

## Perception and Use of Psychoactive Substances Among Commercial Motorcyclists in Makurdi Metropolis, Nigeria

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### ABSTRACT

**Background:** The use of psychosocial substance is a major public health problem. Commercial motorcyclists are mostly young persons with disposable income and are at risk of use of these substances. The aim of the study was to assess the perception of and the prevalence of psychoactive substance use among commercial motorcyclists in Makurdi metropolis.

**Methods:** A cross sectional descriptive study was carried out among 249 respondents selected using multi-staged sampling technique. Data was collected by using a semi structured and self-administered questionnaire and the analysis was done with Statistical Package for Social Sciences (SPSS) software version 23 at 5% level of significance.

**Results:** Majority of the respondents were aged 18-28 years (49.8%) and with secondary education (67.5%). Respondents agreed that substance can cause intoxication (97.6%), road traffic accident (96.0%), chronic diseases (95.6%), psychological disorders (98.4%), sexual risky behaviours (96.8%), increase in crime (93.2%) and domestic violence (95.6%). Eighty seven percent of the respondents use alcohol, 42.2% smoked cigarette, 12.4% take tramadol and 22.0% take marijuana, 19.3% take either marijuana or tramadol and 92.8% take at least one psychoactive substance.

**Conclusion:** The prevalence of psychoactive substances use among commercial motorcyclists in was high. There was however a high perception of the negative consequences of use of substance. Non-governmental organizations should target commercial motorcyclists for interpersonal communication interventions to help them develop the required skills to stop the use to psychoactive substances.

**Key words:** Alcohol consumption, Substance use, Youth, Commercial motorcyclists

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### INTRODUCTION

Psychoactive substances refer to all the substances or drugs which when taken by a person may modify his/her perception, mood, cognition, behavior or motor function. This includes alcohol, tobacco, solvents, marijuana or Indian hemp, caffeine (Kola), coffee, cannabis, cocaine, benzodiazepines, palm wine and 'paraga' (an alcoholic herbal mixture) [1]. Regardless of classification, the abuse of these substances can be associated with serious consequences

like injuries, illness, disability, and death as well as chronic depression, sexual dysfunction, and psychosis [2-4]. There is a growing trend in the abuse of these substances globally especially among the youths [4,5]. Current data indicate that in Nigeria, psychoactive substance use cuts across diverse groups, with high risk groups including youths, commercial sex workers (CSW), commercial drivers and motor park touts [5].

Tobacco is harmful and addictive. It contains nicotine and over 7000 other chemicals with at least 250 of them are confirmed to be harmful, such as hydrogen cyanide, carbon monoxide and ammonia, and at least 69 causative agents of different cancers including those of lungs, kidneys, larynx, bladder, oesophagus, pancreas, stomach, colon among many others

[6-8]. Tobacco use, therefore, remains a leading preventable cause of death in the United States today, causing more than 430,000 deaths per year [9-11].

Use of alcohol and substance has been found to be associated with road traffic accidents. In Enugu, it was found that 75% of the road traffic accidents were associated to cigarette smoking while another study in Ife, Southwest Nigeria, found that about 20% of motorcyclists consume alcohol just before riding and that about 55.8% of them are involved in road crashes [12,13]. Use of psychoactive substances impairs driving performance, threatens safety of motorcycle riders and their passengers. They are associated with increased likelihood of risky sexual practices, crime and violence [14-18].

Motorcyclists constitute an important group of road users globally. In many developing countries, motorcycles are an increasingly popular means of public transportation for the medium and low-income earners, due mainly to convenience, affordability, ease of use, manoeuvrability and ability to navigate through poor road networks and traffic congestions [18-20]. Commercial motorcycle operation is therefore widely adopted in Makurdi. With the current lack of jobs for the teeming youth, many young men have taken up the commercial motorcycling as a means of livelihood [20]. Reports have found that commercial motorcyclists are at higher risk of substance use compared to the general population, often used to enhance performance and relaxation, and suppress fatigue [1,21-23].

There is however dearth of information regarding the burden of substance use and their perception concerning consequence of use of substance to their health and safety. The findings of this study would provide evidence to the relevant stakeholders including government agencies, like NDLEA as well as Non-governmental organizations involved in awareness creation and policy making with regards to the inherent danger posed by the use of psychoactive substances. This study was aimed at determining the prevalence of use of substance and perception on substance use and its consequences on health and safety among commercial motorcyclists in Makurdi, Benue State, Nigeria.

