



## **Influence of Bio-psychosocial Factors on Road Traffic Accidents among Motorcyclists in Benue State: The persona-socio counselling implication.**

***Igbudu Erdo Jannipher<sup>1</sup>, Igbudu Terhem Joseph<sup>2</sup>, Ikyator Kashima Ruth<sup>3</sup>***

<sup>1</sup> [igbudu2020@gmail.com](mailto:igbudu2020@gmail.com) 08025529903

Department of Educational Foundations Benue State University, Makurdi

<sup>2</sup> [Igbudu\\_ter@gmail.co.uk](mailto:Igbudu_ter@gmail.co.uk) 08036690185

Department of Family Medicine, Benue State University Teaching Hospital Makurdi

<sup>3</sup> [ruthikyator@gmail.com](mailto:ruthikyator@gmail.com)

Department of internal medicine, Benue State University Teaching Hospital Makurdi

### **ABSTRACT**

The study investigated the influence of Influence of Bio-psychosocial Factors on Road Traffic Accidents among Motorcyclists in Benue State: The persona-socio counselling implication. The study was guided by three research questions and corresponding hypotheses. The questionnaire survey research design was used for the study. The area of study is Benue State. The population for the study was thirty-eight thousand, one hundred and twenty-eight (38,128) registered commercial motorcyclists in Benue State. The sample size for the study was 396 commercial motorcyclists in Benue State determined using Taro Yamen's formula (1967). The instrument used for data collection was a self-developed and structured questionnaire titled Substance use, Experience, and Road condition on Road Traffic Accident Questionnaire (SUERCTAQ). The instrument was developed and validated and yielded a reliability coefficient of .88 using Cronbach Alpha. Mean and Standard Deviation were used to answer the research questions Descriptive statistics measures of Mean scores and Standard Deviation, and the inferential statistic of Chi-Square test of independence were used to test the hypotheses at 0.05 level of significance. The Standard Deviation was used to know if there were deviations in the mean of the responses of the respondents, instruments which took the form of a continuum of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) were scored thus; SA = 4, A = 3, D = 2 and SD = 1 and the benchmark was calculated thus;  $\frac{4+3+2+1}{4} = 2.50$ . It was concluded that Bio-psychosocial factors of experience, psychoactive substance use and road condition influence road traffic accident influences road traffic accident. As such Counsellors should adopt the use of persona- socio counselling model for public awareness campaigns on road safety education and health consequences of psychoactive substance use among commercial motorcyclists.

**Key words:** Experience, bio-psychosocial, Road Traffic Accident, Motorcyclist.

### **INTRODUCTION**

One of the basic needs of human beings is transportation, it seems to be the reason for almost everything, it enables communication, trade and other forms of exchange between two or more persons, and it provides mobility that fosters employment, education, health, recreational activities and other necessary basic structures that keep life going. Transportation is made easy and convenient by means of cars, buses, trains, taxis, airplanes tricycles and motor cycle. Daily, human beings travel around, within, and even outside their vicinities, using various modes of transportation including land, air, rail and water. Transportation by air makes use of Airplanes while transportation by water makes use of Ships, ferry boats and Canoes. Land transportation on the other hand is grouped into two rail and road transportation. The rail transport uses trains while road transport which is the focus of this study comprise the use of cars, buses, trucks, tricycles, bicycles and motorcycles.

Motorcycle are two wheeled engine vehicles that were invented to facilitate motor way transport as a result of increasing population and industrialization Niven and Hamilton (2011). Some Nigerians engage in commercial motorcycle riding as a way of empowering themselves economically. This business, popularly known as Okada riding in almost every part of Nigeria is currently receiving unprecedented patronage from both young and the old. In fact, it has become a powerful and lucrative enterprise in every part of the country.

The use of motorcycle for commercial transportation activities, where motorcycle riders carry passengers for hire has gained wide spread acceptance, due to the economic down turn, which has placed the purchase and maintenance of new cars and minibuses used as taxis and buses beyond the grasp of most Nigerians. Additionally, motorcycles are more maneuverable than other automobiles during traffic congestions. Motorcycles' ability to travel on roads where no car has gone before, especially the urban slums, and its cost effective and environmental friendliness, makes it an effective means of transportation, with minimum delay requiring just a passenger, that is normally taken to his or her doorstep. (Olusanya and Williams 2007).

Motorcycles are now one of the primary modes of transportation in Nigeria and constitute a cheap and adaptable transportation system found in the most remote of villages in Nigeria, commonly used by the young and the old, men and women. Unfortunately, the rise in Okada usage has been accompanied by increased risky driving and accidents on the Nigerian roads; as a result, motorcycles have come under heavy criticism, resulting in legislation intended

to restrict or prohibit their operation in some Nigerian cities, notably Lagos in 2012 (Olubomehin, 2012). Motorcycles accidents was first recorded in Midland in the year 1896 and ranked by Oluwadiya, Kolawole, Adegbehingbe, Olasinde, Olaide, and Uwaezuoke (2009) as the second most common cause of road traffic injuries in Nigeria. The World Health Organization (WHO 2014) predicted motorcycle road traffic accidents could by the year 2030 become the world's fifth leading Disability-Adjusted Life years lost. This has been a big source of worry to both the society and the different Government agencies charged with the responsibility of promoting safety on the roads.

