

# Assessment of Psychoactive Substance Abuse Among Commercial Motorcycle Operators in Minna, Nigeria.

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## Abstract

The prevalence of psychoactive substance abuse among commercial motorcycle operators in Minna is of public health concern and has become worrisome as a result of their engagement in high-risk behaviour, unsafe lane-splitting and weave in and out of traffic with little caution, putting passengers and other road users at great risk. They also, dominate the road space, overtake along wrong side of traffic, and drive against traffic. This study was invariably designed to assess the extent of abuse of psychoactive substance among commercial motorcycle operators in Minna metropolis. A cross-sectional survey in which multi-stage sampling technique was adopted in dividing Minna into to Local Government Area and 372 structured questionnaires were administered to commercial motorcycle operators at three selected designated parks and operating units (i.e., Bosso, Sauka-kahuta and Kpakungu) within Minna metropolis. Findings reveals that 69.3% of commercial motorcycles operators were between the age of 21-40 years old, 45.2% had primary and secondary education with 52.7% earning less than #50,000 monthly. Unemployment and poverty accounted for 46% of factors influencing drug abuse. While, Tramadol, Codeine and Solution accounted for 98.4% of the total variance of effect of substance abuse with 47% of abused drugs gotten through street traders and peddlers. Multiple linear regression used to assed the effects of drugs abuse shows that the coefficient of determination  $R^2$  is 0.532 (53%), ANOVA;  $F = 38.284$ ,  $P = 0.000$ . The following recommendations were made based on the findings; There is need for National Drugs Law Enforcement Agency (NDLEA) and ACOMMORON to collaborate in establishing a robust monitoring post at major organized motor parks in order to monitor, control, sensitize and arrest drug abuse offenders. Finally, relevant Government agencies should introduce awareness and enlightenment programs on the danger of substance abuse.

Key Words: Psychoactive; Substance; Drug-Abuse; Commercial; Motorcycle

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## 1. Introduction

Substance abuse refers to a strategic use of a drug in which the user consumes it in measures or methods harmful to him/her or others, and it is a primary form of drug-related disorder substance (Akande, 2015). The World Health Organization (2010) addressed substance abuse as "the harmful or dangerous use of psychoactive substances, including alcohol and illicit drugs". The in-take of psychoactive substances leads to

a dependency syndrome - a set of cognitive and psychological behavioural occurrence that forms after repeated substance use and which normally includes a vibrant desire to take the drug, inability in controlling its use, use persistent despite damaging consequences and increased tolerance and sometimes a state of physical withdrawal (WHO, 2010).

Psychoactive substances are chemicals that alter mental functioning for the effects on mood and/or with an altered state of subjective reality, (i.e., they have the ability to change an individual's consciousness, mood or thinking processes). These include illegal drugs, some prescription drugs, alcohol and tobacco. The primary cause of substance abuse and addiction is relatively vague, with theories expounding on hereditary disposition, learned from others, or a habit that, if an addiction is formed, it reveals itself as a severe debilitating disease (Thornton, Singh & Tonmyr, 2011). Individuals abuse substances such as alcohol, tobacco and other drugs due to a number of complex reasons, but it is expressly visible that our society bears a considerable cost (Kabir and Makinde, 2010). The effect of these is seen in our correctional facilities and emergency departments through both first-hand damage to health as a result of drug addiction and its relation to physical trauma (Beavis and Fred, 2014).

The use of motorcycles (also known as Okada in local parlance) to convey passengers from one destination to another for commercial purposes has permeated Nigeria's transport corridors and has become increasingly accepted, perhaps because it is faster, especially when delays are imminent. (Gudaji and Habib, 2016). Okada Riders have come to fill the wide transit deficit in most city centres across the nation. Nevertheless, the number of road accidents associated to the formation of special orthopaedic departments in Nigerian hospitals has sporadically increased due to road accidents. The irresponsibility and terrible attitude of bikers was attributed to drug addiction (Gudaji, 2008). The use of motorcycle as a means of public transport became widely spread as a result of the shortcoming of other modes of public transportation and congestion in most urban centres (Akande, 2015).

The popularity of motorcycles as a mode of transportation in Nigeria has grown as a result of their

convenience, affordability, manoeuvrability, and the ability to drive through congested roads gives it an edge when compared to four-wheeled vehicles. (NHTSA stands for National Highway Traffic Safety Administration, 2008). The problem of addiction is developing at an explosive rate and in just over a decade, it has spread its malevolent tentacles to almost every region of the world by overcoming almost all the barriers of race, caste, belief, religion, sex, educational status, economic layers etc. (Laban, 2016).

Riding a commercial motorcycle comes with lots of risks premised on exposure to harsh weather conditions, peer pressure, unfriendly terrain and other inhumane conditions which invariably could aggravate to drug abuse (Adejide, 2017). Commercial motorcycle operators are viewed as usually engaging in high-risk behaviour, unsafe lane-splitting and weave in and out of traffic with little caution, putting passengers and other road users at great risk (Kumar, 2018). They dominate the road space, overtake along the wrong side of traffic, and drive against traffic as a result of substance abused (Umaru, 2020). Thus, one wonder if these operators are sane or under the influence of drug with their daredevil performances and utmost disregards to life. This invariably necessitate the need to carry out this study in order to unravel the extent of the effect of psychoactive substance abuse and the underlying effects among commercial motorcycle riders in order to proffer solution to this menace.

## **2. Literature Review**

### **2.1 Model Background to Psychoactive Substance Studies**

This study adopted socio-cultural and social learning model. However, some researchers have tried to explain substance abuse with models, such as Psycho-dynamic model (Sigmund Freud, 1900), Reinforcement model (Skinner, 1938), Rationality model (Herbert, 1996), Moral model (Crockett, 2013) among others. However, these conceptual explanations were found to be inadequate as an overall explanation for the phenomenon of substance abuse. Therefore, this study is directed at model building for the explanation of substance abuse, and presents the socio-cultural model and social learning model. Over the years, numerous models of drug use studies have been developed that emphasize differently the hypothetical variables underlying drug use

patterns, hence by a brief contrast and study of this different models we state our reason for choosing the socio-cultural and social learning model.

### **2.1.1 Biological/Medical Models**

According to the bio-medical model which was largely founded on the works of Emile Kraepelin in the late nineteenth century, certain biological markers allow for consumer behaviour prediction. Drug abuse, on the other hand, harms a person's bio-physical structure and causes a variety of ailments. In this light, the drug user is no longer an offender, but rather a patient in need of medical attention (Jellinek, 1960). A more recent method incorporates the biological model into the field of addiction neurobiology. McKim (2003), opined that there are alterations in the neurotransmitter activity that trigger the pleasure and reward system. According to neurochemical studies, there is a link between drug-induced euphoria and the user's attachment to the drug.

