

## **Factors Influencing High Rate of Commercial Motorcycle Accidents in Nigeria**

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### **Abstract**

*This research paper focused on factors influencing high rate of commercial motorcycle accidents in Oyo State, Nigeria. The purpose is to create awareness on how occurrence of accidents among commercial motorcyclist can be brought to a minimal level through the use of information. The total number of four hundreds and fifty commercial motorcycle riders was considered for the study; the same numbers were returned and found valid for analysis. The findings from this research work showed that demographic information has significant influence on the causes of road accidents among commercial motorcycle riders in Nigeria. Among factors that significantly contributing to increasing rate of commercial motorcycle accidents are overspeeding, wrong overtaking, bad roads, sudden mechanical defects, alcoholic intake etc. It was discovered that commercial motorcycle riders do not comply with Road Safety Highway Codes. The paper therefore provides valuable information on causes of accidents especially among commercial motorcyclist in Nigeria and how those causal factors can be managed*

### **Introduction**

Over the years, there is a wide gap in knowledge and information available about road safety efforts and its practice in Nigeria. A lot of underlying principles of road safety are either not well understood or put into effective practice by various key stake holders. This study “Factors influencing high rate of commercial motorcycle accidents in Nigeria” is aimed at addressing the gap, such that there would be a significant reduction in road accidents, dramatic improvement in the management and control of road accidents, the apprehension and prosecution of road traffic offender among commercial motorcycle riders in Oyo state, Nigeria.

With the rising motorcycle population and a significant increase in the number of motorist and commuters in Nigeria, we may expect more road accidents, with the accompanying casualties and fatalities except perhaps, decisive steps are taken to clearly understand and squarely face the principal causes of road accident, beyond these, road accidents need to be seen to be sufficiently controlled and well managed.

The federal road safety commission was put in place about twenty-four years ago (1988) in Nigeria in order to ensure safety of lives on Nigeria roads, the rate with which accident is occurring on daily basis on our roads does not justify the large amount of money being paid to various agencies in charge of road safety in Nigeria. As a result, this study wants to examine the root cause of these incessant occurrences of accident especially among commercial motorcycle riders on Nigerian road. It is believed that if the above stated problem is known, it will help a great deal to proffers measures that will reduce the high rates of the occurrence of accidents among commercial motorcycles riders in Oyo state and Nigeria at large.

### ***Literature Review***

According to Taiwo (2007), most drivers take for granted the ability of their automobile to handle minor road hazards such as pot holes or rail road tracks, these minor road hazard are major problems for motorcycles because these hazards may require sudden changes of lane position and direction. 'Accidents due to motorcycles riding especially in developing countries like Nigeria increase every year due to the fact that the motorcyclists do not follow the traffic rules and they in their mentality believe they are 'the king on the roads' (FRSC, 2007). FRSC (2007) further stated that motorcycle crashes are more likely to occur on certain times especially raining seasons in Nigeria is a season for motorcycle accidents because of the filled pot holes with water and the slippery surfaces of the roads.

The same body has identified road defects as causal factor of motorcycle accident in Nigeria, as a result of the various pot holes and wobbles motions on deformed roads, the motorcyclists' loose control of their motorcycles and collision with oncoming vehicles may occur. Often factors responsible as identified by FRSC (2007) include brake failure; control of the motorcycle is lost when the brake fails and thereby resulted in an accident.

Akinlade (2000) while looking at the same subject matter, from the public health point of view noted that road traffic accidents have been recognized as an important health problems in both developed and developing countries. He observed that road traffic accident have been increasing in developing countries like Nigeria and Tanzania while there has been a reduction in developed countries like Australia (Ogbeide, et al, 1994). Motorcycles accident is believed to affect the quality of life and to have major social and economic consequences. It causes may be a combination of human errors and failures, poor road signs, adverse road conditions, and vehicle defects. It was noted that the most important aspect of the human factor are the age of the motorcyclist, medical fitness of the motorcyclist, alcoholic consumption pattern, fatigue, mental status and educational level (Oladejo and Brieger, 1986; Odero, et al 1997; Lin et al, 2003; Sexton et al, 2004; Elliot, Baughan and Sexton, 2007).

Various factors are associated with accidents including alcoholic and high speed driving. Aganga, Umoh and Abechi (1983), using subjective methods such as smell of alcohol on the people interviewed, ascertained that as low as 0.01% of drivers in Zaria area of Nigeria were driving while intoxicated compared with 45% in Jamaica. Driver's negligence is another major contributing factor to accidents and these includes reckless driving, improper overtaking and disregard for traffic light. Such causes may have had alcohol consumption as an underlying factor (Odero et al, 1997; Nakahara et al, 2005; Clarke et al, 2007).

In Thailand, it was reported that motorcycle-related crashes accounted for the majority of injuries and death from RTAs, contributing factors includes alcoholic consumption, invalid driver's license, inexperience and age of the drivers, as they were found to be a common characteristics in motorcycle accidents than in accidents by other vehicles (Swaddiwudhipong, et al 1994; Ichikawa, Chadbunchachai and Marui, 2003; Haque, Chin and Huang, 2009).