Accident according to Tomusange (2018), is an unplanned and uncontrolled event in which the action or reaction of an object, substance, person or radiation results in injury. The term implies that such an event may not be preventable since its antecedent circumstances go unrecognized and unaddressed. According to Ozdemir (2005), among fatal accidents, motorcycle accidents rank first globally. A large proportion of vehicles involved are two wheelers, which when compared to cars are unstable and provide little protection for their riders in accidents (Adogu, Illika and Aguzu 2009). Road traffic accident and death among motorcyclists seemed to be further heightened by apparent reckless speeding and show of little regard for other road users who could be another vehicle, pedestrian, animal, geographical or architectural obstacle, resulting in injury, property damage or death.

Accidents can be classified in terms of severity or number of vehicles involved. In terms of severity, accidents are classified as fatal; when there is loss of human life within 30 days of occurrence, or from injuries sustained directly from the accidents, serious; when someone is wounded and hospitalized, minor; when there is no injury to someone but there is damage to vehicles or property. The World Health Organization (WHO, 2005) reported that motorcycle users make up a high proportion of overall traffic injuries and deaths, particularly in low-income and middle-income countries where motorcycle ownership is high. In agreement with this view The Nigeria Highway Code (2008) stated that motorcyclists are six times more likely to die in a crash than people in other types of encased vehicles. The chances are 8:10 that a motorcycle accident will result in death or very serious injury such as head and spinal cord injuries. The consequences of motorcycle accidents on the riders and passengers are normally injury and in severe cases death. Such associated injuries can be head fracture, limb wound, facial/scalp wound, dislocations, abdominal, chest and spinal injuries. Other consequences of motorcycle accidents are economic loss; arising from damages to motorcycle, cost of treatment in hospitals, cost of litigations, and loss of man hour and burial expenses in the case of death.

Road traffic accident according to Goswami and Sonowal (2009), can be a collision among vehicles, between vehicles and pedestrians, between vehicles and animals, or between vehicles and geographical or architectural obstacles. World Health Organization in 2004 reported that RTA results in deaths of 1.2 million people worldwide each year and an injury of about four times the number of deaths. Accidents in developing countries cost almost one percent of these countries Annual Gross National Product utilizing scarce financial resources they can ill-afford to lose. Oyeyemi (2023) stated that road traffic accidents constitute a major cause of death and loss of property in the country, depleting the workforce of the nation and rendering victims and their relatives to suffer severe psychological trauma. Road Traffic accident (RTA) represents a major epidemic of non-communicable diseases in Nigeria. It has been recognized as an important public health problem in both developed and developing nations (Adogu, et'al 2009).

According to O'Brien, Tay and Watson (2005) potential factors associated with motorcyclist road accident, are classified under two broad categories, namely person related and situational factors these factors include age, gender, personality, congestion, educational level of rider, lifestyle, riding experience, time pressure, age of vehicle, alcohol/ drug intake (psychoactive substance), condition of the road among others. But for the purpose of this study we will only consider factors such as the experience of the rider, psychoactive substance usage, and the nature of the road.

Some causes of motorcycle accident as listed by Olusanya and William (2007) includes over-speeding, failure to stop at a junction before entering the main road, wearing of non-protective light clothing and slippers, carrying in excess of one passenger, and failure to make appropriate turn signals. Oluwadiya, Kolawole, Adegbehingbe, Olaide and Uwaezuoke (2009) reported that non adherence to road signs, unlicensed and untrained riders, and drunk or drugged riding, shared-rides involving two or more passengers, are other general causes of motorcycle accidents. The study considered biopsychosocial factors of Experience, Psycho-active substance use and road condition as possible factors contributing to Road Traffic accidents among motorcyclists in Benue State.

Inexperience of motorcyclists seem to be a major cause of road traffic accident among motorcyclists. Riding experience of the motorcyclist as reported by Harrison and Christie (2005) is related to motorcyclist's behavior, which may affect their safety on the road. Experienced motorcyclist may seem faster to respond to hazards than inexperienced riders, and such faster response time may be due to experienced riders having visual search that is more than that of inexperienced riders. The experience of a rider is reported to be a major determinant of motorcycle related accidents in as much as it also depends on the level of educational attainment, motorcycle education and the intelligence of the individual rider. Tumwesigye, Atuyambe and kobusingya (2016) posits that the years the rider put into service matters a lot in safety. The inexperience of the rider is as a result of lack of preparation and training before riding and some other cases perceived overconfidence by prospective riders. The inexperience of riders could be seen manifesting in unnecessary display and untimely meandering of riders, beating of traffic signs and lights, cutting corners, risky overtaking and the likes. The show of reckless riding among motorcyclist's calls for observers to question their intelligence, attributing it to the accidents that are becoming disturbingly high. Onserio (2014) and James (2017) noted that commercial road users of younger age are more predisposed to road traffic accidents, with road crash severity found mostly in the under aged category, both ranked inexperience and less educated individuals at higher cause of road traffic accident.