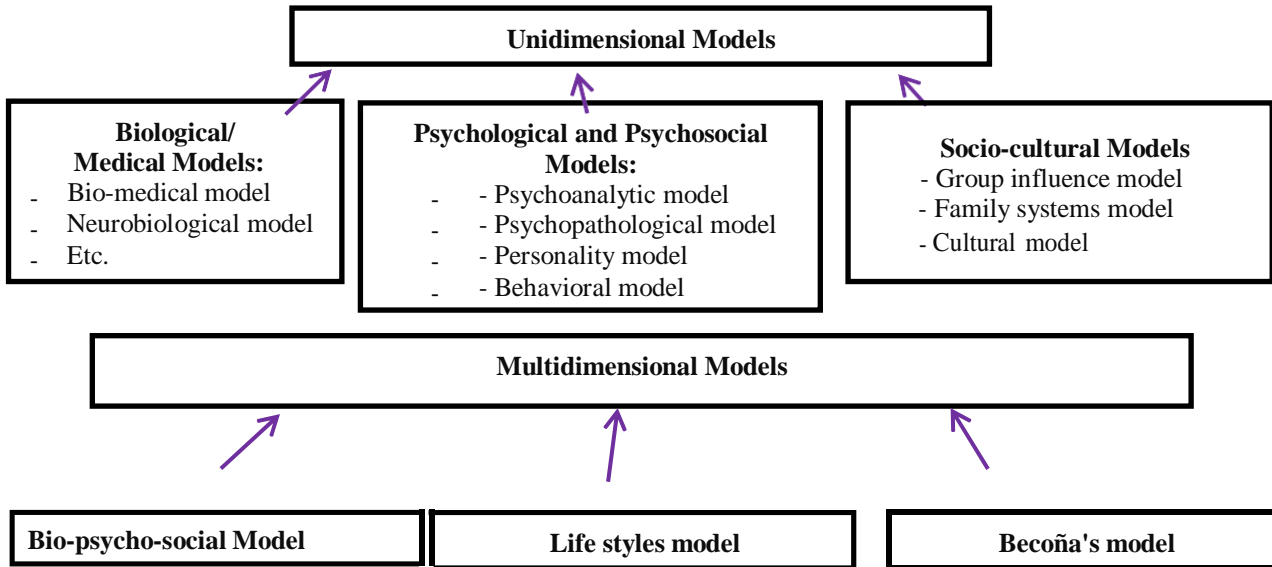
### **2.1.2 Psychological and Psychosocial Models**

These are based on the idea that addiction is caused by a psychological issue, and this line of thought arose from the emergence of psychology and sociology as distinct academic disciplines in the late nineteenth century, for example, the problem is explained as the existence of a compelling need to express aggressiveness or other powerful emotions, which damages the individual's moral code. Several research has been stated to look at the links between various types of psychopathologies and substance abuse (Wilens, 2009). The aim of this model is to reconcile insights from both psychology and sociology to provide a more holistic understanding of mental health rehabilitation and an effective method for mental health treatment.

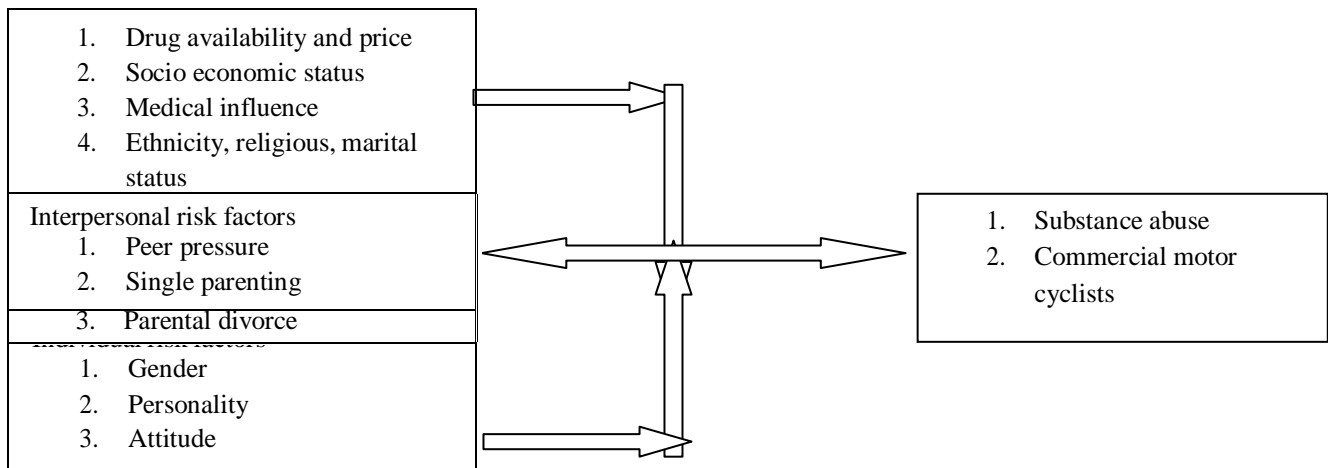
### **2.1.2 Socio-Cultural Model**

Socio-cultural model was proposed by Rogoff, 1990. Unlike other models it focuses on society as whole and not just on individuals. This model is based on the idea that the type of society in which people live has an impact on their substance use and abuse. In particular, this model makes links between inequality and drug use. It suggests that people who belong to groups who are culturally and socially disadvantaged are more likely to experience substance abuse. Also, addiction is likely to occur in children or young adults reared in

families where one or both parents are addicted to drugs (Lawson & Lawson, 1998). It also recognizes that society labels users of certain substances as deviant, thereby creating further problems. Because this model links substance abuse to the conditions of the wider society, the solution to 'drug problems' revolves around changing the social environment, rather than treating individuals. This involves developing ways to address poverty, poor housing and discrimination.



**Figure 1: Uni and Multidimensional Explanatory Models of Drug Use**  
Source: Explanatory Models of Drug Use and Their Rationality, Mihaela (2018)



**Figure 2: Structural Risk Factors Associated with Substance Abuse**  
Source: Azmitta (2016)

In the conceptual framework, causes of drug abuse can be attributed to structural risk factor, interpersonal risk factors and individual risk factors. These make up the independent variables.