Ogagaoghene (2011) speaking at the inauguration of members of association of motorcycle riders in Oyo state, Nigeria, attested to the fact that motorcycle have higher fatality rate per unit of distance travelled when compared with automobiles, this is because motorcycle riders are otherwise refer to as exposed road user.

He further stated that motorcycle accidents in Oyo State, Nigeria are caused by the rider's disobedience to traffic rules and regulations. In the time past, various laws were enacted by Federal, State and Local Governments to curb the excesses of the riders, this includes The National Road Traffic Regulation of 2004 and FRSC Establishment Act 2007 to mention but few, with all these put in place, it is still disheartening that motorcycle crashes are still recorded daily in Oyo State, Nigeria (Ogagaoghene, 2011). Factors responsible for incessant rise of motorcycle accidents in Oyo State as noted by Oyo State Sector Command includes the following: disobedience to traffic rules, overloading by carrying more than one passenger, over speeding running mode on a curve due to excess speed or under cornering, riding under the influence of alcohol which affects the riders judgement, riding bikes with worn-out tyres, brake failures accounted for motorcycle accident due to lost of control, lack of accessories like rear mirror, functional horn and head lamp, route violation: facing on-coming vehicles that is riding against the traffic and riding motorcycle without crash helmet which account s for 95% permanent injury and death of okada accident victims (Ogagaoghene, 2011).

### Methodology

The instrument used for this study was questionnaire, which was designed to obtain information on demographic characteristics of the respondents and on causes of road accident among commercial motorcycle riders in Oyo state, Nigeria. The total number of four hundreds and fifty commercial motorcycle riders working in Oyo State, Nigeria were sampled for the study. The findings were presented in descriptive form using frequencies, percentages, tables, mean and standard deviations. The sequence of presentations was presented with the bio-data of the respondents and the research question.

### Analysis of findings

This section clarified demographic features of the respondents, such as location, age, gender, level of education, marital status, riding experience, training experience before riding, duration of training received and type of motorcycle they are riding respectively.

**Table 1. Respondents distribution by age**

Age	Frequency	Percentage (%)	Cumulative percentage (%)
13-19	13	8.0	8.0
20-25	119	26.4	34.4
26-30	164	36.4	70.9
31+	131	29.1	100.0
Total	450	100.0	

The above table shows that 164(36.4%) respondents fall within 26-30 years of age and are the highest, 131(29.1%) respondents were between 31years and above, 119(26.4%) respondents were within the age bracket of 20-25years, while 13(8.0%) were in the age bracket of 13-19years respectively. This shows that 62.8% of okada motor riders are between the ages of 20-30 years. These represent the major working force in Oyo State Nigeria.

**Table 2: Sex of the Respondents**

Sex	Frequency	Percentage(%)	Cumulative percentage(%)
Male	427	94.9	94.9
Female	23	5.1	100.0
Total	450	100.0	

Table 2 above reveals that majority of the respondents were male 427(94.9%) while 23(5.1%) respondents were female. The result reveals that motorcycle riders are dominated by male when compared with female motorcyclist riders.

**Table 3: Distribution of the respondents based on their level of education**

Level of Education	Frequency	Percentage (%)	Cummulative percentage (%)
None	26	5.8	5.8
Primary	163	36.2	42.0
Secondary	167	37.1	79.1
NCE/Poly/University	94	20.9	100.0

Table 3 shows the level of education of commercial motorcycle riders, it was discovered that majority of okada riders are semi-illiterates. 167(37.1%) respondents were holders of either West African School Certificate, General Certificate, or Senior Secondary School Certificate. 163(36.2%) respondents only attended primary school, 94(20.9%) respondents had post secondary school certificates, while 26(5.8%) have never experienced what is called formal education. This may account for why majority of these motorcycle riders are prone to accidents because it would be difficult for them to interpret or decode road signs on the highways.

**Table 4: Percentage distribution of marital status of the respondents**

Marital status	Frequency	Percentage(%)	Cummulative percentage(%)
Single	192	42.7	42.7
Married	208	46.2	88.9
Separated	45	10.0	98.9
Divorced	4	0.9	99.8
Others	1	0.2	100.0
Total	450	100.0	

From the table above the percentage distribution of the marital status of the respondents revealed that married people dominated the okada riders business, it accounts for 208(46.2%) of the total respondents, 192(42.7%) were single, 45(10.0%) are separated from their spouses, while 4(0.9%) are divorced. One can infer from the result that extra caution are expected to be maintained among the commercial motorcyclist since they are married and ought to have been responsible.