Psychoactive substance according to WHO (2020), are substance that when used or administered into ones system, affects ones mental processes. National Cancer Institute refers to psychoactive substances as drugs that affect the brain works and causes changes in mood, awareness, thoughts and feelings or behavior. Some examples of psychoactive substances include Alcohol, Caffeine, Nicotine, Tobacco, Marijuana, Amphetamines, Ecstasy, Heroin and certain pain medicines. <http://www.cancer.gov/about-nei/legislative>.

Psychoactive substance use may have profound effects on riding skills, these effects according to American Association for the Advancement of Science, (2010) suggest that alcohol slows reflexes, which decreases the ability for one to react swiftly to changing situations, alcohol slows down the eye muscles functions, alter eye movement and visual perception, which results in blurred vision, and makes it difficult for an Okada rider (Motorist) to judge a vehicles position on the road, or the location of other vehicles, center line or road signs. Psychoactive substances may cause a decrease in driving attention and brings about drowsiness, which hinders one's ability to make rational decision, and also reduces eye, hand, foot coordination. The changes in the brain function experienced by people who use psychoactive substances affect their perception, mood, and consciousness. Psychoactive substances are found in a number of medications as well as in alcohol, illegal and recreational drugs and some plants and even animals.

The action of drugs on the human body according to (Balogun,2006) is called pharmaco-dynamics and what the body does with the drug is called pharmacokinetics. The drugs that enter the human tend to stimulate certain receptors, ion channels, act on enzymes or transporter proteins. As a result, they cause the human body to react in a specific way. There are two different types of drugs:

- a) Agonists: they stimulate and activate the receptors
- b) Antagonists: they stop the agonists from stimulating the receptors

Furthermore, (Balogun 2006) stated that once the receptors are activated, they either trigger a particular response directly on the body or they trigger the release of hormones and/or other endogenous drugs in the body to stimulate a particular response. Prescription of medication is designed and intended to help with a variety of medical needs, misuse comes in when a prescribed drug is used for a purpose other than its intended purpose, for instance, taking Percocet for a simple headache or a Xanax to treat nausea. Those who abuse prescription medication are often not prescribed what they are taking, they take medication to “feel high” or to chase a euphoric feeling nevertheless, the individual’s intention is the keystone to either misuse or abuse because the terms have a few similarities. A drug can also be referred to as a substance that could bring about a change in the biological function its chemical actions. It is also considered as a substance that modifies perceptions, cognition, mood, behavior and general body functions (Balogun, 2006).

Similarly, Mustapha and Faisal (2016) noted that majority of road traffic accidents in Nigeria occur as a result of high psychoactive substance use amongst riders. Most of the abusers of these substances are adolescent and youths who are incidentally the age group more involved in commercial motorcycling as reported by the Centre for Disease Control and Prevention (Stevelee 2017). Alti-Muazu and Aliyu (2008), posit that high prevalence of road traffic accidents (59.5%) was associated with the use of psychoactive substances, as a result road traffic accidents among commercial motorcyclists due to psychoactive substance intake were a frequent occurrence in that part of the country. Omumu, Tibi and Olufunke (2017) affirmed that psychoactive substance intake, their perception about the problems associated with substance intake and the number of accidents they have had in the past. The regression analysis showed psychoactive substance intake prevalence and occurrence of accidents and other public health concerns. This result in a lot of problems such as high death rate, mental problems, physical dys-functioning, reckless driving, aggressive driving, dangerous driving and loss of property. Drunk riding is a threat to cyclists’ safety as operating vehicle under the influence of alcohol increases a person’s risk of having a serious crash.

Condition of a road has to do with the state or wellbeing of a road. It is often characterized as being in a bad or good state. Most roads that are characterized by pot holes are referred to be in a bad state and these pot holes make riding on those roads a difficult task. According to Taiwo (2007) most riders take for granted the ability of their automobile to accommodate minor road hazard such as potholes or railroad tracks. Condition of the road is a great contributory factor to the high rate of accidents among motorcyclists. Poor road surfaces have been identified as a contributing factor in motorcycle crashes and are often mentioned by motorcyclists as an area where the government can take action to reduce crashes, sleepy surfaces, and repaired patches on the road, unevenness of the road, road markings, longitudinal parallel grooves, and use of cobbles and drain covers and gratings. Alpoh (2010) observed that most of the roads are in a rapidly deteriorating state due to construction of far below quality and engineering standard roads required, also poor lightning of the high ways. Non adherence to road signs and traffic rules accounted for 18 percent and 16 percent of commercial motorcycle accidents in Makurdi metropolis (Manassah 2013). Ogunmodede, Adio, Ebijuwa, Oyetola and Akinola (2012) posit that significantly contributing to increasing rate of commercial motorcycle accidents were poor state of roads and unfavorable weather conditions. Also, over-speeding, wrong overtaking and sudden mechanical defects, stating that commercial motorcycle riders do not comply with Road Safety Highway Codes. Manasseh (2013) also revealed that an average of 284 commercial motorcycle accidents per year occurred in Makurdi metropolis, resulting in an annual average of 224 deaths, and 188 injuries. Obstruction on the path of riders accounted for 17 percent of accidents and 16 percent for the nature of the road, with other factors accounting for the remaining percentages of accidents and deaths.