## 2.2. Empirical Review

Ajibade, Uvomata, Akinpelu, Adeleke, Fabiyi & Akinlabi (2016) study on factors influencing substance abuse amongst selected commercial motorcyclists in Ogbomosho Metropolis, affirms that (46%) had a fair knowledge about substance abuse (36.5%) had a poor knowledge of substance abuse while only 17.5% had good knowledge about substance abuse. This invariably corroborate the findings in the studies of Makanjuola et. al., 2009, & Kabir & Makinde, 2010). The abuse of drugs in larger doses put a greater strain on the body, the stress on the heart can be fatal. Aside from the physical impact, there are also severe emotional conditions caused by even short-term abuse of drugs like hallucinations and psychotic behaviour (Muobogare, 2008; Obadeji, Kumolalo & Ajiboye, 2020).

Gureje et. al., (2007) stated that the prevalence of alcohol was 58 percent, tobacco 17 percent, sedatives 14 percent, stimulants 2.4 percent, and cannabis 3 percent in a statewide study of psychoactive substance use among adults in five of Nigeria's six geopolitical areas. It has been observed that commercial motorcycle riders have a very high prevalence of substance misuse (Danjuma, Taiwo, Omoniyi, Balarabe, Kolo, 2015; Coleman, 2010 & Fasoro, Olusuyi, Dada, Adewunmi & Oluwatuyi 2020). Adogu, Ilika, & Asuzu (2009) findings shows that alcohol consumption among motorcyclists was discovered to be a strong predictor of road traffic accidents, as well as death. Alti-Muazu & Aliyu (2008) findings reveals that motorcyclists have been linked to the usage of psychoactive medications. Stephen, David & Kevin, (2017) in determining seminal symptoms of conduct disorder as a risk factor for substance abusers among incarcerated youth. Observed that the overall model containing 6 symptoms of conduct disorder is significantly related to substance abuse.

Afolabi, Ayilara, Akinyemi & Ola-Olorun, (2012) result shows that the substances were obtained from open drug market. Reasons from drug use included; to keep awake, to experience high feelings, for body building

and to moderate appetite. Furthermore, Thornton, Singh & Tonmyr, (2011) care giver substance abuse was found to be a significant predictor of youth substance use. While, Makanjuola, Makata, Ogundele, Makanjuola & Johnson, (2020) findings revealed that commercial motorcycle operators in Akure Metropolis engaged in substances use and abuse due to frustrations, to boost energy and get fit for the work, to avoid problems and to think more clearly and also due to availability and affordability of the substance. Gudaji & Habib; 2016 & Schmidt; 2004, study observed that there is a strong association between poverty, social exclusion and problematic drug and substance abusers.

### **3. Study Area**

This research was carried out in the Minna metropolitan area. The administrative division of Minna metropolis is as follows: two Local Government Areas i.e., Chanchaga and Bosso. Minna which is Niger State's political capital with a total land area of 76,363 square kilometres (29,484 square miles). Niger State is located in Nigeria's North-Central region. It is bordered in the north by Kaduna State, the north west by Kebbi State, the south west by Kwara State and the south east by Kogi State. While, in the state's south eastern boundary is Abuja, the Federal Capital Territory. Minna city is divided into 21 political wards (11 in Chanchaga and Bosso LGAs 10 wards).

According to 2006 census conducted by the National Population Commission, the metropolis has a total projected population of 472,911 people with 2.5 percent annual growth rate. Minna, a city in north central Nigeria, has only one airport, which is located in Maikunkele, a suburb in Minna. There is also a functioning railway line that runs the length and breadth of the country, transporting products and passengers. Minna is connected to various parts of the country via a number of road networks. Minna is also connected to other parts of the state by local roads. Shuttle buses, taxi cabs, and commercial motorcyclists are all common modes of public transit. Commercial motorbikes enable individuals to go from one part of the city to another, particularly in difficult-to-reach districts or areas with poor road networks.

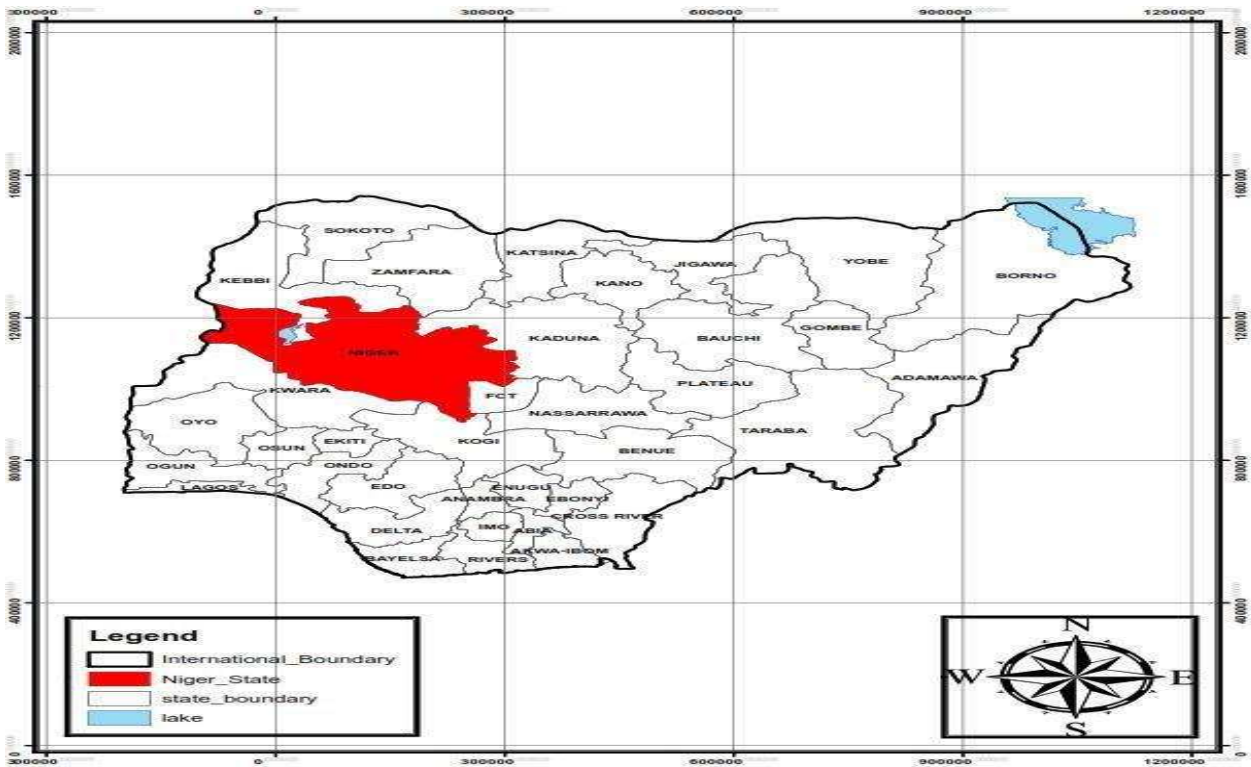


Figure 3: Map of Nigeria showing Niger State  
Source: Niger State Ministry of Lands and Housing Minna, (2013)