**Table 5: The distribution of the respondents according to years of motorcycle riding**

Years	Frequency	Percentage(%)	Cummulative percentage(%)
1-2	115	25.6	25.6
3-5	194	43.1	68.7
6-9	81	18.0	86.7
10-15	38	8.4	95.1
16-20	16	3.6	98.7
21+	6	1.3	100.0
Total	450	100.0	

The above table reveals the years of experience since the respondents have been riding commercial motorcycle. It can be deduced that 194(43.1%) respondents had between three( 3) to five (5) years of riding experience, 115(25.6%) are the most recent on the table with respondents between one(1) to two(2) years of riding experience, 81(18.0%) respondents reportedly had between six(6) and nine(9) years of riding experience, 38(8.4%) respondent affirmed they had between ten(10) and fifteen(15) years riding experience, 16(3.6%) respondent said they had sixteen(16) and twenty(20) years of riding experience while 6(1.3%) respondent had twenty-one years and above riding experience. It is clear from the table that majority of the riders are just been recent in the motorcycle riding business. This may be as a result of economic hardship and the increase in the rate of unemployment that led to the recent influx into the business.

**Table 6: Percentage distribution of the respondents on whether they received formal training before riding**

Training	Frequency	Percentage(%)	Cummulative Percentage(%)
Yes	229	50.9	50.9
No	221	49.1	100.0
Total	450	100.0	

Table 6 affirmed that commercial motorcycle riders undergo formal training before embarking on the riding business. 229(50.9%) respondents received formal training while 221(49.1%) did not.

**Table 7: showing the distribution of the respondents on the duration of training received**

Training Duration	Frequency	Percentage(%)	Cummulative Percentage(%)
One week	273	60.7	60.7
<one month	103	22.9	83.6
1-6month	55	12.2	95.8
<one year+	4	0.9	100.0
Total	450	100.0	

Table 7 reveal the level of training received by the commercial motorcycle riders before embarking on motorcycle riding business. 273(60.7%) respondents trained for one week, 103(22.9%) respondents trained for less than one month, 55(12.2%) respondents received training for between one and six months, 15(3.3%) trained for less than a year, while 4(0.9%) respondents account for one year and above period of training. It can be seen from the above table why there are incessant increase of accidents among commercial motorcycle riders which was lack of adequate training of the riders, 376(83.6%) respondents received formal motorcycle riding training for between one and three weeks, meanwhile it is expected that the duration of training should not be less than one and half year, if sanity will be maintained on our highways.

**Table 8 showing what type of motorcycle they ride**

Type of motorcycle	Frequency	Percentage(%)	Cummulative Percentage(%)
Suzuki	155	34.4	34.4
Honda	40	8.9	43.3
Boxer	165	36.2	79.6
Bajaj	51	11.3	90.9
Kawazaki	41	9.1	

The table above shows that Boxer was the most common type of motorcycle used for commercial business in Oyo state, it accounts for 165(36.2%) of the sampled population, 155(34.4%) respondents rode Hajue Suzuki, 51(11.3%) respondents used Bajaj, 41(9.1%) respondents used Kawazaki while 40(8.9%) used Honda respectively.

### Research question 1

Research question: *What are factors that increase rate of commercial motorcycle accident in Oyo state?*

**Table 9: The factors that increase the rate of commercial motorcycle accidents**

S\N	ITEMS	SD	D	U	A	SA	Mean	S.D
1	Over-speeding	40 8.9%	10 2.2%	4 .9%	98 21.8%	98 21.8%	4.34	1.20
2	Wrong overtaking	42 9.3%	11 2.4%	9 2.0%	86 19.1%	302 67.1%	4.32	1.24
3	Bad roads	44 9.8%	8 1.8%	5 1.1%	109 24.2%	284 63.1%	4.29	1.23
4	Mechanical defect	55 12.2%	20 4.4%	11 2.4%	114 25.3%	250 55.6%	4.08	1.36
5	Alcoholic intake	65 14.4%	10 2.2%	18 4.0%	102 22.7%	255 56.7%	4.05	1.41
6	Tyre defect	53 11.8%	19 4.2%	16 3.6%	136 30.2%	226 50.2%	4.03	1.33
7	Trafficators failure, miss-information	61 13.6%	19 4.2%	20 4.4%	126 28.0%	224 49.8%	3.96	1.39
8	Oil spillage on the road	64 14.2%	18 4.0%	24 5.3%	114 25.3%	230 51.1%	3.95	1.42
9	Animal crossing	68 15.1%	16 3.6%	10 2.2%	132 29.3%	224 49.8%	3.95	1.42
10	Over-loading	63 14.0%	16 3.6%	16 3.6%	189 42.0%	166 36.9%	3.84	1.34
11	Heavy rain	60 13.3%	17 3.8%	24 5.3%	203 45.1%	146 32.4%	3.80	1.30
12	Wrong maneuvering	58 12.9%	10 2.2%	34 7.6%	212 47.1%	136 30.2%	3.80	1.26
13	Dangerous checkpoint	64 14.2%	28 6.2%	17 3.8%	192 42.7%	149 33.1%	3.74	1.35
14	Poor knowledge of traffic code	67 14.9%	25 5.6%	26 5.8%	200 44.4%	132 29.3%	3.68	1.35
15	Smoke emission of other vehicle	68 15.1%	19 4.2%	35 7.8%	206 45.8%	122 27.1%	3.66	1.33
16	Income generation	87 19.3%	38 8.4%	22 4.9%	149 33.1%	154 34.2%	3.54	1.51

