



# Prevalence of Substance Abuse, Assessment of Socio-economic and Demo-graphic Determinants of Commercial Motorcyclists in Katsina State Nigeria

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## Summary

### BACKGROUND

Substance abuse has been reported to have adversely affected socio-economic determinants of states and nations. Substance abuse is the use of tobacco, alcohol, illegal or prescription drugs and other substances in ways contrary to the overall health of the individual. It has been grossly under-reported and undermined in Katsina State, Nigeria. Identification and early intervention of associated risk factors had greater impact than later intervention by changing individual's life pathway from problems and towards positive behaviors.

### OBJECTIVES

To determine the prevalence of substance abuse amongst motorcyclists and associated socio-economic characteristics in Katsina State, Nigeria, a cross sectional study approach was commissioned.

### METHODOLOGY

Convenient sampling using a mobile Open Data collection tool (ODK) application was used to collect and collate field data. Data was analyzed using SPSS®. Strength of significance within categorical variables were reported and accepted at  $P \leq 0.05$ .

### RESULTS

Kola nut (53%) and *Marijuana* (1%) were identified to have the highest and lowest prevalence respectively ( $P > 0.05$ ) across Jibia and Katsina Local Government Areas the (2 LGAs) in Nigeria where the study was carried out. Almost all types of psychoactive substances were available in Nigeria due to their spill over into the streets from drug traffickers who use Nigeria as a conduit to transport drugs from South East-Asia (the Golden, South America to Europe and North America [12].

### CONCLUSION

With an overall substance abuse prevalence of 19%, it was concluded that substance abuse was endemic in the state and hence public health education must be used to check this societal ill

**Keywords:** Abuse, Katsina, Prevalence, Socio-economic, Substance

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## Introduction

Substance abuse is the use of tobacco, alcohol, illegal drugs, prescription drugs or other substances in ways not conducive to the overall health of the

individual. This definition does not discriminate between: alcohol, tobacco, caffeine, solvents, over the counter drugs, prescribed drugs, illicit drugs. Rather it focuses on changes in the body and or behavior change as a result of using such substances.



These substances are also referred to as psychoactive drugs, meaning that they affect the central nervous system and alter mood, thinking, perception and behavior. Equally, the definition makes no distinction between the legality, social acceptability or 'value' of the drugs. Blanket definitions which attempted to cover these areas as well as substance/user/affect nexus. They often had weak logic underpinning their meanings, making them vulnerable to challenge particularly in terms of highlighting inconsistencies. For example, if alcohol and tobacco were not defined as drugs, what does it reflect on adults in a society which approves and endorses their use, (mindful of the health and social costs they both incur) but disapproves of the use of *cannabis* and ecstasy by youth

Once a broad working definition of drugs shall be established, one might be better placed to discuss the health, personal and social costs arising from substance use. That did not mean the legal status of any drug was not important, rather it reckoned the risks that arose from drug use were not presented exclusively in relation to the criminal/legal system, such as:

1. Prevention programs should enhance protective factors and reverse or reduce risk factors.
2. The risk of becoming a drug abuser involved the relationship among the number and type of risk factors (deviant attitudes and behaviors) protective factors (parental support).
3. The potential impact of specific risk and protective factors changes with age. For example, risk factors within the family have greater impact on a younger child, while association with drug-abusing peers may be a more significant risk factor for an adolescent.
4. Early intervention with risk factors (aggressive behavior and poor self-control) often has a greater impact than later intervention by changing a child's life path (trajectory) away from problems and toward positive behaviors.
5. Research has shown that abuse of drugs was influenced by several underlying psychosocial factors: peer pressure, perceived recreational value of drug abuse, neglect, depression, curiosity and force.
6. It was worth noting that commercial motorcycles (popularly called "Achaba") were patronized by

all and sundry in the society irrespective of the socio-economic status of the individuals especially those who were eager to get to their destination or workplace promptly

Moreover, it's availability, relative cost and most specifically it's accessibility and capacity to manoeuvre bad roads, traffic congestions or hold-ups and get to your destination on time. It was an easy alternative for public use above other means of intra-city public transport.

- (7). Despite offering certain advantageous transport services, commercial motorcycle service growth had also led to an increase in road accidents especially in wet and slippery conditions. Traffic management problems, pervasive noise and increased local air pollution and greenhouse gas emissions were other challenges.
- (8). Studies like this have been conducted on the issues of motorcycle traffic accidents, determinants of earnings, motorcycle traffic management in motorcycle dependent cities, commercial motorcycle operations among others.

Therefore, the main objective of this study was to establish a baseline prevalence study on substance abuse in Katsina state and to describe the characteristics of commercial motorcycles and their direct socio-economic impacts.