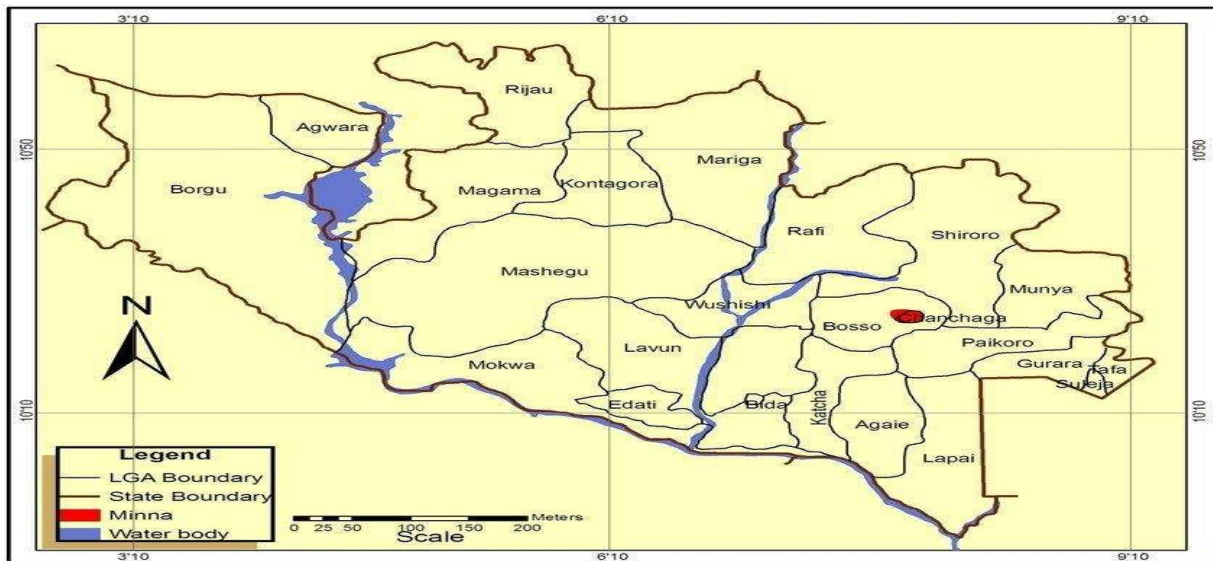
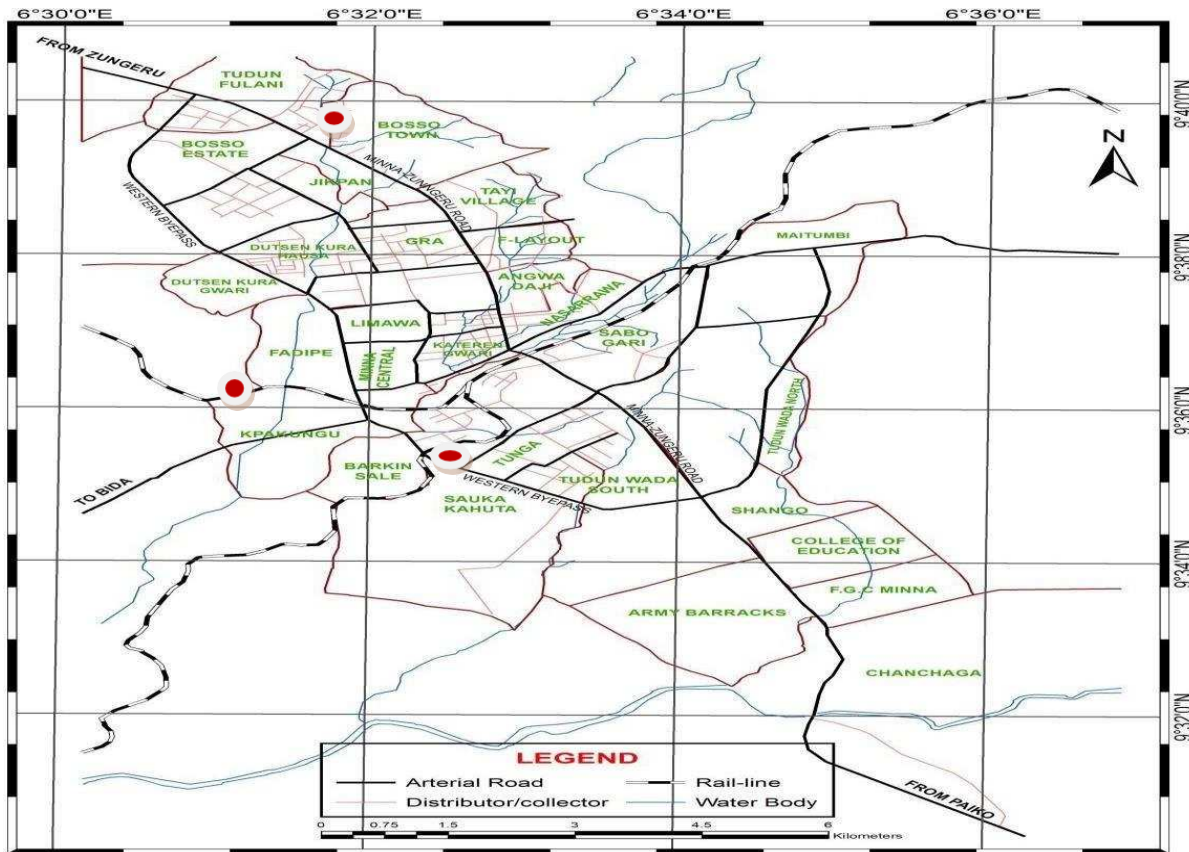


Figure 4: Map of Niger State showing all Local Governments Areas  
Source: Niger State Ministry of Lands and Housing Minna, (2013)





**Figure 5: Selected Commercial Motorcycle Operators Parking Units Minna**  
Source: Authors Field Survey (2021)

**4. Methodology**

A survey research method was adopted to collect data. Furthermore, a cross-sectional study which focused mainly on substance abuse among commercial motorcyclists in Minna, Niger State. This study was delimited to selected motorcyclists that were registered by the Amalgamated Commercial Motorcycle Owner’s and Riders Association of Nigeria (ACOMORAN) in Minna. The research population consists of motorcycle riders registered members of the Amalgamated Commercial Motorcycle Riders Association of Nigeria (ACCOMORON) were about 19,000 registered members in Minna.