## METHODS

### Study setting

The study was conducted in Makurdi is the capital city of Benue State, Nigeria. Makurdi metropolis is naturally divided into two land masses by River Benue into North and South Banks. The South Bank is further divided (politically) into Wurukum, High Level, Wadata, Ankpa Quarters and Old GRA (Government Reserve Area). It is home for the Tiv speaking people of the state, however many people of different tribes of the country and beyond have come to settle in the town for various purposes [24]. Makurdi is increasingly becoming terribly busy due to its rich agrarian potential, the presence of both federal and state government institutions and agencies and private sector organizations [24]. Commercial motorcyclists make a living from transporting people to and from various points as inhabitants go about their businesses. The registered motorcycle parks within Makurdi metropolis are: North bank, Wurukum, Modern market, Apir, High Level, New bridge road, Wadata, Akpehe and Air force base motorcycle parks.

### Study design

Descriptive cross-sectional study design was used among commercial motorcyclists in Makurdi metropolis.

### Study population

The study population was commercial motorcyclists working within the Makurdi metropolis. The inclusion criteria include all consenting, commercial motorcyclists, 18 years and above working within the Makurdi metropolis.

### Sample size determination

Minimum sample size was determined using the formula (Fishers formula)

$$n = Z^2 pq / d^2 [25]$$

Where: n=sample size, z=The standard normal deviate at 95% confidence interval which corresponds to 1.96, P=Proportion assumed form a study of psychoactive substance use among commercial motorcyclists in Enugu state of 78.05% is adopted [12], q=Complimentary probability (1-P) and d=Degree of accuracy desired, set as 0.05. The sample size was therefore calculated to be 249 after the use of correction factor for less than 10,000 and adjustment for possible non-response.

### Sampling technique

A multistage sampling technique was used to select respondents. One motorcycle park was selected from each of eleven council wards within Makurdi metropolis using balloting.

Proportionate allocation was then used based on the number of registered motorcyclists in each park. The number of respondents from each of the selected motorcycle parks were as follows: North bank (37), Wurukum (43), modern market (32), Apir (17), high Level (29), New bridge road(21), Wadata (33), Akpehe (22) and Air force base (15). The allocated numbers of respondents were selected using systematic sampling using the register of all members in the respective parks as the sampling frame.

### Data collection

Data was collected using a semi-structured, self-administered questionnaire. The questionnaire consisted of section I which obtained information socio demographic characteristics and section II which contains questions assessing the attitude of the respondents towards psychoactive substance use, use of the substances and the reasons for use. Questionnaires were administered by trained research assistants on every working day including weekends.

### Data analysis

Data analysis was done using Statistical Package for the Social Sciences (SPSS) software, version 23. Data was entered and cleaned. Descriptive statistics were used to produce percentages, frequency tables and charts.

### Ethical consideration

Ethical approval for the study was obtained from the ethical committee of Benue University Teaching Hospital, Makurdi, before the study was conducted (ethical committee approval code: BSUTH/MKD/HREC/2017/006). Permission

and clearance were obtained from the leadership of the commercial motorcyclist union in Makurdi metropolis. Informed consent was obtained from the respondents.

## RESULTS

The socio-demographic characteristics in the Table 1 show that majority of the respondents were between the ages of 18-28 years (49.8%) while 45.8% of respondents were aged between 29-39 years. Majority of respondents had secondary level of education (67.5%), followed by tertiary education (17.3%) and primary education (15.2%). Majority of the respondents were not married (54.2%) while 45.8% were married. Christianity was the major religion, (86.7%) followed by Islam (12.0%) while the rest were traditionalists (1.2%). Tiv was the major ethnic group (54.2%), followed by Hausa (10.4%), Igede (9.2%) and Idoma (8.0%). An analysis of the duration of riding commercial motorcycle shows 69.5% of respondents have been riding for less than 5 years or less while 30.5% have being on the job for more than 5 years (Table 1).

Table 2 shows that most of the respondents agreed that substance use can cause intoxication (97.6%), have long term damage to vital organs (95.6%), associated with chronic diseases (95.6%), can cause psychological disorders (98.4%) and have a negative impact on the society (96.0%). The proportion who agreed it could lead to other negative consequences include road traffic accident (96.0%), sexual risky behaviours (96.8%), increase in crime (93.2%) and domestic violence (95.6%).

Respondents who take alcohol were 218 (87.6%) while 105 (42.2%) smoke cigarette, 30 (12.0%) take marijuana, and 31 (12.4%) take tramadol). Respondents who take either marijuana or

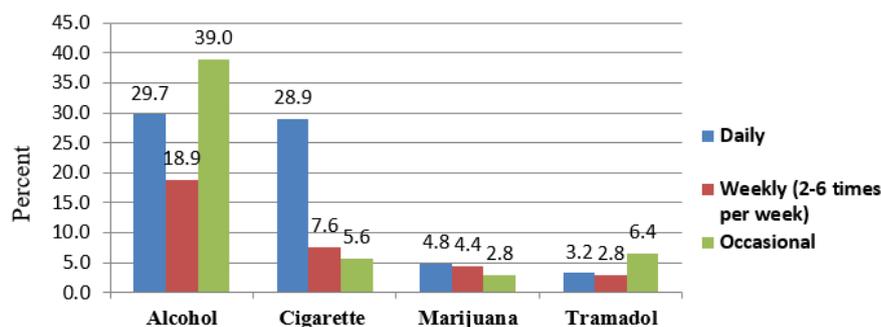


Figure 1: Pattern of alcohol and psychoactive substance use among commercial motorcyclists.