The factors that increase the rate of accidents among commercial motorcycle riders are presented in the table above. Over speeding was ranked highest, 196(43.6%) respondents agreed that it was the major cause of accidents among commercial motorcycle riders, 50(12.1%) disagree (mean = 4.34). 388(86.2%) respondents support wrong overtaking as the major factor responsible for the high rate of accidents among commercial motorcycle riders, while 53(11.7%) respondents were not in support of this fact (mean = 4.32). 393(87.3%) respondents stressed bad roads as the principal cause of accidents among commercial motorcycle riders, 52(11.6%) disagree with this stand (mean = 4.29). 364(80.9%) respondents remarked mechanical defect on the motorcycle like sudden cut of wheel chain, loosening of bolt and nuts, brake failure among others as the main factors responsible for the high rate of accidents among commercial motorcycle riders while 75(16.6%) respondents objected the stand (mean = 4.08). 357(79.4%) respondents maintained alcoholic intake by these riders is a major factor responsible for the high rate of accidents among okada riders in Nigeria, while 75(16.6%) respondents rejected this claim (mean = 4.05). 361(80.4%) respondents remarked tyre defect as the main factor responsible for the occurrence of accident among okada riders, 350(77.8%) noted trafficators failure, misinformation as the principal factor that made accident among okada riders to be on the increase. 344(80.2%) respondents stressed oil spillage on the road as the factor that aids increase in accidents among commercial motorcycle riders (mean = 3.95). 356(79.1%) respondents affirmed animal crossing as a factor that aid the high rate of accident among motorcycle riders (mean = 3.95). 355(78.9%) respondents agree that carrying of more than one passenger at a time (overloading) was a major factor responsible for the menace (mean = 3.84). Other factors noted by the respondents as responsible for high rate of commercial motorcycle accidents are listed according to their level of agreement: Heavy rain 349(77.5%), wrong manoeuvring 348(77.3%).

Dangerous checkpoint by police and Road Safety Corps officers 291(75.8%), poor knowledge of traffic code 332(73.7%), smoke emission of other vehicle 328(72.9%) and lastly the desire to generate more income and maximises profit 303(67.3%) respectively. The finding collaborated the earlier finding of Odero et al (1997), Nigerian Highway code, (2008); Salawu, (2008); Adisa, (2010) and Ngim and Udosen (2007) that over speeding, bad road, dangerous overtaken, use of alcohol, poor knowledge of traffic codes and income generation are factors that are responsible for accidents among commercial motorcyclists.

**Table 10: Showing the respondents percentage distribution on alcoholic intake**

	Frequency	Percent	Cumulative percent
Yes	222	49.3	49.3
No	228	50.7	100
Total	450	100	

Table 10 above revealed that 228(50.7%) respondents reported that they do not take alcoholic drink, while 222(49.3%) respondent agree that they drink alcohol drinks.

**Table 11: Showing different types of alcohol taken by the commercial motorcyclists.**

	Frequency	Percent	Cumulative percent
Beer	57	12.7	12.7
Palm wine	48	10.7	23.3
Hot drinks	345	76.7	100.0
Total	450	100	

Table 11 was used as a check to identify the true picture of the alcoholic intake pattern of the respondents, it was discovered earlier from table 10 that average commercial motorcycle riders do not take alcohol, but the clearer picture of their behaviour in term of alcoholic intake was discovered, from table 11. 345 (76.7%) respondents drinks Hot drinks which include local dry gin, Regal gin, etc., 57(12.7%) respondents said they drinks beer of different types while 48(10.7%) respondents drinks local palm wine. The finding reveals that commercial motorcycle rider’s drinks alcohol which may responsible for the high rate of accident among them.

**Research question 2**

*To what extent do commercial motorcycle riders comply with road safety highway codes?*