A multi-stage technique was adopted in which Minna was divided into two Local Government Areas (i.e.,

Bosso and Chanchaga). Moreover, in Chanchaga LGA there are 42 commercial operating units while in Bosso LGA there are 28 operating units. In Chanchaga LGA there are 12,680 operators and in Bosso LGA 7,220 (Danlami, 2016). In order to determine the sample size for a population proportion of 19,900 riders in the selected LGAs, Taro Yamane (1967) sample size formula was used to determine the suitable sample size for the study.

The formula is presented as follows:

$$n = \frac{N}{1+N(e)^2}$$

Where;

n = sample size,

N = population of the study, and

e = level of significance or (limit of tolerable error) = 0.05.

So, from the equation,

Where;

N= 19,900

e= 0.05.

The sample size is calculated as follows;

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{19,900}{1+19,900(0.05)^2}$$

$$n = \frac{19,900}{1+19,900(0.0025)}$$

$$n = \frac{19,900}{49.7525}$$

$$n = 399.97$$

$n \approx 400$  (Approximately sample size).

Therefore, 400 questionnaires were distributed out of which 372 (i.e., 93%) were returned valid.

## 5. Findings and Discussions

### 5.1. Socio-economic Characteristics of Respondents

**Table 1 Socio-economic Characteristics of Passengers**

Variable	Attribute	Frequency	%
Gender N = 372	Male	372	100.0
	Female	0	0
Age N = 372	<20 years	21	5.6
	21-30 years	146	39.2
	31-40 years	112	30.1
	41years and above	52	13.0
Education Status N = 372	No Formal Education	07	28.7
	Primary	93	25.0
	Secondary	75	20.2
	OND/NCE/HND	68	18.3
	BSc	29	7.8
	Above 1 <sup>st</sup> Degree	0	0.0
Occupation N = 372	Student	53	14.2
	Business/Trader	65	17.5
	Self Employed	108	29.0
	Privately Employed	9	2.4
	Civil Servant	42	11.3
	Unemployed	95	25.5
Income N = 372	<N50,000	196	52.7
	N51,000-N100,000	73	19.6
	N101,000-N150,000	67	18.0
	N151,000-N200,00	34	9.1
	N201,000-N250,000	2	0.5
Marital Status N = 372	Married	157	42.2
	Single	84	22.6
	Divorced	5	1.3
	Separated	61	16.4
	Widow/Widower	65	17.5
Family Size N= 372	1-2	30	8.2
	1-3	49	13.2
	1-4	63	16.9

1-5	149	40.0
>6	81	21.7

**Source: Author's Computer Analysis (2021)**

Table 1 indicates that motorcycle operators were predominantly male dominated with 69.3% between age 21-40 years. 45.2% possess primary and secondary educational qualification while 29 % and 25% were self-employed and unemployed respectively. Furthermore, 52.7% earned less than #50,000 monthly with 42.2% been married with 40% having a family size between 1to 5.

## 5.2 Forms of Ownership

**Table 2: Form of Ownership of Commercial Motorcycle Operators**

Response option	Frequency	Percentage (%)
Self-owned	81	21.8
Contractual Agreement	77	20.7
Loan	75	20.2
Rent	63	16.9
Riding for others	59	15.9
Hire Purchase	17	4.6
<b>Total</b>	<b>372</b>	<b>100.0</b>

**Source: Authors Computation, (2021)**

Table 2 shows that 21.8% of the commercial motorcycles used by operators are self-owned, while 20.7% are under contractual agreement, 20.2% were acquired through loans and 16.9% were rented. Moreover, 15.9% of the operators were riding for others with 4.6% owned through hire purchase. This result shows that majority of commercial motorcycles operating in Minna 21.8% were self-owned. 20.7% and 20.2% were owned through contractual agreement and Loan respectively.

## 5.3 Factors Responsible for Drug Abuse

**Table 3: Ranking of Factors Influencing Drug Abuse**

Response option	Frequency	Percentage (%)	Position
Unemployment	87	23.4	1 <sup>st</sup>
Poverty	84	22.6	2 <sup>nd</sup>
Culture (Socio-Cultural Beliefs and Perspective)	68	18.3	3 <sup>rd</sup>
Curiosity	65	17.5	4 <sup>th</sup>
Income	61	16.4	5 <sup>th</sup>

Emotional stress (Inability to cope with Pain)	7	1.9	6 <sup>th</sup>
<b>Total</b>	<b>372</b>	<b>100</b>	

**Source: Authors Computation, (2021)**

Table 3 shows that Unemployment (23.4%) tops the list of factors adduced for influencing the use of psychoactive substances with Poverty (22.6%), Culture (18.3%), Curiosity (17.5%), Income (16.4%), and Emotional Stress (1.9%). The Analysis identified Unemployment (23.4%) to be the most dominant factor in pushing individuals towards abusing substances, this is valid for the bracket in the populace that are relatively idle and can be easily influenced by variables that seems to alleviate their enthusiasm in this lowly state. Poverty (22.6%) ranks second amidst predisposing factors in that the correlation that exists between poverty and unemployment is delicate. Culture (18.3%) is the 3<sup>rd</sup> ranking factor.

**Table 4: Total Variance of Factors Explained**

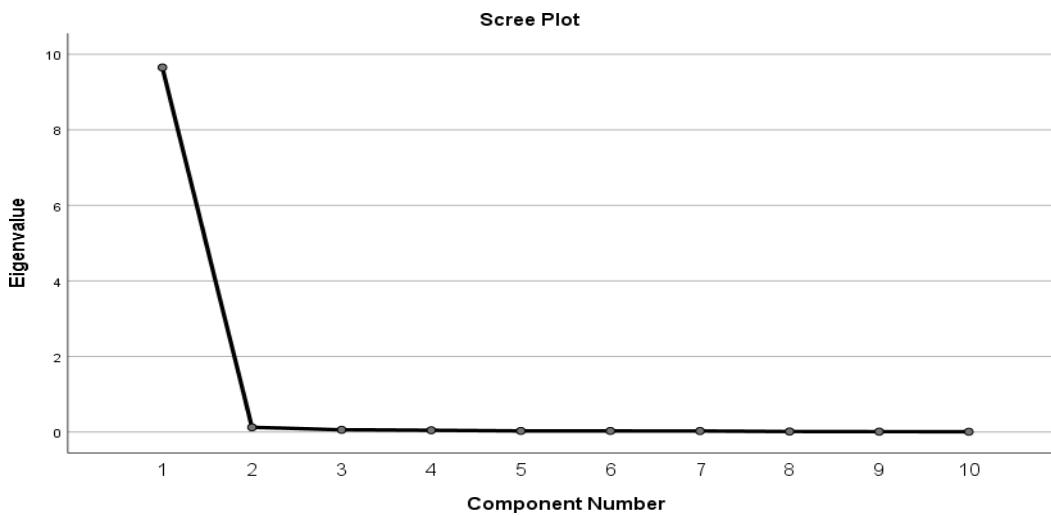
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Tramadol	7.651	76.508	96.508	7.651	96.508	96.508
Cough Syrup (Codeine)	1.125	10.250	97.758	1.125	10.250	97.758
Solution	.860	5.597	98.355	.860	5.597	98.355
Rophynol	.047	.475	98.830			
Marijuana	.030	.302	99.132			
Cigarettes	.029	.289	99.421			
Alcohol	.027	.274	99.695			
Caffeine	.013	.130	99.825			
Quat	.010	.101	99.926			
Cocaine	.007	.074	100.000			