The display of an undesired behavior while riding is an issue of concern and requires counselling, which is capable of helping one resolve his or her behavioral problems and imbibe better driving values. Counselling is a process which helps an individual understand oneself and serves as an essential tool for the reformation of a person’s thought process and over all behaviour (Adejo, 2012). As such, the study seeks to investigate the influence of Bio-psychosocial factors on road traffic accidents among motorcyclists in Benue State, using counselling to reduce the menace of commercial motorcycle accident in the State.

---

## **Statement of the Problem**

Motorcycle is a major cost effective means of transportation of Man, goods and services from one place to another due to its availability and the fact that it is cheaper, easily affordable and accessible even in the rural areas, and also its ability to penetrate areas that could not have feasibly been accessed by motor vehicles. Despite its benefits, motorcycles are now seen as death traps as many people are scared of using motorcycles to travel from one place to another for fear of death injury or deformation. For instance, commercial motorcyclists, usually have a scent of either alcohol or cigarette indicating the fact that they have just finished consuming psychoactive substances. There is every tendency that such a cyclist may be involved in an accident. Several studies have been carried out on motorcycle accident in Benue state, studies have approached the consequences of motorcycle accident without revealing the causes. Some laid emphasis on recklessness, non-adherence to traffic rules, obstruction on the path of riders, rider’s attitude to safety measures.

The works of Manasseh (2013) and statistics from the sector command of Benue State Federal Road Safety Commission (2017) confirmed incessant motorcycle accidents. Nevertheless, there is deficiency of study on lack of experience, psychoactive substance use and road condition on road traffic accidents in the study area. Hence the study sought to investigate the influence of Bio-psychosocial Factors on Road Traffic Accidents among Motorcyclists in Benue State: The persona-socio counselling implication.

## ***Purpose of the Study***

The main objective of this study was to investigate the influence of demographic characteristics, psychoactive substance use and road condition on road traffic accidents among motorcyclist in Benue State, Nigeria. The Specific objectives are to:

1. Determine the influence of riding experience of motorcyclists on road traffic accidents in Benue State;

2. Ascertain the influence of psychoactive substance use by motorcyclists on road traffic accidents in Benue State;
3. Ascertain how the condition of roads influence road traffic accidents among motorcyclists in Benue State.

### Research Questions

The following research questions will be raised to help guide the study;

1. What is the influence of the riding experience of motorcyclists on road traffic accidents in Benue State?
2. What is the influence of psychoactive substance used by motorcyclists on road traffic accidents in Benue State?
3. What is the influence of condition of the roads on road traffic accidents among motorcyclists in Benue State?

### Statement of Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance.

1. Riding experience of motorcyclist has no significant influence on road traffic accident in Benue State.
2. Psychoactive substance used by motorcyclists has no significant influence on road traffic accidents in Benue State.
3. Road condition has no significant influence on Motorcyclists road traffic accident in Benue State.

## METHODOLOGY

The research design for the study was questionnaire survey research design. The area of study is Benue State. The population for the study was thirty-eight thousand, one hundred and twenty-eight (38,128) registered commercial motorcyclists in Benue State. The sample size for the study was 396 commercial motorcyclists in Benue State determined using Taro Yamen's formula (1967). The instrument used for data collection was a structured questionnaire constructed by the researcher titled Bio-psychosocial Factors on Road Traffic Accidents Questionnaire (BFRAQ). The instrument were subjected to validation to ensure internal consistency of the items of the questionnaire, the Cronbach Alpha Reliability Method was used yielding a reliability index of 0.88. Descriptive statistics measures of Mean scores and Standard Deviation, and the inferential statistic of Chi-Square test of independence were used to test the hypotheses at 0.05 level of significance. The Standard Deviation was used to know if there were deviations in the mean of the responses of the respondents, instruments which took the form of a continuum of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) were scored thus; SA = 4, A = 3, D = 2 and SD = 1 and the benchmark was calculated thus;  $\frac{4+3+2+1}{4} = 2.50$ . Therefore, any item with a Mean value of 2.50 and above was considered Agreed while those below 2.50 were considered Disagreed.

## Results

### Research Question one

#### What is the influence of riding experience of motorcyclists on road traffic accidents in Benue State?

Table 1: Mean rating of the Influence of Riding Experience of Motorcyclists on Road Traffic Accidents in Benue State.

Experience	N	Mean	SD	Remarks
1 – 5 yrs	13	<b>3.51</b>	.76	High influence
6-10yrs	153	<b>2.70</b>	1.11	High influence
11-15yrs	63	<b>1.58</b>	.88	Low influence
16-25yrs	29	<b>1.68</b>	1.01	Low influence
26plus	16	<b>1.13</b>	.91	Low influence

Table 1 revealed that, motorcyclist riding experience of 1-5 years and 6-10 years had mean values above the bench mark of 2.5, that is, 3.51 and 2.70 respectively with corresponding standard deviation values of .76 and 1.11. This implies that road traffic accidents are highly negatively influenced by motorcyclist within these years of riding experience. It also revealed that, motorcyclist with riding experience of 11-15yrs, 16-25yrs and 26plus had mean values below the bench mark (that is 1.97 and 1.62 with corresponding standard deviations of .88, 1.01 and .91 respectively). This implies that motorcyclist of these riding experiences has low negative influence on road traffic accidents.