## Materials and Methodology

### Study Area

The study was conducted in Jibia and Katsina Local Government Areas (LGAs), Katsina State. Jibia LGA shares a common international border with Niger republic. Jibia LGA is characterized by mass movements of people between Nigeria and Niger republic for economic activities. Katsina LGA is the State capital of Katsina State, Nigeria. Katsina LGA is equally a citadel of economic, administrative and educational institutions in Katsina State.

The intense socio-economic activities in those LGAs had attracted a great number of youths to migrate to these LGAs for better opportunities. Majority of those youths partook commercial motorcycle business.

### Study Design

A Cross sectional survey was carried out in Jibia and Katsina LGAs to assess the prevalence and socio-



economic determinants of motorcyclists in Katsina State with a view to improve health, Peace and reduce morbidity and disabilities due to abuse of drugs.

## Data Collection

Convenient sampling using a mobile Open Data collection tool (ODK) application was used to collect and collate field data. Independent surveyors were trained on the use of the ODK. Field pre testing of ODK embedded questionnaire was done for the purpose of correcting ambiguous questions and for validating the questionnaire.

## Sample Size Determination

Sample size was determined based on the formula for prevalence studies;

$$n = Z^2 pq / d^2, \text{ as described by [10]}$$

Where n = sample size

Z = appropriate value of the standard normal deviate for the desired

confidence = 1.96

P = expected CBPP prevalence

q = (1-p) = 1-0.118= 0.882

## Sampling Procedure

Participants were sampled based on their consent. Number of participants sampled per LGA

was determined by proportional sampling method (10). Sampling units comprised of LGAs and 10% of participants in each LGA were assessed.

## Inclusion Criteria

For the study, a participant was assessed only if he is a motorcyclist with a known history of drug use.

## Statistical Analysis

- Prevalence will be calculated with the formula:  $\text{Prevalence (\%)} = \frac{\text{Number of participants that responded positive to the use of drugs}}{\text{Total number of participants sampled during the study period}} \times 100$

- Field data on ODK were downloaded, transcribed and exported to Statistical Package for Social Sciences (SPSS) for descriptive and inferential statistical analysis.

- Strength of statistical significance between categorical variables and prevalence of drug abuse was measured using Chi Square ( $\chi^2$ ). Variables with P-values  $\leq 0.05$  were considered significant.

## Results

The prevalence of substance abuse is as shown in (*Table 1*) below.

*Table 1. Prevalence of Substance Abuse in The Study Area*

Substance	Use		Prevalence (%) N=100
	Yes	No	
<i>Cigarette</i>	34	66	34
<i>Alcohol</i>	9	91	9
<i>Marijuana</i>	1	99	1
<i>Cocaine</i>	9	91	9
<i>Heroin</i>	2	98	2
<i>Kola nut</i>	57	43	57
<i>Snuff</i>	22	78	22
<i>Petrol</i>	16	84	16
<i>Alabukun</i>	19	81	19
<b>Total</b>	169	731	19

The table above show that Kola nut (57%) had the highest prevalence followed by smoking Cigarettes (34%) and Snuff (22%).

Similarly, (*Table 2.*) shows the varying prevalence of substance abuse by LGAs where the study was conducted.



**Table 2. Prevalence of Substance Abuse by LGAs where the Study was Conducted**

LGA	Cigarette (%)	Alcohol (%)	Marijuana (%)	Cocaine (%)	Heroin (%)	Kolanut (%)	Snuff (%)	Petrol (%)	Alabukun (%)
Jibia	32	10	0	10	2	54	16	16	18
Katsina	36	8	2	8	2	60	28	16	20
Overall Prevalence	34	9	1	9	2	57	22	16	19
P > 0.05									

The study also looked into the relationship between substance abuse and demographic variables in the study area. The table below points at parameters

with significant statistical association ( $P \leq 0.05$ ) to substance abuse prevalence.

**Table 3: Measure of Statistical Significance Between Substance Abuse Prevalence and Demographic Parameters**

Prevalence (%)	Demographic Parameters Significant at $P \leq 0.05$			
Cigarette (34%)	Age	Religion	Ethnic group	Status of Parents
Alcohol (9%)	Religion	Ethnic group	Status of Parents	
Marijuana (1%)				
Cocaine (9%)	Religion	Ethnic group		
Heroin (2%)	Ethnic group			
Kolanut (57%)	Status of Parents			
Snuff (22%)	Religion	Ethnic group	Status of Parents	
Petrol (16%)	Age	Ethnic group	Status of Parents	
Alabukun (19%)	Religion	Ethnic group		

**Table 4. Socio-Economic Parameters And Substance Abuse**

	Cigarette (%)	Alcohol (%)	Marijuana (%)	Cocaine (%)	Heroin (%)	Kolanut (%)	Snuff (%)	Petrol (%)	Alabukun (%)
Type of Operator	34	9	1	9	2	57	22	16	19
Daily Income	34	9	1	9	2	57	*22	16	*19
Dependants	34	9	1	9	2	57	22	16	19
Number of Dependents	*34	9	1	9	2	57	*22	16	19
*: Significant at $P < 0.05$									