**Source: Authors computation (2021)**

Using the eigenvalue-one criteria (i.e., Kaiser 1960 criterion) Table 4 explains the result of total variance of the effect of substance abuse on commercial motorcycle operators. The results reveal that 1 factor whose

eigenvalues is greater than 1 accounted for 76.5% of the total variance. The cumulative value of the factors is over 98.3%. The result confirmed that Tramadol 76% is the foremost substance abused. A cursory look at the scree plot in Figure 6 shows the factors that were extracted (the point of sudden change in the slope) of which account for more than 98.3% of the changes in variance which is relative to the remaining 7 factors. These variables according to their other of ranking include; Tramadol (0.979), Cough Syrup (0.978), Solution (0.974), Rohypnol (0.968), Marijuana (0.967), Cigarettes (0.966), Alcohol (0.965), Caffeine (0.959), Quat (0.948), and Cocaine (0.946).

**Figure 6: Scree Plot**



Source: Authors Computation, (2021)

**Table 5: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.925
Bartlett's Test of Sphericity	Approx. Chi-Square	11063.546
	Df	45
	Sig.	.000

Source: Authors Computation 2021

The KMO and Bartlett's Test in Table 5 was used to test the adequacy and validity of the data used for the study, which indicate that it is significantly adequate.

**5.5 Effect of Substance Abuse on Motorcycle Operators in Minna**

**Table 6: Substance Abused by Commercial Motorcyclists**

S/No	Substance Abused	Initial	Extraction	Rank
1	Tramadol	1	0.979	1st
2	Cough Syrup (Codeine)	1	0.978	2nd
3	Solution	1	0.974	3rd
4	Rophynol	1	0.968	4th
5	Marijuana	1	0.967	5th
6	Cigarettes	1	0.966	6th
7	Alcohol	1	0.965	7th
8	Caffeine	1	0.959	8th
9	Quat	1	0.948	9th
10	Cocaine	1	0.946	10th

Extraction Method: Principal Component Analysis.

Source: Authors Computation, (2021)

In order to quantitatively analyze the level of effect at which Psychoactive substance abuse usage on commercial motorcycle operators in Minna, the researcher made use of the regression model. The regression model can be conceptualized as:

$$Y = F(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10} + e) \dots\dots\dots \text{Equation (1)}$$

Where Y represents the number of trips made by respondents;

- X<sub>1</sub> = Drowsiness
- X<sub>2</sub> = Dullness
- X<sub>3</sub> =Weight loss
- X<sub>4</sub> =Brain damage
- X<sub>5</sub> =Change in Appetite
- X<sub>6</sub> =Hallucination
- X<sub>7</sub> =Dependence syndrome
- X<sub>8</sub> =Weakened immune system
- X<sub>9</sub> =Insomnia
- X<sub>10</sub> =Sight distortion

e = Error term of prediction

Equation (1) above is now made operational in the form of a regression

Where: Y = dependent variables

X<sub>n</sub> = Independent variables

b<sub>0</sub> = Constant

b<sub>1</sub>-b<sub>10n</sub> = coefficient of independent variables

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \dots + \beta_nX_n + \epsilon \dots\dots\dots (2)$$

Where X<sub>1</sub>.....X<sub>10</sub> represent independent variables and b<sub>0</sub>, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub>, b<sub>5</sub>, b<sub>6</sub>, b<sub>7</sub>, b<sub>8</sub>, b<sub>9</sub>, b<sub>10</sub> represent

the regression constants. Using equation above the data was subjected to multiple regression analysis.

**Table 7: Regression Model Analysis on Effect of Psychoactive Substance Abuse Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.762 <sup>a</sup>	.532	.524	5.86072

Predictors: (Constant), Drowsiness, Dullness, Weight loss, Brain damage, Change in Appetite, Hallucination, Dependence syndrome, Weakened immune system, Insomnia and Sight distortion.

b. Dependent Variable: Abused substance (Tramadol, Solution and Cough syrup)

Source: Authors Computation (2021)

Table 7 shows the R value 0.762 (76%) which indicates a good level of prediction with the coefficient of determination  $R^2$  0.532 (53%) which is the proportion of variance in the dependent variable; Abused substance (i.e. Tramadol, Solution and Cough syrup) which explains that the independent variable accounts for 53.2% of the variability of the independent variables; Drowsiness, Dullness, Weight loss, Brain damage, Change in Appetite, Hallucination, Dependence syndrome, Weakened immune system, Insomnia and Sight distortion with an Adjusted  $R^2$  0.524.

The study as shown in Table 8, further indicated that the general relationship between Abused substance (Tramadol, Solution and Cough syrup) and the effect of the of the abused substance Drowsiness, Dullness, Weight loss, Brain damage, Change in Appetite, Hallucination, Dependence syndrome, Weakened immune system, Insomnia and Sight distortion. ( $R = 0.762$ ) was statistically significant ( $F = 38.284$ ;  $p < 0.05$ ). This implies the regression model is fit for the data.