### Research Question two

#### What is the influence of psychoactive substance used by motorcyclists on road traffic accidents in Benue State?

Table 2: Mean rating and standard deviation of the influence of psychoactive substance used by motorcyclists on road traffic accidents in Benue State.

S/N	Item Statement	SA	A	D	SD	Mean	Std. d	Decision
1	Motorcyclist speed above the stipulated limits when high on tramadol	185	147	38	26	3.24	.99	Agree
2	Motorcyclist who smoke cigarettes do not respect road signs	176	128	85	7	3.19	.78	Agree
3	Motorcyclist when high on marijuana do not mind giving salutations while riding	180	170	39	7	3.32	1.00	Agree

4	Motorcyclist who takes cannabis do not mind receiving calls while riding	201	147	20	28	3.32	1.10	Agree
5	Motorcyclist when high on tramadol like entering sharp bends on high speed	134	148	66	48	2.93	.09	Agree
6	Motorcyclist when high on proactive drugs like caffeine do not give chance to other vehicles getting ahead of them when the road is congested	147	145	66	38	3.01	1.31	Agree
7	Motorcyclists when high on marijuana do not drive at a speed that allow them to stop safely behind the vehicles ahead of them	186	140	38	32	3.21	1.11	Agree
8	Motorcyclists when high on cigarette get impatient at keeping a safe following distance in a stop road- sign	80	98	127	89	2.43	1.93	Disagree
9	Motorcyclists when high on tramadol do not allow other motorists to overtake them	98	156	89	53	2.76	1.21	Agree
10	Motorcyclists when high on cannabis feel excited speeding ahead of other vehicles	45	134	165	52	2.43	1.89	Disagree
11	Motorcyclists when high on codeine exceedingly speed up to overtake whenever another motorist overtakes them	200	59	89	48	3.04	1.67	Agree
12	Motorcyclists when high on codeine always speed up to an extent that their passengers do caution them	35	139	200	22	2.47	2.13	Disagree
13	Motorcyclists when high on caffeine exceedingly speed up to avoid being stopped by Road Safety Corps	189	113	88	6	3.22	1.25	Agree
14	Motorcyclists when high on marijuana often overtake other vehicles by the right when the road is congested	177	110	67	42	3.06	.45	Agree
15	Motorcyclists when high on cigarettes do not keep a safe following distance even when it is raining	189	114	60	33	3.16	1.76	Agree
16	Motorcyclists when high on cannabis get impatient at slow moving motorist in front of them	287	90	16	3	3.67	1.21	Agree
17	Motorcyclists when high on caffeine exceedingly speed up to avoid being stopped by policemen	217	100	45	34	3.26	1.32	Agree
18	Motorcyclists when high on tramadol do not mine overtaking other motorist where they is pot holes	289	87	15	5	3.67	.87	Agree
19	Motorcyclists when high on codeine easily get involve in accident when driving on a bumpy road	290	89	14	3	3.68	.17	Agree
20	Motorcyclists when high on marijuana move on even when the road sign is red	220	86	45	45	3.21	.87	Agree
<b>Cluster Mean</b>						<b>3.11</b>	<b>1.16</b>	<b>High</b>

Table 2 showed the mean responses of respondents on the influence of psychoactive substance used by motorcyclists on road traffic accidents in Benue State with corresponding Standard Deviation values. From the table, except for items 8, 10 and 12 with mean value ranging from 1.89 – 2.13 which are below the bench mark of 2.50 the respondents agreed to other items from 1 – 20 with mean values ranging from 2.76-3.68. The table also revealed close Standard Deviation values ranging from .17 - 1.93 which showed homogeneity in responses. The Cluster mean of all the items was revealed to be 3.11 and SD= 1.02. It revealed that, psychoactive substance has high negative influence on road traffic accidents in Benue state.

### Research Question three

#### What is the influence of condition on road traffic accidents among motorcyclists in Benue State?

Table 3: Mean and Standard deviation of the influence of condition of the roads on road traffic accidents in Benue State

S/N	Item Statement	SA	A	D	SD	Mean	Std. d	Decision
1	Motorcyclists enjoy over-speeding on good roads	132	150	68	46	2.93	0.59	Agree
2	Motorcyclists get involved in accident when they encounter zebra crossing on roads without prior warning	176	128	87	5	3.20	0.73	Agree
3	Motorcyclists get involved in accidents when street hawkers encroach the road making it narrow	183	167	43	3	3.34	1.01	Agree
4	Motorcyclists get involved in accidents when riding on a smooth road and suddenly encounters a bumpy spot	201	147	20	28	3.32	0.93	Agree
5	Motorcyclists easily get involved in accidents when riding on a bumpy road	134	148	66	48	2.93	1.11	Agree
6	Motorcyclists resort to rear-end collision when riding on expressway with pot holes	147	147	64	38	3.02	1.03	Agree
7	Motorcyclists get involved in accident when riding on wet clay graded roads	186	145	33	32	3.22	1.11	Agree
8	Motorcyclists get involved in accident when riding on dusty roads	89	122	98	87	2.54	1.11	Agree
<b>Cluster mean</b>						<b>3.06</b>	<b>.95</b>	<b>High influence</b>

Table 3 showed the mean responses of respondents on the influence of condition of the roads on road traffic accidents in Benue State with corresponding Standard Deviation values. The Table revealed that, all the items have mean response above 2.5. The Table also revealed close Standard Deviation values ranging from .59 - 1.11 which showed that the respondents were homogeneous in their responses. The cluster mean of all the items was revealed to be 3.06 and SD= .95. The finding revealed that condition of road has high influence on road traffic accidents in Benue state.

