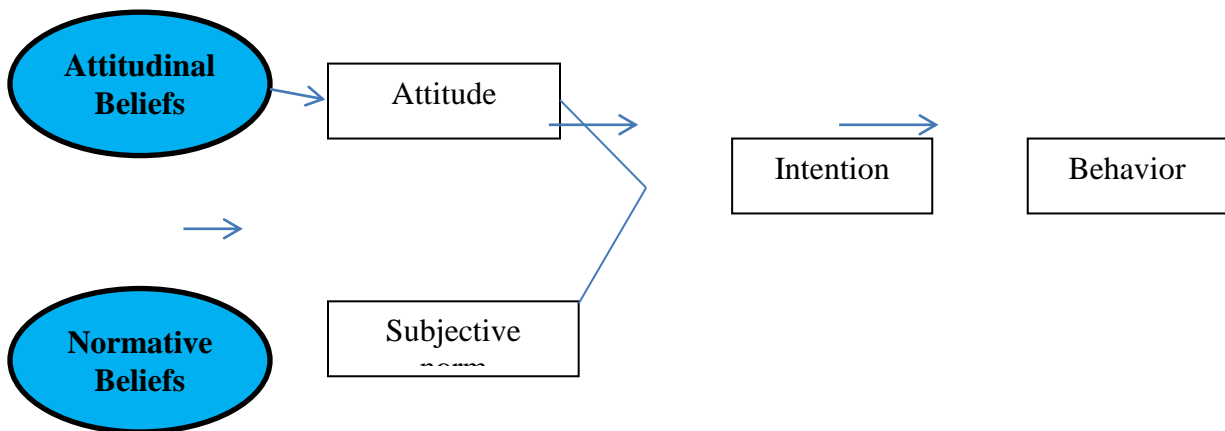
Source: Adapted from Ajzen (1991, p. 182)

### The Theory of Reasoned Action (TRA)

The theory of reasoned action (TRA) (Ajzen & Fishbein, 1980; Fishbein, 1980; Fishbein & Ajzen, 1975) postulates that intentions are the best predictor of behaviour. Intentions are formulated via a reasoned process whereby the individual considers the consequences of their actions, either implicitly or explicitly. The behaviour reasoned to be the most likely to achieve the most positive outcome for the individual is then enacted.

The TRA hypothesizes two determinants of intentions: attitudes and subjective norms (see Figure 4) which are underpinned by attitudinal and normative beliefs about the consequences of the behaviour. The strength of a person's attitude (i.e., their positive or negative evaluation of performing the behaviour) combined with the weight of social pressure they perceive they are under to perform the behaviour (subjective norm) will influence the strength of their intention to perform the behaviour and the subsequent action.

Figure 2: The Theory of Reasoned Action



Source: Adapted from Fishbein and Ajzen (1975, p. 16 and p. 334)

In a preliminary study into motorcyclist behaviour, Rutter et al. (1992) used factor analysis on 200 postal surveys to test the TRA (in addition to the 200 surveys used to test the HBM). They found self reported behaviour fell into three main categories: “law breaking”, “carelessness”, and “safety equipment and training”. For these behaviours, personal (or attitudinal) beliefs accounted for a significant proportion of the variance whereas normative beliefs did not. However, when they explored crashes, they found that both attitudinal and normative beliefs about being considerate and law abiding were significantly (negatively) related to crashes.

Rutter et al. (1995) found that the best predictor of crashes was the self reported behaviour of breaking laws. The TRA component showed beliefs that being a safe rider meant following the Highway Code, obeying traffic laws, not speeding, and doing as taught *negatively* predicted self reported law breaking behaviour at Time Two. However, a second significant factor, ‘taking care’, was contrary to expectations as the belief that being a safe rider (which meant concentrating properly, maintaining your bike, showing consideration, and following the Highway Code) emerged as a positive predictor of law breaking behaviour at Time Two. Rutter et al. (1995, p.380) suggest that this may be “because a belief in taking care leads to overconfidence, risk compensation, or breaking the law to avert danger to oneself or others”.