**Table 12 Extent of commercial motorcycle riders compliance with road safety high way code**

S\N	ITEMS	NT	OT	T	VT	Mean	S.D
1	I carry more than one passenger at times	54 12.0%	44 9.8%	95 21.1%	257 57.1%	3.23	1.05
2	I check my motorcycle everyday before riding	44 9.8%	46 10.2%	183 40.7%	177 39.3%	3.10	.94
3	Every time I want to carry passenger, I put on my trafficators light before packing to carry passenger	76 16.9%	67 14.9%	192 42.7%	115 25.6%	2.77	1.01
4	I have my trafficators, mirrors, horn, rear light functioning well	65 14.4%	156 34.7%	72 16.0%	157 34.9%	2.71	1.09
5	I maintain road safety speed	89 19.8%	71 15.8%	175 38.9%	115 25.6%	2.70	1.06
6	I keep a long distance between myself and the vehicle, motorcycle ahead of me	76 16.9%	143 31.8%	108 24.0%	123 27.3%	2.62	1.06
7	I use safety equipments like helmet while riding	149 33.1%	149 33.1%	55 12.2%	97 21.6%	2.22	1.13
8	I drink alcohol only in the night	236 52.4%	109 24.2%	59 13.1%	46 10.2%	1.81	1.02
9	I drink alcohol during the day	265 58.9%	110 24.4%	35 7.8%	40 8.9%	1.67	.96
10	I always ride with my driver’s license	304 67.6%	62 13.8%	28 6.2%	56 12.4%	1.64	1.05

The table above shows the extent with which commercial motorcycle riders comply with the rules and regulations contained in the Nigerian highway codes. 352(78.2%) indicated that it was true they carry more than one passenger while driving, 44(9.8%) said they carry more than one passenger occasionally, while 54(12.0%) noted they don't carry more than one passenger (mean = 3.23). 360(80%) agreed they check their motorcycle everyday before riding, 46(10.2%) respondents only check their motorcycle before riding occasionally while 44(9.8%) do not check their motorcycle daily before riding it (mean = 3.10), 307(68.3%) said it is true they put on their trafficators light before parking to carry passenger, while 143(31.8%) do not care to put on trafficators light when parking to carry passengers (mean = 2.77). 299(50.9%) said they have functioning trafficators light, mirrors, horn and rear light while 221(49.1%) doesn't have (mean = 2.71). 290(64.5%) reported that they maintain road safety speed as noted in the Nigerian Highway Codes, 71(15.8%) remarked that they observes road safety speed as contained inside the Nigerian highway codes while 89(19.8%) stated that they don't observes road safety speed (mean = 2.70). 231(51.3%) said it is true they keep long distance between themselves and the vehicle/motorcycle ahead of them in order to forestall accident occurrence, 143(31.8%) said they put on this behaviour occasionally while 76(16.9%) stressed they don't keep the appropriate distance that is expected to be kept between vehicles/motorcycles on the road (mean = 2.62). It was discovered that it was minority that uses safety equipment like helmet while riding. 152(33.8%) only uses helmet while riding motorcycle, 149(33.1%) put on helmet occasionally while 149(33.1%) do not use helmet while riding, (mean = 2.62).

This finding was in line with the earlier finding of (Akinlade, 2000, Ichikawa et al, 2003 and Mayrose 2008) that an average motorcycle riders do not use safety helmet while riding. 236(52.4%) affirmed they do not drink alcohol while working at night, 109(24.2%) drink alcohol at night occasionally while 105(33.7%) drinks alcohol in the night (mean = 1.81). 265 (58.9%) do not take alcohol during the day, 185(41.1%) indicated they drink alcohol during the day (mean = 1.67). The result agree with the finding of Hermans et al (2008) that alcoholic drinks are one of the strong determinant of most motorcycle accident in Twenty-one European countries sampled by the author. It was discovered that 304(67.6%) respondents does not ride their motorcycle with driving licence, while 84(18.6%) respondents ride their motorcycle with their driver's license in their custody. The implication of this is that those that are riding motorcycle are not permitted by the law of Federal Republic of Nigeria to ride motorcycle on the Nigerian highways, hence the incessant rate of accidents among these commercial motorcyclists on the Nigerian roads.

**Table 13: Showing motorcyclist possession of driver's licence**

	Frequency	Percent	Cumulative percent
Yes	96	21.3	21.3
No	354	78.7	100.0
Total	450	100	

The above table revealed that majority of commercial motorcyclist does not possess a driving licence. 354(78.7%) respondent does not possess a driving licence, while 96(21.3%) respondents possesses. This might be one of the critical factors why commercial motorcycle accident is on the increase, because those who ride motorcycle for commercial purposes are not permitted by the government to do so.

**Table 14: Showing the percentage distribution of respondents driving speed in build-up areas/ highway.**

	Frequency	Percent	Cumulative percent
40 km/h – 60km/h	159	35.3	35.3
50km/h - 80km/h	131	29.1	64.4
60km/h – 90km/h	88	19.6	84.0
90km/h –100km/h	12	2.7	86.7
Don't use Speedometer	60	13.3	100.0
Total	450	100.0	

The above table is an assessment of the driving speed of the commercial motorcycle riders, if we are to go with the Federal Safety Corps regulation on the safety speed prescribed for motorcycle riders, overspeeding is a major factor responsible for the high rate of accidents among commercial motorcycle riders in Nigeria. 291(64.7%) respondents drive at the speed of between 60 km/h and above as indicated from the table.