**Hypothesis one:** Riding experience of motorcyclists has no significant influence on road traffic accident in Benue State.

**Table 4: Chi-Square Test of the Influence of Riding experience of motorcyclists on road traffic accident in Benue State**

Variables	N	Df	$\chi^2$	Sig	Alpha Level	Remark
Riding experience						
	396	21	<b>148.505</b>	<b>.000</b>	.05	<b>Significant</b>
road traffic accident						

Analysis presented in table 4 above shows the Pearson Chi-square value of 148.505, degree of freedom df =21 and a Sig value (P-value)=0.00 which is less than the alpha value ( $\alpha=.05$ ). Since  $P<.05$ , the result is significant, it therefore follows that the null hypothesis is rejected. This implies that, riding experience of motorcyclists has significant influence on road traffic accident in Benue State.

**Hypothesis two:** Psychoactive substance used by motorcyclists has no significant influence on road traffic accidents in Benue State.

**Table5: Chi-Square Test of the Influence of Psychoactive substance used by motorcyclists on road traffic accident in Benue State**

Variables	N	Df	$\chi^2$	Sig	Alpha Level	Remark
Psychoactive substance						
	396	57	<b>94.409</b>	<b>.000</b>	.05	<b>Significant</b>
road traffic accident						

Analysis presented in Table 5 revealed a Pearson Chi-square value of 94409, degree of freedom df =57 and a Sig value (P-value)=0.00 which is less than the alpha value ( $\alpha=.05$ ). Since  $P<.05$ , the result is significant, it therefore follows that the null hypothesis is rejected. This implies that, psychoactive substance used by motorcyclists has significant influence on road traffic accidents in Benue State.

**4.1.10 Hypothesis three:** Road condition has no significant influence on Motorcyclists road traffic accident in Benue State.

**Table 6: Chi-Square Test of the Influence of Road condition on road traffic accident in Benue State**

Variables	N	Df	$\chi^2$	Sig	Alpha Level	Remark
Road condition						

396	21	133.032	.000	.05	Significant
-----	----	---------	------	-----	-------------

road traffic accident

Analysis presented in Table 6 revealed a Pearson Chi-square value of 133.032, degree of freedom  $df = 21$  and a Sig value (P-value) = 0.00 which is less than the alpha value ( $\alpha = .05$ ). Since  $P < .05$ , the result is significant, it therefore follows that, the null hypothesis is rejected. This implies that, road condition has significant influence on Motorcyclists road traffic accident in Benue State.

## Discussion of Findings

The result from the finding of the study in respect to research hypothesis one which sought to find the influence of riding experience of Motorcyclists on road traffic accidents indicate that riding experience of motorcyclists has significant influence on road traffic accident in Benue State. The findings revealed that, cyclist of higher riding experience have less chances of getting involved in road traffic accidents. Thus it was seen that road traffic accident was accountable for cyclist of riding experience from 1-5 years followed by those with riding experience of 6-10 years, 11 – 15 years and 16 – 20 years then 21 – 25 years and a lesser mean (lower than the bench mark) accountable for motorcyclists with 26 above years of riding experience. This finding agrees with that of James (2017) whose study to investigate the prevalence of alcohol use among road users and its impact on traffic crash severity in Ghana, who ranked inexperience a higher cause of road traffic accident in Ghana. The finding also conforms to Onserio (2014) whose study to determine factors influencing accident rates among motorcycle operators in Kisii town identified experience as a factor influencing road traffic accidents in Kisii town. Onserio revealed that motorcyclist of higher riding experience were less prone to road traffic accidents in Kisii town. Inexperience could be seen as major contributor to motorcycle road crashes, with novice riders being more likely to over brake or misjudge turns. This elevated risk was linked to inexperience that led to over speeding. It is important to restrict privileges for new and inexperienced riders until they gain sufficient experience. For experienced riders, even though they had better ability to predict vehicle behavior and anticipate another rider's abilities and action, they also have increased awareness of blind spots and defensive rider's techniques. It is also very important for experienced riders to refresh their skills and improve safety awareness. Young riders should be encouraged to go through driving schools and use virtual reality or driving simulators to help them gain confidence before taking to the roads. Counselling helps to address complacency or over confidence to encourage renewed adherence to safety practice. Cognitive behavioral therapy on the other hand can address anxiety or fear in riding, also to help process guilt or trauma resulting from accidents. Therefore it is important to teach strategies to rebuild confidence and prevent future errors. It can therefore be concluded from the finding that the number of year's one stay on the job as a Motorcyclist has an influence on road traffic accidents in Benue state.