### The Health Belief Model (HBM)

One of the earliest studies which examined the psychological factors associated with motorcycle riding was conducted in the UK in the late 1980s (Rutter & Quine, 1996; Rutter, Quine & Chesham, 1992, 1995). This study applied both the health belief model (Janz & Becker, 1984) and the theory of reasoned action (TRA) (Ajzen & Fishbein, 1980; Fishbein, 1980; Fishbein & Ajzen, 1975) in a postal survey examining the relationship between rider beliefs, characteristics, and self reported behaviour.

The health belief model (HBM) was developed in the 1950s as a response to concerns over people's unwillingness to take up disease prevention initiatives. Essentially it consists of 4 aspects:

- Perceived susceptibility: the extent to which someone feels that they are likely to contract the condition;
- Perceived severity: how severe the consequences would be if they did contract the condition;
- Perceived benefits: whether the individual feels that taking preventative action would indeed reduce the risk of contracting the condition; and
- Perceived barriers: the estimated negative effects of taking the health action (costs, discomfort, time, pain, difficulty etc.) (Janz & Becker, 1984).

In the preliminary study by Rutter et al. (1992), 400 questionnaires were posted out to riders; 200 testing the HBM and 200 testing the TRA. The HBM did not show a significant relationship to crashes. In the main study, Rutter et al. (1995) sent out 2051 postal questionnaires to assess beliefs relating to behaviour and crashes using the HBM and 2050 questionnaires using the TRA.

A second questionnaire was posted 12 months later to examine the self reported behaviours, crashes, and other measures such as exposure that had occurred during that 12 month period. They found that the best predictor of crashes was the self reported behaviour of breaking laws and rules (i.e., speeding, breaking traffic laws, breaking the Highway Code, riding too close). Both the TRA and HBM explained similar amounts of variance (31%) for this behaviour. Once demographic factors such as age, sex, education, experience and training were accounted for, two significant predictive factors of law breaking behaviour (obeying laws and taking care) emerged from the TRA, whilst the HBM produced four factors. These were:

- feeling safe: people who stated that following the road rules and concentrating properly made them feel safe, and that showing consideration for other road users earn them goodwill, and doing what was taught made them feel skilful, were less likely to report breaking laws and rules 12 months later;

- having fun: those who reported that breaking the speed limit is fun, that riding too close to the vehicle in front makes overtaking easier, that riding after drinking gave them increased confidence and who disagreed that bright or reflective clothing helps people to see you better, were more likely to report breaking laws and rules later;
- good bike performance and safety: those who agreed that maintaining their bike makes it perform better, and concentrating while riding makes them feel safer, and who disagreed that riding too close makes overtaking easier, and disagreed that wearing a crash helmet made them feel safe, were more likely to report breaking laws and rules at time two, 12 months later; and
- risk of crash: those who agreed that breaking the speed limit increases their risk of having a crash, and maintaining your bike takes time and expense, and who disagreed that wearing bright or reflective clothing makes you look stupid, or obeying the traffic laws slows you down were less likely to report breaking laws and rules 12 months later (Rutter et al., 1995)