**Table 8: Testing Variance of Psychoactive Substance Abuse on Commercial Motorcycle Operators ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	4256.929	10	1256.386	38.284	.000 <sup>a</sup>
Residual	3534.542	353	35.014		
Total	5.226	372			

a. Predictors: (Constant), Drowsiness, Dullness, Weight loss, Brain damage, Change in Appetite, Hallucination, Dependence syndrome, Weakened immune system, Insomnia and Sight distortion.

b. Dependent Variable: Abused substance (Tramadol, Solution and Cough syrup)

Source: Authors' Computation (2021)



The general form of the equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \dots + \beta_nX_n + \epsilon$ ) to predict Abused substance (Tramadol, Solution and Cough syrup) from Drowsiness, Dullness, Weight loss, Brain damage, Change in Appetite, Hallucination, Dependence syndrome, weakened immune system, Insomnia and Sight distortion is: predicted Abused substance (Tramadol, Solution and Cough syrup) is  $Y = 83.311 + (0.278X_1) + (0.218X_2) + (0.304X_3) + (0.116X_4) + (0.253X_5) + (0.112X_6) + (0.320X_7) + (0.117X_8) + (0.132X_9) + (0.144X_{10}) \dots \dots \dots (3)$

**Table 9: Estimated Model Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	83.311	7.213		17.992	.000
X1: Drowsiness	.278	.021	.627	3.376	.000
X2: Dullness	.218	.031	.312	3.376	.010
X3: Weight loss	.304	.023	-.645	2.733	.000
X4: Brain damage	.116	.041	-.455	-3.455	.000
X5: Change in Appetite	.253	.011	.623	2.346	.010
X6: Hallucination	.112	.021	.432	4.244	.000
X7: Dependence syndrome	.320	.030	.241	6.332	.000
X8: Weakened immune system	.117	.029	-.577	2.432	.000
X9: Insomnia	.132	.018	-.174	1.233	.000
X10: Sight distortion	.144	.017	.235	2.344	.000

**a. Dependent Variable: Abused substance (Tramadol, Solution and Cough Syrup)**

**Source: Authors Computation (2021)**

The model derived from this study is presented below:

$$Y = 83.311 + (0.278X_1) + (0.218X_2) + (0.304X_3) + (0.116X_4) + (0.253X_5) + (0.112X_6) + (0.320X_7) + (0.117X_8) + (0.132X_9) + (0.144X_{10})$$

Table 9 shows that the value 83.311 is the constant of the model which is the value of the dependent variable when independent variables are zero. 0.278 is the coefficient of  $X_1$ (Drowsiness) which means that the amount of change in Y as a result of a unit change in  $X_1$  this is also applicable to others. The value 0.218 is the coefficient of  $X_2$  (Dullness), 0.304 is the coefficient of  $X_3$  (Weight Loss), 0.116 is the coefficient of  $X_4$  (Brain damage), 0.253 is the coefficient of  $X_5$  (Change in appetite), 0.112 is the coefficient of  $X_6$  (Hallucination), 0.320 is the coefficient of  $X_7$  (Dependence syndrome), 0.117 is the coefficient of  $X_8$

(Weakened immune system), 0.132 is the coefficient of  $X_9$  (Insomnia) while, 0.144 is the coefficient of  $X_{10}$  (Sight distortion).

Therefore, the result of the multiple regression analysis as shown in Table 9 indicates abused psychoactive substances have significant statistical effects on commercial motorcycles operators in Minna resulting in Drowsiness, Dullness, Weight loss, Brain damage, Change in Appetite, Hallucination, Dependence syndrome, Weakened immune system, Insomnia and Sight distortion.

**Table 10: Descriptive Statistics of Reasons for Substance Abuse by Commercial Motorcyclists**

Reasons for Substance Abuse by Commercial Motorcyclists	Mean	Std. Dev.	Rank
Keep awake	4.31	.520	4 <sup>th</sup>
Suppress fatigue	4.51	.552	2 <sup>nd</sup>
Stimulate/elevate mood	4.25	.492	6 <sup>th</sup>
Enhance performance (Sexual)	4.40	.660	3 <sup>rd</sup>
Suppress Fear	4.30	.543	5 <sup>th</sup>
Peer pressure	4.64	.544	1 <sup>st</sup>

**Source: Authors Computation, (2021)**

Table 10 shows that Peer pressure (mean = 4.64, std. dev. = .544) ranked 1<sup>st</sup> among all the reasons for substance abuse. This is significant in such a way that removing an addict from the environment which nurtures the addiction. The desire to suppress fatigue ranked 2<sup>nd</sup> (mean = 4.51, std. dev. = .552), while, to enhance performance (mean = 4.40, std. dev. = .660) ranked 3<sup>rd</sup>. Keep awake (mean = 4.31, std. dev. = .520) ranked 4<sup>th</sup>, and Suppress Fear (mean = 4.30, std. dev. = .543) ranked 5<sup>th</sup>, while, Stimulate/Elevate mood (mean = 4.25, std. dev. = .492) ranked 6<sup>th</sup> respectively.

**Table 11 Showing Source of Supply of Abuse Substances**

Source of supply of abuse substances	Frequency	Percentage	Rank
Street traders/Peddlers	175	47	1 <sup>st</sup>
Dealers	75	20	2 <sup>nd</sup>
Friends	34	9	3 <sup>rd</sup>
Club	31	8.2	4 <sup>th</sup>
School	28	7.5	5 <sup>th</sup>
Family members	15	4	6 <sup>th</sup>
Pharmacy shops/ Patent medicine dealers	5	1.8	7 <sup>th</sup>

Hotels	9	2.5	8 <sup>th</sup>
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**Source: Author's Computation (2021)**

Table 11 shows that Street Traders and Peddlers represent the highest source of supply and accessibility of abused substances for Commercial Motorcyclists ranking 1<sup>st</sup> with 47%. Dealers, street traders/peddlers also rank 2<sup>nd</sup> among the sources with 20%. While friends (9%) and club were the other major sources of supply of abuse substance respectively

This result implies that Substance abuse by riders is easily accessible on the street within the neighbourhoods and among peers. Hence to reduce the rate of abuse of drugs by motorcyclists it is important to attack the supply channels and root of the drugs abused, this can be done by proper vigilant by responsive agencies and placing bans on the sources by the government and necessary corrective measures.

## 6. Conclusion and Recommendations

The study concludes that the use of psychoactive substances appears to contribute to a higher percentage of threat to frequent motorcycle accidents. Hence, future scope should be expanded to unravel the behavioural issues contributing to abuse of substance by commercial motorcyclists. In that, there is an urgent need for public health intervention targeting current abusers and prospective ones because of the potential risk for substance-related disorders.

Based on the findings in this study, the following recommendations were made;

1. the National Drug Law Enforcement Agency (NDLEA) and ACCOMORAN must collaborate in establishing a monitoring post at major parks in order to monitor, control and arrest offenders.
2. relevant Government agencies should must synergies in introducing awareness and sensitization programs on the danger of substance abuse.
3. Efforts should be geared towards discouraging unfettered access to abused substances from drug stores and street peddlers.

4. Federal Road Safety Corps (FRSC) and the Nigerian Police Force (NPF) should organize a routine check on commercial Motorcycle operators to checkmate, control and ascertain level of substance abuse.
5. Offenders should be strictly sanctioned and made to undergo therapy/rehabilitation programs.
6. regulating agencies must sustain the enforcement of all existing laws banning the use of substance while driving or riding in order to protect other road users.