All motorcyclists were interviewed irrespective of age, tribe and sex as shown in the table below:

*Table 5. Demographic Characteristics of Respondents*

Parameter	Category	Frequency (N=100)	Percentage
<b>Age</b>	17 - 26 years	13	13
	27 - 31 years	18	18
	32 - 41 years	40	40
	42 - 46 years	16	16
	46 years and above	13	13
	<b>Total</b>	<b>100</b>	<b>100</b>
<b>Sex</b>	Male	100	100
	Female	0	0
	<b>Total</b>	<b>100</b>	<b>100</b>
<b>Religion</b>	Christianity	4	4
	Islam	96	96
	<b>Total</b>	<b>100</b>	<b>100</b>
<b>Ethnic group</b>	Fulani	4	4
	Hausa	91	91
	Igbo	1	1
	Nupe	1	1
	Yoruba	3	3
	<b>Total</b>	<b>100</b>	<b>100</b>
<b>Level of Education</b>	Informal / Arabic	42	42
	Post Secondary (University / Polytech / Monotech	4	4
	Primary Complete	6	6
	Primary Incomplete	11	11
	Secondary Complete	23	23
	Secondary Incomplete	14	14
	<b>Total</b>	<b>100</b>	<b>100</b>
<b>Family Formation</b>	Monogamy	21	21
	Polygamy	79	79
	<b>Total</b>	<b>100</b>	<b>100</b>
<b>Status of Parents</b>	Both parents died	8	8
	Living together	55	55
	One parent died	32	32
	Separated	5	5
	<b>Total</b>	<b>100</b>	<b>100</b>



## Discussions

This study was able to confirm a varying prevalence of substance abuse ranging from *Kola nut* (57%) to *marijuana* (1%). A review of literature clearly indicated that there was a steady increase in the prevalence of drug use with its associated consequences within the last three decades [11].

Almost all types of psychoactive substances were available in Nigeria due to their spill over into the streets from drug traffickers who use Nigeria as a conduit to transport drugs from South East-Asia (the Golden Triangle) and South America (Bolivia, Peru, and Brazil) to Europe and North America [12].

Demographic parameters (age, sex, religion, ethnic group, level of education, family formation and status of parents) showed significant statistical association with substance abuse. *Kola nut*, cigarette, snuff and petrol were identified as the most abused substances across all demographic parameters ( $P < 0.05$ ).

All the respondents sampled were male. The society regularly decries what they consider to be the greater consequences of drug use. Indeed nearly every deviant act in the community was directly or indirectly attributed to drug use [13].

The United Nation 2016 World Drug Report estimated that, 1 in 20 adults, or a quarter of a billion people between the ages of 15 and 64 years, used at least one psychoactive drug in 2014. Of these, over 29 million people worldwide suffer from drug use disorders [1].

Several researchers had noted that young people are ruining their lives through the misuse of drugs [14]. A comparison with other third world countries reveals that Nigeria ranks among the highest users of dangerous drugs such as alcohol, tobacco, *cannabis*, benzodiazepines, cocaine and opioids [15].

In a study on Prevalence and Patterns of Drug Abuse among Students of Tertiary Institutions in Abeokuta, Ogun State, Nigeria, reported a lifetime prevalence rate of the use of any drug among the respondents was 69.2%.

1. Alcohol was the most prevalent lifetime drug of use at (34.4%).

2. Followed by Tobacco at (14.4%).
3. Hypnotosedatives (8.8%)
4. *Cannabis* (6.2%)
5. Inhalants (2.5%)
6. Opiates (2.0%)
7. Cocaine (1.9%)
8. Heroin (0.5%) and
9. Amphetamine (0.1%)

The prevalent rate of use of any drug in the past one month was 28.2%. The rate of tobacco use according to gender showed a higher prevalence in male which was statistically significant for;

- (i). lifetime use ( $\chi^2 = 36.07$ ,  $p = 0.01$ ),
- (ii). previous ( $\chi^2 = 41.51$ ,  $p < 0.001$ ) and
- (iii). previous month use ( $\chi^2 = 32.42$ ,  $p = 0.001$ ).

Similarly males also attained significant levels for lifetime use, previous year, and previous month use for alcohol and *cannabis*. Female respondents had a higher prevalence rate of use of tranquilizers (benzodiazepine) than males at a statistically significant level for lifetime use ( $p = 0.03$ ) and previous year use ( $p = 0.02$ ) [16].

## Conclusion

The current study was able to establish an overall substance abuse prevalence of 19%. The low to medium prevalence reported across the substances in this study could be attributed to the low sample size (100) used. Escalating the sample size may reveal more information on the level of substance abuse in the study area. It was concluded that substance abuse was endemic in the state and hence, public health education should be used to checkmate this societal ill.

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