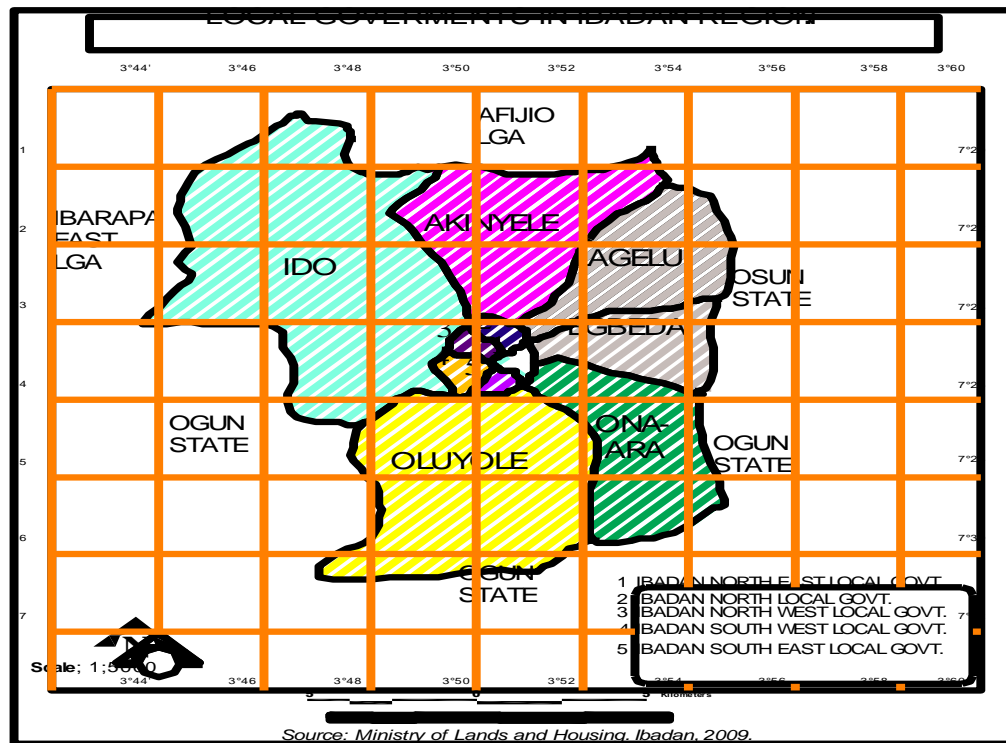
## STUDY AREA

Ibadan, one of the fastest growing cities in Nigeria is located in Oyo State in the south-west geopolitical zone of Nigeria. The State is bounded on the North by Kwara State, on the south by Ogun State, on the west by the sister state of Osun, and on the West by the neighboring Republic of Benin.

The city of Ibadan is located approximately on longitude  $3^{\circ} 51'$  to  $3^{\circ} 55'$  East of the Greenwich Meridian and latitude  $7^{\circ} 23'$  to  $7^{\circ} 58'$  North of the Equator at a distance some 145 kilometres west of Lagos. Ibadan is directly connected to many towns in Nigeria, as its rural hinterland by a system of roads, railways and air routes. The physical setting of the city consists of ridges of hills that run approximately in northwest – southeast direction. The largest of these ridges lies in the central part of the city and contains such peaks as Mapo, Mokola and Aremo. These hills range in elevation from 160 to 275 metres above sea level and thus afford the visitor a panoramic view of the city.

The average temperature of Ibadan is  $27^{\circ}\text{C}$ , with a range of  $4^{\circ}\text{C}$ ; the mean annual rainfall is above 1,505mm while the relative humidity is between 60% and 80%. The vegetation, of Ibadan is rainforest. It has tall trees exist in different heights; they form canopies i.e. lower, middle and upper layers; it has numerous heterogeneous species of trees like Iroko, Obeche and Mahogany.