## 7. References:

- Adejide, A. O. (2017). Problems of drug abuse in Nigeria. *Nigerian Medical Journal*. 10(1), 5-9
- Adogu POU, Iluka AL, Asuzu AL (2009). Predictors of Road Traffic Accidents, Road Traffic Injury and death among commercial motorcyclists in an Urban Area of Nigeria. *Nigerian J. Med.* 18(4):393-397.
- Afolabi, M. O., Ayilara, A. E., Akinyemi, O. A and Ola-Olorun, O. J. (2012). Survey of Drug Use among Young People in Ife, Nigeria. *African Journal of Drug and Alcohol Studies*, 11(2), 8-12
- Ajibade, B. L., Uvomata, M. E., Akinpelu, A. O., Adeleke, M. A., Fabiyi B. O. and Akinlabi, T. (2016). Factors influencing substance abuse amongst selected commercial motorcyclists in Ogbomosho metropolis, Oyo State, Nigeria. *International Journal of Health and Psychology Research*. 4(3), 1-27.
- Akande, D.A (2015). Preparation of Guidance Counsellors for Basic Education in Africa, *Education Community*, February Issue: 23-37
- Alti-Muazu M. and Aliyu, A.A. (2008). Prevalence of psychoactive substance use among commercial motorcyclists and its health and social consequences in Zaria, Nigeria *Annals of African Medicine*; 7(2), 67-71
- Azmitia, E. C. (2016). Structural risk factors associated with substance abuse: Knowledge for social workers. *Journal of Social Work Practice in the Addictions*, 1 (3), 41-64.
- Beavis, E. R., and Fred (2014). Socialization and adolescent development; *Medical Science Journal*; 2 (5), 9-12.
- Crockett M (1996): Models of Morality, Trends in Cognitive Sciences DOI 10.1016/j.tics.2013.06.005
- Danjuma A, Taiwo A.I, Omoniyi S.O, Balarabe S.A and Kolo, S. (2015). Nonconventional Use of Substances among Youth in Nigeria: Viewpoints of Students in a Nigerian Tertiary Institution. *Journal of Nursing Care* 4(311).24-29.
- Fasoro O., Olusuyi A., Dada A., Adewunmi M. Oluwatuyi Y. (2020). Assessing Substance Abuse among Commercial Motorcyclists in Ijero Township, Ekiti State, Southwestern Nigeria: It's Implication to Public Health. *J Addict Ther: JATP-126*. DOI:10.29011/2577-1507.100126.
- Freud, S. (1900). "The interpretation of dreams," in *The Standard Edition of the Complete Works of Sigmund Freud*, Vol. 4(5), ed J. Strachey (London: Hogarth Press).
- Gudaji, M. I and Habib, Z. G. (2016). Prevalence of psychoactive substance use among registered commercial motorcycle operators in Kano, North Western Nigeria: A community study. *International Journal of Medicine and Medical Sciences*, 8(10), 105-111.
- Gureje Oye, Simon, Gregory, E, Von Koff, M. (2007). A cross-national study of the course of persistent pain in primary care. *Pain*. (92) 195-200.
- Gudaji, M. I. (2008). The use and abuse of psychoactive substances among commercial motorcycle operators in a selected local council area in Kano, Nigeria, 9-12
- Herbert A. Simon (1996) The concept of Rationality: Boundaries and procedures September 2010, *Revista de*

- Economia Política 30(3):455-472, DOI: [10.1590/S0101-31572010000300006](https://doi.org/10.1590/S0101-31572010000300006).
- Iliya, L. D. (2010). knowledge, perception and use of psychoactive substances among commercial motorcycle riders in Minna Metropolis, Niger State, Nigeria, pp 4-5
- Jellinek, E. M. (1960). The disease concept of alcoholism. New Haven, Conn.: Hillhouse Press, pp. 246
- Kabir., J.E. and Makinde, R. (2010). Structure of problems behaviour in adolescence and young adulthood, Journal of Consulting and Clinical Psychology, (53), 890-904
- Laban, D.I (2016). Knowledge, Perception and use of Psychoactive Substances among commercial motorcycle riders in Minna metropolis, Niger State, Nigeria.
- Lawson Ann, W., & Lawson, Gary (1998). Alcoholism and the Family: A Guide to Treatment and Prevention. An Aspen publication, Lawson Library the University of Michigan.
- Makanjuola, O. J. Makata, N.E, Ogundele, A. I, Makanjuola, M. S. Johnson P. V. (2020). Factors Influencing Substance Abuse among Commercial Motorcycle Operators in Akure Metropolis Ondo State. International Journal of Caring Sciences September- 13(3) 1711
- Mihaela Dana Porumb (2018). Explanatory Models of Drug Use and Their Rationality
- William A. McKim (2003) Drugs and Behaviour: An Introduction to Behavioural Pharmacology, 5<sup>th</sup> Edition.
- Muobogare, (2008). Negative effects of drug and substance abuse on athletes. National Institute of Alcohol abuse and Alcoholism.
- Obadeji, A, Kumolalo, F.B. & Ajiboye, A. (2020). Substance use among commercial motorcyclists and its relationship with life satisfaction and significant depressive symptoms. Journal of Substance Use, 26(2) 177-183, DOI: 10.1080/14659891.2020.1800844.
- Rogoff, B., (1990)' An apprenticeship in thinking cognitive and development in social context. New York: Oxford University Press.
- Schmidt, D. D. (2004). The substance abuse prevention: An expanded perspective for councillors. Journal of Counselling and Development. 72(5).
- Skinner, B. F. (1938). The behaviour of organisms: An experimental analysis. New York: Appleton-Century.
- Stephen J., David, W. S and Kevin, C, J.D. (2017). Determinants of Substance Abuse among Incarcerated Adolescents. Brief Treatment and Crisis Intervention, (6), 206–217
- Thornton, T., Singh, V. S Tonmyr, L. (2011). Determinants of Substance Abuse in a Population of Children and Adolescents Involved with the Child Welfare System. International Journal of Mental Health and Addiction, 9 (4), 382-397.
- Umaru, E. (2020). Flying without navigational aids – The case of commercial motorcyclists in Minna, Nigeria. Transportation Research Part F: Traffic Psychology and Behaviour. 15(3), 311-318.
- World Health Organization (2010). Views on drugs and substances abuse.
- Wilens, T.E. (2009) Straight Talk About Psychiatric Medications for Kids (3rd ed.). New York: Guilford, pp. 324.
- Yamane, T. (1967). How to calculate a reliable sample size for your research work. <https://www.projectclue.com>view-blog>