The results from hypothesis two which sought to find the influence of psychoactive substance use by motorcyclists on road traffic accidents indicate that Psychoactive Substance used by Motorcyclists had significant influence on road traffic accidents in Benue State. This finding corroborates that of Alti-Muazu and Aliyu (2008) whose study on the Prevalence of psychoactive substance use among commercial motorcyclists and its health and social consequences in Zaria revealed that a high prevalence (59.5%) of road traffic accident among commercial motorcyclists was associated with the use of psychoactive drugs. Commonly identified psychoactive substances used were: marijuana (Indian hemp) solution, caffeine (Kola) and coffee. Keeping awake, suppression of fatigue, and peer group effect were the identified factors influencing psychoactive substance use. Since psychoactive substance use slows down the brains ability to process information, delaying responses to sudden road hazards, substances like Alcohol or stimulants (cocaine) may increase confidence, leading to reckless riding, speeding or ignoring rules. Distorted or impaired depth perception makes it harder to judge distances thereby increasing the risk of collision. Riders under the influence of psychoactive substances are less likely to notice traffic signals, pedestrians or other vehicles. It can also enhance drowsiness, increasing the likelihood of falling asleep at the wheel. It is therefore, important to counsel riders to address the root causes of substance misuse and help individuals adopt healthier coping mechanisms, psycho-education on substance effects and support for trauma related symptoms such as guilt or anxiety. It will be important for strict penalties to be put in place to deter behaviors and also screen riders on use of Breathalyzers. Thus, from the finding, it can be concluded that the use of psychoactive substances influence road traffic accident in Benue State.

Lastly, the results from the findings of hypothesis three which sought to find the influence road condition on motorcyclists road traffic accidents indicate that road condition has a significant influence on motorcyclists road traffic accident in Benue State. The analysis as presented showed all the items had mean value above bench mark. This finding supports that of Ogunmodede, et'al (2012) whose work revealed among other factors that bad roads significantly contributes' to increasing rate of commercial motorcycle accidents. A similar result was revealed by Onserio (2014) in a work to determine factors influencing accident rates among motorcycle operators in Kisii town in Kenya. Poor state of roads and unfavorable weather conditions among other host of factors also influences motorcycle accidents. Road condition sufficiently influence the likelihood of road traffic crashes by affecting the safety and performance of vehicles and riders, potholes and cracks causes blow outs on vehicle tyre, loss of control, increase in risk of skidding. Wet roads reduces time traction therefore increasing stopping distance and the likelihood of hydroplaning. Poor visibility also limits reaction time and decision making for riders. Insufficient street lighting at night causes poor visibility increasing the risk of night time crashes, as overgrown vegetation's or curves can hide hazards like oncoming vehicles or pedestrians. Head on collision is increased with sharp turns or blind spots, undersigning confuses riders leading to wrong turns or abrupt stops. Malfunctioning traffic issues lead to confusion and accident at intersections as poorly placed crosswalks increases the risk of pedestrian vehicle collision. Sudden road closure due to construction and loss gravel or uneven pavement, areas with better maintained roads and clear signage tend to experience fewer accidents. From the finding, it can be said that road condition of Motorcyclists influences road traffic accidents in Benue State.

## Conclusion

Based on the findings of the study, the researchers concluded that, demographic characteristics (riding experience of motorcyclist, road condition and psychoactive substance usage influences road traffic accidents among motorcyclists in Benue State. Cyclists with little riding experience and those involved in the use of psychoactive substances are more prone to road traffic accidents in Benue State. More so, the state of being (bad, dusty and rainy) of the road also leads to road traffic accidents.