The Nigeria Highway Code (2008) maintained that the road safety speed to be maintained by motorcycle riders in highway and build up areas is fifty kilometre per hour (50 km/h), and speed above that is regarded as over speeding. The finding was in support of the existing findings of (Akinlade, 2000; Simoncic, 2001; Horswill and Helman, 2003), that overspeeding is a principal factor that causes accidents among motorcyclist riders in Nigeria, United kingdom, and Taiwan respectively

**Table 15: Showing the percentage distribution of respondents possession of crash helmet**

Item	Frequency	Percent	Cumulative percent
Yes	177	39.3	39.3
No	273	60.7	100.0
Total	450	100.0	

From the table above, 273(60.7%) respondents did not have crash helmet, while 177(39.3%) respondent noted they have. This finding revealed that most motorcycle riders do not possess crash helmet. My observation at some strategic location under the covering areas of the study affirmed what I observed especially at Academy Olomi area, Ojoo, Sango and Mokola areas of Ibadan, Takie, Isale ora, LAUTECH and Randa area of Ogbomoso, Owode Junction, Oyo, and Koso, Barack and Ojude Oba area in Iseyin, all in Oyo state, where almost all the riders observed during the period of administration of questionnaire do not put on crash helmets while riding their motorcycles.

**Table 16: Showing reasons why commercial motorcycle riders does not possess safety helmet.**

Item	Frequency	Percent	Cumulative percent
It is too costly	61	13.6	13.6
I don't have money	33	7.3	20.9
It is not convenient	113	25.1	46.0
Majority of okada riders doesn't use it	45	10.0	56.0
I know I will not have accident	7	1.6	57.6
There is no penalty for it	191	42.4	100.0

Table 16 revealed why most commercial motorcycle riders do not have safety helmet. 191(42.4%) respondents remarked that that the reason why they fail to possess a crash helmet despite danger/threat to life by it non utilisation when accident occurred was that there was no penalty for it. 113(25.1%) respondents said it inconvenient them, 61(13.6%) respondents noted it was too costly, 45(10.0%) respondents are negatively influenced by other motorcycle riders who does not use it, 33(7.3%) respondents said it was as a result of financial constraints that made them not to possess one, while 7(1.6%) respondents base their decision on the assumption that they will not have accident.

### Discussion of findings

This study focuses on factors influencing high rate of accidents among commercial motorcycle riders in Oyo state, as noted from the analysis of findings, the study found that majority of motorcycle riders in the study area are within 20 and 30 years of age, these categories of people are in their late adolescence and early adulthood years and are characterized by high driving risky behaviours, always in a hurry and aggressive, this finding was in support of earlier findings of (Ngim and Udosen, 2007; Chang and Yeh, 2007; Yannis, et al 2005; and Horswill and Helman 2003) that age of motorcycle riders was a determinant factor responsible for the causes of accidents among the commercial motorcyclists.

The finding of this study corroborate the existing finding of Adisa (2010) and Nakahara et al (2005) that commercial motorcyclists are more dominated by male than their female counterparts. The level of formal education of the respondents reveals that commercial motorcyclist does not have formal education or that they are dropped out of school at the early stage, this may account for high level of ignorance among them as most of the motorcyclist can not interpret road traffic regulations or signs. It was in support of finding of Ngim and Udozen (2007). The study reveals that though the respondents understudied claimed to have undergone former training before commences the motorcyclist business, the duration of the training received shows that 60.7% of the respondents only trained for one week, while 22.9% received training for between two and three weeks.

This was in line with the existing studies of Akinlade (2000) and Adisa (2010). This may account for why the rate of accidents among commercial motorcyclists was on the increase because there was not enough adequate training given to the commercial motorcycle riders before embarking on riding expenditure.

Factors influencing the rate of commercial motorcycle accidents have been found to include: overspeeding, wrong overtaking, bad roads, mechanical defect, and alcoholic intake. This assertion agreed with the previous studies of (Meuleners et al 2007; Nahakara et al, 2005; Njim and Udozen, 2007; Horsewill and Helman, 2003; Nigerian highway codes, 2008; Adisa, 2010; and Ogagaogene, 2011) respectively. Other factors as found in the study responsible for the high rate of accidents among commercial motorcyclists are tyre defect, trafficators failure/mis-information, oil spillage on the road, animal crossing, overloading, wrong maneuvering and dangerous checkpoints by the law enforcement agencies like the Nigerian police and the officers of Federal Road Safety Commission (FRSC). The finding was in support of the view of (Odero, et al 1997; Akinlade, 2000; and Nigeria Highway codes 2008). Poor knowledge of traffic code and the desire to generate more money was also found to be a significant factor responsible for high rates of accidents among commercial motorcycle riders. Consistent with previous studies, (Akinlade, 2000; Akinlade and Brieger, 2004; Pai and Saleh, 2007; Chang and Yeh, 2007; Ogagaogene, 2011; and Rosebloom et al, 2011) commercial motorcyclists carry more than one passenger. The motorcycle riders do not ride with their driver's license and they do not put on their safety helmets for protection in case of accident. This could account for the severity of crash when commercial motorcyclists are involved in accidents (Mayrose, 2008).