Figure 3: Map of Local Governments in Ibadan Metropolis



Source: Ministry of Lands and Housing, Ibadan, 2009

## RESEARCH METHOD

Population for this study consists of number of hospitals which have orthopedic section in the city of Ibadan. A total of 105 hospitals were identified to have orthopedic section in Ibadan. Out of this, 10.5% of the hospitals were selected randomly for the purpose of administering questionnaire to them, making a total of eleven (11) hospitals. The questionnaire was structured by the authors to obtain information from the health workers of the selected Orthopedic hospitals. The random selection take the form of paper balloting. In each of the hospital, one health worker was administered questionnaire to. The lists of these hospitals are: 1. Ring road hospital (New Adeoyo), 2. St. Mathias Hospital, Aremo, 3. O. L. A. Catholic Hospital Oluyoro, Oke-Offa, 4. University College Hospital (UCH), 5. Sunny Dale Orthopedic Hospital, Alalubosa GRA, 6. Saint Lucial Hospital, Oke-Ado, 7. Group Medical Practitioners, Mokola, 8. Toun Memorial Specialist Hospital, New Ife Road, 9. Banby Hospital, Akobo, 10. Cottage Hospital/Comprehensive Health Centre, Oyo Police Command, and 11. Crown Hospital, Agbaje Bus-stop Orita Challenge. It could also be noted that record of Okada accident victims in the last five (5) years i.e. 2010-2014 were also obtained.



The data collected from the field were subjected to statistical analysis using descriptive statistics like frequency tables in percentages. This was done with the use of computer software program known as Statistical Package for the Social Sciences (SPSS).

## RESEARCH FINDINGS

### Trend Analysis of Okada Accidents in Ibadan from 2010-2014

Table 1: Victims of Okada Accidents in Ibadan from 2010-2014

S/N	Name of hospital	Years					Total
		2010	2011	2012	2013	2014	
1	Ring road hospital (New Adeoyo)	32	44	47	53	73	249
2	St. Mathias Hospital, Aremo	28	20	48	51	64	211
3	O. L. A. Catholic Hospital Oluyoro, Oke-Offa	20	19	29	35	70	173
4	University College Hospital (UCH)	75	88	97	109	146	515
5	Sunny Dale Orthopedic Hospital, Alalubosa GRA	29	38	49	97	160	373
6	Toun Memorial Specialist Hospital, New Ibe Road	36	41	59	83	101	320
7	Group Medical Practitioners, Mokola	52	12	25	49	69	207
8	Saint Lucial Hospital, Oke-Ado	15	17	19	21	25	97
9	Banby Hospital, Akobo	21	28	33	25	41	148
10	Cottage Hospital/Comprehensive Health Centre, Oyo Police Command	5	15	19	16	25	80
11	Crown Hospital, Agbaje Bus-stop Orita Challenge	16	19	22	20	27	104
<b>Total</b>		<b>329</b>	<b>341</b>	<b>447</b>	<b>559</b>	<b>801</b>	<b>2,477</b>