**Table 1: Sociodemographic characteristics of the commercial motorcyclists in Makurdi, Nigeria.**

Variable		N	%
Age Group (Years)	18-28	124	49.8
	29-39	114	45.8
	40-50	11	4.4
Education	Primary	38	15.3
	Secondary	168	67.5
	Tertiary	43	17.3
Marital Status	Married	114	45.8
	Not married	135	54.2
Religion	Christianity	216	86.7
	Islam	30	12
	Traditional	3	1.2
Ethnic group	Tiv	135	54.2
	Idoma	20	8
	Igede	23	9.2
	Hausa	26	10.4
	Igbo	15	6
	Yoruba	7	2.8
	Others	23	9.2
Duration on Okada Job	01-May	173	69.5
	> 5 yrs	76	30.5

**Table 2: Perception of the negative effects of substance use among commercial motorcyclists in Makurdi, Nigeria.**

	Agree		Don't agree	
	n	%	n	%
Psychoactive drugs cause intoxication	243	97.6	6	2.4
Psychoactive drugs results in long term damage of vital body organs	238	95.6	11	4.4
Chronic diseases result from use of psychoactive drugs	240	96.4	9	3.6
Psychological disorders can result from abuse of psychoactive drugs	245	98.4	4	1.6
Psychoactive drug abuse has a negative impact on the Society	239	96	10	4
Use of psychoactive drugs can result in road accidents	239	96	10	4
Risky sexual behaviours can result from abuse of psychoactive drugs	241	96.8	8	3.2
Addiction to psychoactive drugs predisposes one to crime	232	93.2	17	6.8
Abuse of psychoactive drug is associated with domestic violence	238	95.6	11	4.4

**Table 3: Use of alcohol and substance among commercial motorcyclists in Makurdi metropolis.**

Variable			
Alcohol	Yes	218	87.6
	No	31	12.4
Smoking	Yes	105	42.2
	No	144	57.8
Marijuana	Yes	30	12
	No	219	88
Tramadol	Yes	31	12.4
	No	218	87.6
Tramadol or Marijuana	Yes	48	19.3
	No	201	80.7
At least one psychoactive substance	Yes	231	92.8
	No	18	7.2

tramadol were 48 (19.3%) Table 3. A further breakdown on the pattern of use shows that 39.0% took alcohol occasionally while 29.7% and 18.9% took alcohol daily and 2-6 times weekly respectively. About twenty nine percent of the respondent's smoke cigarette daily while 4.8% and 3.2% take marijuana and tramadol daily respectively (Figure 1).

The analysis of the reasons for alcohol consumption shows that 37.8% take alcohol just to relax, 20.1% to feel among (peer pressure), 19.3% enjoy drinking alcohol as a habit and 10.4% take alcohol because it is available. For cigarette, 18.1% smoke cigarette to ease anger and tension. 9.6% smoke just to relax. 2.8% of respondents said they can't do without it.4.4% of

Table 4. Reasons for use of psychoactive drugs among Commercial motorcyclists.

		N	%
Alcohol (n=218)	To relax	94	43.1
	To feel among (peer pressure)	50	22.9
	Because it is available	26	11.9
	Just enjoy drinking	48	22
Cigarette (n=105)	To relax	24	22.9
	To ease anger and tension	45	42.9
	To be high	14	13.3
	I just can't do without it	7	6.7
Marijuana(n=30)	I don't know why	15	14.3
	To relax	11	36.7
	To feel among (peer pressure)	7	23.3
	Because it is available	1	3.3
Tramadol(n=31)	Just to enjoy myself	11	36.7
	To relax	15	48.4
	To feel among (peer pressure)	6	19.4
	Just to enjoy myself.	10	32.3

respondents take marijuana to relax, 0.4% said they take it because it is available. Of the 12.4% that use tramadol, 6% use it when they want to relax, 2.4% to feel among (peer pressure) and 87.6% do not use tramadol (Table 4).

#### DISCUSSION

The aim of the study was to assess the perception of and the prevalence of psychoactive drug use among commercial motorcyclists in Makurdi metropolis. The socio-demographic characteristics of respondents in this study showed that majority of the respondents (49.8%) were aged 18-28 years. This agrees with findings from previous studies [1,5]. Commercial motorcycling involves a great deal of physical activity and so is mostly carried out by young persons. The predominant tribe of respondents in this study was Tiv (54.2%) while 86.7% were Christians. These findings are in line with fact the major ethnic group and religion in Benue state are Tiv and Christianity respectively [24]. Majority of the respondents (67.5%) have secondary education, which is similar with findings in Kano and Oyo states of Nigeria [26,27]. It can be accepted that is a reflection of the low access to higher education and high unemployment rate among young persons.