Although, this study found that the motorcyclist check their motorcycle before riding, some of them do not have functional trafficator's lights, side mirrors, horns and brake lights which in turn has a negative effect on the occurrence of accidents among commercial motorcyclists. The Highway codes maintained that alcoholic intake be avoided when driving/riding, it was also found that some of these commercial motorcyclists still rode under the influence of alcohol. Non possession of driver's license and overspeeding also characterized the behavior of the motorcycle riders studied. This agrees with the finding of Elliot, et al, (2007) and Adisa, (2010). The study found that the commercial motorcyclist do not know the actual speed limit they are expected to maintain while riding. Their responses reflected that they seem to know the speed limit, but the kilometer per hour (km/hr) with which they drove shows that they do not know, 291(64.7%) drove above 50km/hr which was the normal speed limit that they are expected to maintain.

### ***Conclusion***

Based on the findings of the study, the following conclusions are drawn. The study reveals that overspeeding, wrong overtaking and bad roads accounted for the higher percentage of factors that increase the high rate of accidents among commercial motorcycle riders. The study shows that the commercial motorcycle riders do not comply with road safety highway codes. This is because they carry two or more passengers at a time, do not use safety equipments like helmet, and does not ride with their driver's license, all which is forbidden in the safety highway codes, many of them take alcoholic drink before driving, while some cannot decode the rules and regulations guiding driving on our roads.

### ***Recommendations***

Based on the findings of this study, the following recommendations are made;

1. Adult literacy classes should be provided by the government for those who can not read or write so that Okada riders in Nigeria can be part of the beneficiaries of such exercise and thereby know how to read and write.
2. Funds should be made available by the government for the creation of road safety awareness using different media of communication as a form of National orientation.
3. Road situation in Nigeria should be improved as bad roads need to be repaired.
4. There should be strict penalties against anybody caught riding motorcycle under the influence of alcoholic drinks and alcoholic joints should be closed by the government.
5. Helmet must be made compulsory for okada riders to prevent head injuries, if accident occurs.
6. Lastly, the Nigerian government should provide employment opportunities for our teeming youth as this will go a long way in the reduction of number of youth who as a result of unemployment took to motorcycle riding business.