Figure 4: Total Cases of Okada Accidents in the Hospitals

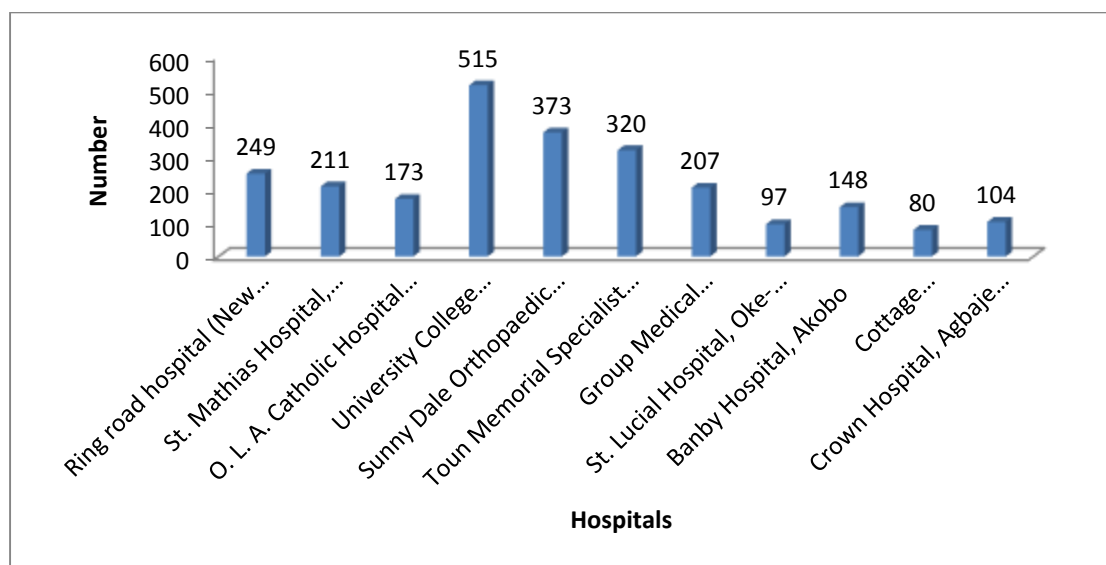
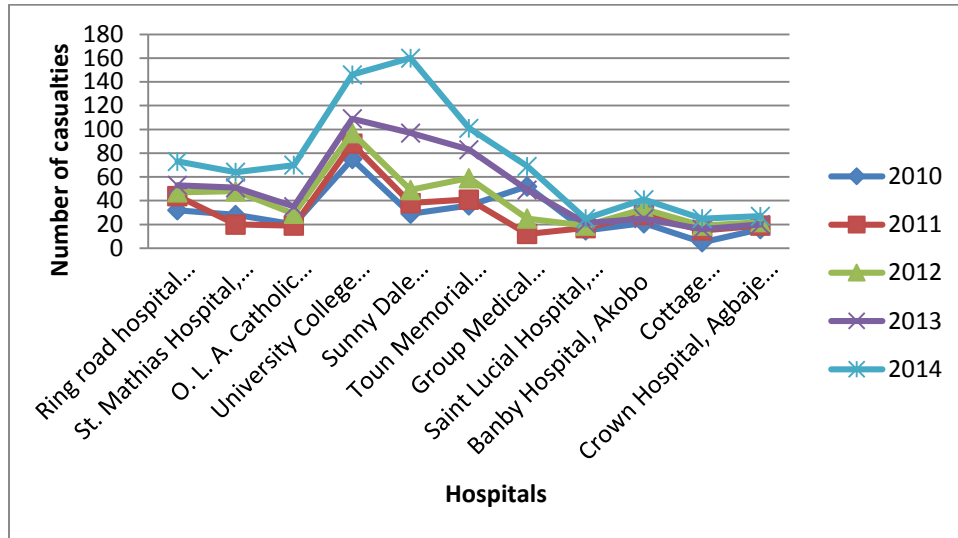


Figure 5: Yearly Cases of Okada Accidents in the Hospitals



It is observed generally that the accident of Okada is 2,477 within the period of five years in the selected 11 hospitals in Ibadan Metropolis. This implies that accident of Okada is very high. Apart from the high magnitude/number of Okada accident, the incessant nature of its happening is also worrisome.

Table 2: Records of Types of Injury in the Hospitals 2010-2014

Name of Hospitals	Bruises/ abrasions		Lacerations		Fractures		Burns		Total	
	N	%	N	%	N	%	N	%	N	%
Ring road hospital (New Adeoyo)	71	28.3	38	15.2	132	53	8	3.5	<b>249</b>	
St. Mathias Hospital, Aremo	75	35.6	28	13.4	102	48.3	6	2.7	<b>211</b>	
O. L. A. Catholic Hospital Oluyoro, Oke-Offa	55	31.5	37	21.1	79	45.6	2	1.8	<b>173</b>	
University College Hospital (UCH)	88	17.1	117	22.7	285	55.4	25	4.8	<b>515</b>	
Sunny Dale Orthopedic Hospital, Alalubosa GRA	42	11.2	69	18.5	259	69.3	3	1.0	<b>373</b>	
Toun Memorial Specialist Hospital, New Ife Road	39	40.2	23	23.7	34	34.8	1	1.3	<b>97</b>	
Group Medical Practitioners, Mokola	63	30.4	36	17.6	103	49.7	5	2.3	<b>207</b>	
Saint Lucial Hospital, Oke-Ado	92	28.8	46	14.5	168	52.6	14	4.1	<b>320</b>	
Banby Hospital, Akobo	39	26.6	28	18.9	79	53.4	2	1.1	<b>148</b>	
Cottage Hospital/ Comprehensive Health Centre, Oyo Police Command	28	34.7	14	17.5	37	46.2	1	1.6	<b>80</b>	
Crown Hospital, Agbaje Bus-stop Orita Challenge	40	38.6	17	16.0	46	44.1	1	1.3	<b>104</b>	
<b>Total</b>	<b>632</b>	<b>25.5</b>	<b>453</b>	<b>18.3</b>	<b>1324</b>	<b>53.5</b>	<b>68</b>	<b>2.7</b>	<b>2,477</b>	