This study found that 87.6% of the respondents take alcohol. Our findings agree with a previous study on alcohol use among motorcyclists in Enugu (81.3%) [12]. It is however much higher than findings from previous studies in Oyo (49.3%), Bayelsa (40.2%), Lagos (29.3%) and Ado Ekiti (28.6%) [27-30]. Our study further

showed that the prevalence of other psychoactive substances includes smoke cigarette (42.2%), marijuana (12%) and tramadol (12%). The prevalence of cigarette smoking was high in our study compared to findings of previous studies which found prevalence of 16% in Kano but lower than 85% in Indonesia [12,31]. The use of tramadol is an emerging problem among young persons in Nigeria. Previous studies found varying prevalence rates such as amongst commercial bus drivers in Kano where it was reported that misuse of tramadol was 85.2% and in Owerri, South East Nigeria, 53.4% of a sample of university students admitted the use of Tramadol [32,33].

Our finding on prevalence of marijuana was lower than those found in Lagos (22.6%) and Zaria (25.8%) [27,34]. Use of psychoactive substances among the respondents especially alcohol and among respondents in Makurdi is relatively high. Respondents who take at least one psychoactive substance (including alcohol) is 92.8%. This is huge. Alcohol is a common predictor of road traffic accidents and related risky behaviours such as using mobile phone during driving, poor manoeuvring, and driving over the speed limit [12,16,17]. Possible chronic complications of excessive alcohol use include risk of developing alcohol dependence, liver cirrhosis and cancers [35,36]. Psychoactive drugs such as marijuana are associated schizophrenia and other psychotic disorders, domestic violence and crimes [37,38]. Though use of tramadol is relatively low in our study, its misuse has a lot of health consequences including altered levels of consciousness which could result in mortality [39].

The most common reasons given for the use of alcohol and other psychoactive substances include to relax, ease anger/tension and to enjoy themselves. The high use of substances in our study compared to previous studies may be due to loose legal and regulatory environment and peer pressure. This is especially so because the majority of the respondents were aware of the negative consequences of use of alcohol and other substances.

Despite the relatively high intake of alcohol and other psychoactive substance in this study, we also found that most of the respondents agreed that use of substances is associated with many negative health and social consequences, ranging from 93.2% who agreed that use of substance could lead to crime to 98.4% who agree that psychological disorders could result. This finding is higher than those from many previous studies. Among out-of-school youths in Lagos motor parks, 92.6% and 86.3% agreed that alcohol is harmful to health and is a serious problem respectively [40]. In Botswana, most respondents associate substance use with some negative consequences as follows: mental health (74.9%), traffic accidents (70.7%), and heart diseases (58.5%) [41]. The perception of the consequences of alcohol and drug use in our study is therefore high. One would therefore ordinarily expect this to translate to a much lower prevalence of use of psychoactive substances. Previous studies found that knowledge of a risk does not necessarily translate to reduction in risk-taking behaviour [42,43]. The high use of substance despite high level of awareness of the risk involved can be attributed to the state of 'unrealistic optimism' resulting from the effect of the substances on the consciousness of the individual.

The study has a few limitations. It involved recall of some previous events, thus subjecting the findings to recall bias. In addition, since the study was interviewer administered, some respondents may be less inclined to reporting their true status of intake of alcohol and other substances in order to appear to be please the interviewer. Thus, there is a possibility that the reported use of substances may be lower than the real prevalence. While efforts were made to ensure that the respondents were a true representative of the commercial motorcyclists in Makurdi metropolis, they may differ

systematically from motorcyclists elsewhere. The findings of this study may, therefore not be true representative of all motorcyclists in Benue state and elsewhere in Nigeria.

### CONCLUSION

The study found that the prevalence of psychoactive substances use especially alcohol and cigarette among commercial motorcyclists in Makurdi was relatively high. There was however a high perception of the negative consequences of use of substance. Primary and secondary schools should introduce and strengthen anti-drug campaigns in schools to enlighten the pupils on the dangers posed by psychoactive drug. Non-governmental organizations should target Commercial for interpersonal communication interventions to help them develop the required skills to stop the use to psychoactive substances. Government agencies such as Ministry of health, women affairs and NGOs should also introduce and facilitate Peer education campaigns using trained volunteers among commercial motorcyclists. It has also become imperative to institute anti-smoking and anti-substance polices use especially in public places in Benue State. An assessment of mental status of commercial motorcyclists in Makurdi should be carried out in view of the high use of psychoactive substance.

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