## References

- Adisa, R.S. (2010). A study of the use of intoxicants among Rural Commercial Motorcyclists in Kwara State, Nigeria. *Journal of Social Sciences* 22(2):85 – 91.
- Aganga, A.O., Umoh, J.U. and Abedii, S.A. (1983). Epidemiology of motor vehicle accidents in Zaria, Niigeria. *Journal of the Royal Society of Health*. 103:123-126
- Akinlade, C.O.(2000). Knowledge, Attitudes, and practices of Road Safety and First Aid among Commercial Motorcyclists in the Ibarapa District of Oyo State. An unpublished dissertation for the award of master of public Health/Health Education submitted to the sub-Department of Health Promotion and Education. Department of Preventive and Social Medicine, University of Ibadan. 187 P.
- Akinlade, C.O. and Brieger, W.R. (2004). Motorcycle, Taxis and Road Safety in Southwestern Nigeria. *International Quarterly of community Health Education*. 22(1): 17-31
- Chang, H. and Yeh, T. (2007). Motorcyclist accident involvement by age, gender, and risky behaviours in Taipei, Taiwan. *Transportation Research Part F* 10:109-122. available online at [www.sciencedirect.com](http://www.sciencedirect.com).
- Clarke, D.D., Ward, P., Bartle, C. and Truman, W. et al. (2007). The role of motorcyclist and other driver behavior in two types of serious accident in UK. *Accident Analysis and Prevention*. 39:974-981.
- Elliot, M.A., Banghan, C.J. and Sexton, B.F. (2007). Errors and violations in relation to motorcyclists crash risk. *Accident Analysis and Prevention*. 39:491-499. Retrieved from [www.hinari.com](http://www.hinari.com) on 15<sup>th</sup> March, 2011.
- Federal road Safety Commission, (2004). Drivers' Licence Report, FRSC, Abuja.
- FRSC, (2007). An article on FRSC Establishment Act. [www.Frsc.gov.ng](http://www.Frsc.gov.ng). Dec. 15, 2007.
- Haque, M.M., Chin, H.C., and Huang, H. (2009). Modelling fault among motorcyclists involved in crashes. *Accident analysis and Prevention*. 41:327-335. Retrieved at [www.hinar.com](http://www.hinar.com) 15<sup>th</sup> March. 2011.
- Hermans, B., Bossche, F.V., and Wets, G. (2008). Combining road safety information in performance index. *Accident Analysis and Prevention*. 40:1337-1344. Retrieved on 15<sup>th</sup> March, 2011 from [www.hinar.com](http://www.hinar.com)
- Horswill, M.S. and Helman, S. (2003). A behavioural comparison between motorcyclists and a marched group of non-motorcycling car drivers: factors influencing accident risk. *Accident Analysis and Prevention* 35:589-597. Retrieved 15<sup>th</sup> March, 2011 from [www.hinar.com](http://www.hinar.com)
- Ichikawa, M., Chadbunchachai, W. and Marui, E.(2003). Effect of the helmet act for Motorcyclist in Thailand. *Accident analysis and Prevention* 35:183-189. Retrieved 15<sup>th</sup> March, 2011 from [www.hinar.com](http://www.hinar.com)
- Lin, M.R., Chang, S. it., Pai, L., and Keyl, P.M. (2003). A longitudinal study of risk factors for motorcycle crashes among junior college students in Taiwan. *Accident Analysis and Prevention*, 35:243-252.
- Mayrose, J. (2008). The effects of mandatory motorcycle helmet law on helmet use and injury patterns among motorcyclist fatalities. *Journal of Safety Research* 39: 429-432. Retrieved 15<sup>th</sup> March,2011. From [www.hinari.com](http://www.hinari.com).
- Meuleners, L.S., Lee, A.H. and Harworth, C. (2007). Road Environment, crash type and hospitalization of bicyclists and motorcyclists presented to emergency departments in Western Australia. *Accident Analysis and prevention* 39: 1222 – 1225. Retrieved 18th March, 2011 from [www.hinari.com](http://www.hinari.com).
- Nakahara, S., Chadbunchachai, W., Ichnikawa, M., Tipsuntornsak, N. and Wakai, S. (2005) Temporal distribution of motorcyclist injuries and risk of fatalities in relation to age, helmet use, and riding while intoxicated in Khon Kaen, Thailand. *Accident Analysis and Prevention* 37:833-842. Retrieved 15<sup>th</sup> March, 2011. from [www.hinar.com](http://www.hinar.com)
- Ngim, N.E. and Udosen, A.M., (2007). Commercial Motorcyclists : Do they care about Road Safety? *Nigerian Medical Practitioner* . 15 (6): 111 – 113.
- Nigeria Highway Code (2008). The Nigeria Highway Code 2<sup>nd</sup> edition. A Publication of Federal road Safety Corps. Abuja: Detail works. 102 p.
- Odero, W., Garner, P. and Zwi, A. (1997). Road traffic injuries in developing countries: A comprehensive review of epidemiological Studies. *Tropical Medicine and International Health* Vol 2 (5):445-460.
- Ogagaoghene, C.C.(2011). An Address Delivered by The Sector Commander, Federal Road Safety Corps Oyo State at the Inauguration of members of Association of Motorcycle Riders in Oyo State on 19<sup>th</sup> March, 2011.
- Ogbeide, O., Okojie, O., Isah, E. and Wagbatsoma, V. (1994). Road Traffic Accidents seen in Benin City, Nigeria. *Nigerian Medical Journal*. 26 (2): 45-47.
- Pai, C.W., and Saleh, W. (2007). An analysis of motorcyclist injury severity under various traffic control measures at three-legged junctions in the UK. *Safety Science*. 45:832-847. Available online at [www.sciencedirect.com](http://www.sciencedirect.com) Retrieved 15<sup>th</sup> March, 2011. from [www.hinari.com](http://www.hinari.com)
- Rosembloom, T., Perlman, A. and Pereg, A. (2011). Hazard Perception of motorcyclists and car drivers. *Accident Analysis and Prevention*. 43:601-604. Available at [www.sciencedirect.com](http://www.sciencedirect.com). Retrieved 15<sup>th</sup> March, 2011.
- Salawu, R.O.A. (2008). Fundamental Principles of Road Safety, Ibadan: Oke Ade Publisher. 173 P.
- Sexton, B., Banghan, C., Elliott, M. and Maycock, G. (2004). The Accident Risk of Motorcyclist (TRL Report 607). Transport Research Laboratory, Crowthorne, England.
- Simoncic, M. (2001) Road accidents in Slovenia involving a Pedestrian, Cyclist or Motorcyclist and a Car. *Accident Analysis and Prevention*, 33:147-156. Retrieved on 15<sup>th</sup> March,2011 from [www.elsevier.com/locate/aap](http://www.elsevier.com/locate/aap).
- Swaddiwudhipong, W., Nguntra, P., Mahasakp, P., Koonchote, S. and Tantriratna, G. (1994). Epidemiology characteristics of drivers, vehicles, Pedestrians and road environments involved in road traffic injuries in rural Thailand. *South East Journal of Tropical Medicine and Public Health* 25 (1): 37-44.
- Taiwo, S.K. (2007). Motorcycle Accidents in Nigeria. Abeokuta: Bolatito and Sons Ltd.
- Yannis, G., Golias, J. and Papadimitriou, E.(2005). Driver age and vehicle engine size effects on fault and severity in young motorcyclist accidents. *Accident Analysis and Prevention* 37:327-333. Retrieved 15<sup>th</sup> March, 2011. from [www.hinari.com](http://www.hinari.com)