Hospital records as contained in table 2 show that fracture is the type of injury that common with Okada accidents victims. It accounted for 1,324 out of 2,477 recorded in the eleven hospitals sampled for this study in the last five years. This is followed by Bruises/abrasions (632), Lacerations (453), and the least type of injury is Burns (68). It can be deduced from this records that bone fracture is the most prevalent injury usually sustained by the Okada accidents victims in the study area.

### **Challenges Faced by Okada Accident Victims and Workers in the Orthopedic Section of Regular Hospital**

Attempt is made in this sub section to examine some of the challenges faced by workers in the orthopedic section of regular hospitals and Okada accident victims.

Table 3: Need for Orthopedic Hospital in Ibadan

<b>Need for orthopedic</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	10	90.9
No	1	9.1
Total	11	100

It is observed in the table 3 that majority of respondents (90.9%) are of the opinion that there is need for specialist/full fledged orthopedic hospital in the study area.

Table 4: Facilities and Trend of Casualties

<b>Facilities and casualties</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	3	27.3
No	8	72.7
Total	11	100

When asked about the fact that does facilities in the hospitals can cope with the trend of Okada casualties, majority of respondents (72.7%) as contained in table 4 noted that facilities in the regular hospital do not sustain the number of casualties been recorded.

Table 5: Injury Arrival Time and Outcome

<b>Injury</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Fast	1	9.1
Moderate	2	18.2
Slow	2	18.2
Very slow	6	54.5
Total	11	100

Table 6: Frequency of Occurrence of Okada Accidents in a Month

Number of occurrence	Frequency	Percentage (%)
Once	1	9.1
Twice	1	9.1
Three times	2	18.2
Four times	3	27.3
More than 4 times	4	36.4
Total	11	100

The officials (workers) in the orthopedic section of hospitals gave accounts of frequency of okada accidents occurrence in a month as shown in table 6. According to the table 9.1% of respondents indicated that okada accidents occurs once and twice in a month, while 18.2%, 27.3% and 36.4% of respondents are of the opinion that accidents of okada occurs three times, four times and more than four times in a month. It can be inferred from this table that the highest proportion of respondents are of the view that okada accidents usually occurs more than four times in a month. This however, implies that the number of Occurrence of Okada accidents is very high in the study area. That is why workers in the hospitals frequently lament the incessant cases of Okada accidents in the city of Ibadan.

Table 7: Nature and Fatality of Casualties

Fatality and Casualties	Frequency	Percentage (%)
Fatal	8	72.7
Not fatal	3	27.3
Total	11	100

Table 8: Periodic of Casualties and Proper Treatment

Casualties	Frequency	Percentage (%)
Often	1	9.1
Moderate	2	18.2
Not often	6	54.5
Not at all often	2	18.2
Total	11	100

Table 9: Adequacy of Bed Space

Adequacy of bed space	Frequency	Percentage (%)
Very adequate	1	9.1
Adequate	1	9.1
Just adequate	1	9.1
Not adequate	6	54.5
Not at all adequate	2	18.2
Total	11	100

It is observed from table 9 that the highest proportion of respondents disclosed that bed space in the orthopedic section of a regular hospital is not adequate. This finding is also buttressing the previous one that facilities in the hospitals are not adequate.