## REFERENCES

- Adogu, P.O.U., Illika, A.L., & Asuzu, A.L. (2009). Predictors of road traffic accident, Road traffic injury and death among commercial motorcyclist in urban areas in Nigeria. *Nigerian journal of Medicine*, 18(4), 393-397.
- Adejo, G.O. (2012). Knowledge of psychological adjustment: A veritable tool in the hands of a counsellor. *Journal of Educational Innovators*, 5(1), 220-224.
- Alti, M., & Aliyu, A.A. (2008). Prevalence of psychoactive substance use among commercial motorcyclist and its health and social consequences in Zaria, Nigeria. *Am. Afr. Med. Journal*, 7(2), 67-71.
- American Association for the Advancement of Science (AAAS). (2010). Effect of Alcohol on Driving skills. *International Journal of Counselling Association of Nigeria*, 9(3), 25-34.
- Balogun S.O. (2006) *Road Safety Practices in Nigeria*. Abuja: Lothan publishers.
- Benue Motorcycle Association (BEMOA 2018). Inquiry into road accidents caused by commercial Motorcyclists in Makurdi. Accidents emergency record book. Makurdi. BEMOA
- Federal Road Safety Corps (2017). An article on FRSC what we do. Retrieved from <http://frsc.gov.ng/whatwedo>. Retrieved from [www.FRSC.gov.ng](http://www.FRSC.gov.ng)
- Federal Road Safety Corps (2007). An article on FRSC Establishment Act. Retrieved from [www.FRSC.gov.ng](http://www.FRSC.gov.ng)
- Federal Road Safety Corps (2012). Accident Summary, Statistics Department of Policy Research and Statistics, Head Quarters Abuja Nigeria. Retrieved from [www.FRSC.gov.ng](http://www.FRSC.gov.ng)
- Goswami, A & Sonowal, R. (2009). *A statistical Analysis of Road Traffic Accidents in Dibrugarh City*, Assam, India: Medical Research Centre.
- Harrison, W., & Christie, R. (2005). Exposure survey of motorcyclist in New South Wales. *Accident analysis and prevention*, 3(7), 441-451.
- James, D. D., (2017). The Prevalence of Alcohol Use among Road Users and Its Impact On Traffic Crash Severity in Ghana. *Journal of Everyday Counselling*, 9(3), 63-73. Retrieved from <http://www.regdisrumich.edu/garp/articles/eccleso2.pdf> Retrieved 21/08/2018.
- Manasseh, J. (2013). Causes and Consequences of Commercial Motorcycle Accidents in Makurdi Metropolis. *Global Journal of Social Sciences*, 1(2), 11-18.
- National Health and Medical Research Council. (2001). Alcohol Guidelines Health Risk and Benefits Canberra, USA. *The International Journal of Orthopedic Surgery*, 8(2), 154- 165.
- Nigeria Highway Code (2008). The Nigeria Highway Code 2nd edition. *Federal road Safety Corps*. Abuja Retrieved from <http://www.regd/articles/eccleso2.pdf> Retrieved 21/08/2018.
- Niven, A., & Hamilton, N. (1987). The counselor. *Journal of Counselling Association of Nigeria*, Benue State 2(9), 11-19.
- O' Brien, S.R., & Waston, B. (2005) Situational factors contributing to the expression of Aggression on the road. *Journal of International Association of Traffic and Safety Sciences*. 28(1), 101-107.
- Ogunmodede, T.A., Adio, G., Ebijuwu, A.S., Oyetola, S.O., & Akinola, J.O. (2012). Factors Influencing High Rate of Commercial Motorcycle Accidents in Nigeria. *American International Journal of Contemporary Research*. 2(11), 20-32
- Olubomohin, O. (2012). The development, understanding impact of motorcycle as a means of Commercial transportation in Nigeria. *Global Journal of Social Sciences*, 2(6), 133- 140
- Olusanya, C. A., & William, R. B. (2003). Motorcycle injuries in a developing country and the vulnerability of riders, passengers, and pedestrians. *International Quarterly of Community Health Education*. 22(1), 17-31.
- Olusanya, C. A., & William. R. B. (2007). Motorcycle taxis and road safety in south western Nigeria. *International Quarterly of Community Health Education* 22(1), 17-31.
- Oluwadiya, K. S., Kolawole, K. I., Adegbehingbe, O. O., Olasinde, A. A., Olaide, A., & Uwaezuoke, S.C. (2009). Motorcycle crash characteristics in Nigeria: Implication for Control. *Accident Analysis and Prevention*, 4(2), 294-298.
- Omumu, F., Tibi, P., & Olufunke, C. (2017). Commercial Cyclists (Okada Riders) and Alcohol Related Problems in Delta State, Nigeria. *Covenant International Journal Of Psychology (CIJP)*, 2(1), 34-42.
- Onserio, V. N., (2014). Factors Influencing Accident rates among Motorcycle Operators in Kisii Town. *Journal of everyday Counselling*, 9(3), 105-111. Retrieved from <http://www.regdisrumich.edu/garp/articles/eccleo5a>.
- Oyeyemi, B.O. (2003) *Productivity and road traffic administration in Nigeria Impediments and strategies*. Ibadan: Clemeve Media Consult.
- Ozdemir, C., Ozei, E. T., Dogan, Y.B. (2005). Investigation of alcohol use disorders in a group of driving while intoxicated offenders. *Journal of Emergency Medicine*. 40(6), 529-536
- Taiwo, S.K. (2007). *Motorcycle Accident in Nigeria*. Abeokuta: Bolatilo and Sons Ltd
- Tomusange, R. N (2018). Motorcycle accidents and road safety in western Nigeria. *International Quarterly of Community Health Education* 22(1), 45-52.
- Tumwesigye, N.M, Atuyambe, L.M, Kobusingye, O.K (2016) Factors associated with injuries among commercial motorcyclists: evidence from a matched case control study in Kampala city, Uganda. *PLoSone*, 11(2) 32-44 Available at [ncbi.nlm.nih.gov/pmc/articles/PMC4769300/#\\_ftn\\_sec1title](http://ncbi.nlm.nih.gov/pmc/articles/PMC4769300/#_ftn_sec1title).



---

World Health Organisation WHO. (2020) *Programme on Substance Abuse, Preventing Substance Abuse in Families*, Geneva: World Health Organization  
Position Paper: Author  
World Health Organisation, (2005). Helmets: A road safety manual for decision makers and Practitioners. Retrieved from [http:// www.who.int/violence](http://www.who.int/violence).