Table 10: Safety of the Environment for Health Workers

Safety	Frequency	Percentage (%)
Safe	1	9.1
Moderately safe	7	63.6
Not safe	2	18.2
Not at all safe	1	9.1
Total	11	100

The environment for health workers is moderately safe in the orthopedic section of regular hospital. This is the view of 63.6% of respondents, while 18.2% of them argued that it is not safe.

Table 11: Enough Equipment to Tackle Menace of Okada Casualties

Equipment	Frequency	Percentage (%)
Yes	3	27.3
No	8	72.7
Total	11	100

It is observed that there is no enough equipment in the regular hospital to tackle menace of Okada casualties. This is the position of most of the respondents (72.7%) in the study area.

Table 12: Hospital around Equipped to Handle Cases of Okada Casualties

Equipment	Frequency	Percentage (%)
Yes	1	9.1
No	10	90.9
Total	11	100

Table 13: Responses of Medical Personnel

Medical personnel	Frequency	Percentage (%)
Fast	1	9.1
Moderate	2	18.2
Slow	6	54.5
Very slow	2	18.2
Total	11	100

## SUMMARY AND DISCUSSION

1. It is observed generally that the accident of Okada is 2,477 within the period of five years in the selected 11 hospitals in Ibadan Metropolis. This implies that accident of Okada is very high. Apart from the high magnitude/number of Okada accident, the incessant nature of its happening is also worrisome.
2. Hospital records show that fracture is the type of injury that common with Okada accidents victims. It accounted for 1,324 out of 2,477 recorded in the eleven hospitals sampled for this study in the last five years. This is followed by Bruises/abrasions (632), Lacerations (453), and the least type of injury is Burns (68). It can be deduced from this records that bone fracture is the most prevalent injury usually sustained by the Okada accidents victims in the study area.
3. The highest proportion of hospital workers are of the view that Okada accidents usually occurs more than four times in a month. This however, implies that the number of Occurrence of Okada accidents is very high in the study area. That is why workers in the hospitals frequently lament incessant cases of Okada accidents in the city of Ibadan.
4. Majority of respondents (90.9%) are of the opinion that there is need for specialist/full fledged orthopedic hospital in the study area.
5. Bulk of respondents (72.7%) maintained that facilities in the regular hospital do not withstand the number of Okada accident casualties been recorded.
6. The highest proportion of respondents disclosed that bed space in the orthopedic section of a regular hospital is not adequate. This finding is also buttressing the previous one that facilities in the hospitals are not adequate.

That the prognosis of motor cycle injuries is worse in developing countries is well documented (Odelowo, 1994, Oyediran, 1997). Factorssuch as poor pre-hospital and hospital care and late presentation in hospitals are responsible for this (Adesunkanmi, 1998).

The mortality rate reported in this study is comparable to that seen elsewhere in Africa and also from the developed countries. But this does not mean that the severity of injuries is the same. Most of the patients who required urgent treatment may have died either at the scene of accident or in transit to the hospital because of poor pre-hospital care. The facilities needed to improve survival of these patients are expensive and beyond the economic capabilities of most third world countries. However accident prevention and effective pre-hospital care are recognized ways of attaining this goal.

## POLICY ISSUES AND CONCLUSION

This paper has examined the trends of commercial motorcycle (Okada) transport casualties in Ibadan Metropolis, Nigeria. It was found out that accident of Okada is very high. Apart from the high magnitude/number of Okada accident, the incessant nature of its happening is also worrisome. It is on this note that the paper suggests the following for policy directions:

1. Establishment of a full fledged Orthopedic hospital in the city of Ibadan. This will enhance speedy and appropriate treatment for the victims of Okada accidents.
2. There is also the need to increase the awareness of road-users to safety oriented road behaviour.
3. The motor cyclist should also be encouraged or enforced to use protective devices.

This study however not only contributing to the existing body of knowledge in the field of transportation and safety but also serves as a useful guide to the policy makers.

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