



Pattern of Drug Abuse among Adolescents in Lokoja Metropolis of Kogi State, Nigeria

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

Background: Adolescence is characterized by thrill-seeking and looking for new experiences which are often accompanied with experimentation with substance use and testing boundaries with its attendant consequences.

Aim: The aim of this study is to provide an overview of the prevalence levels, pattern and types of abused substances in Lokoja metropolis and provide valuable information for stakeholders.

Study Design: This was a cross-sectional, descriptive study carried out among adolescents In Lokoja Metropolis of Kogi State, Nigeria.

Place and Duration of Study: The study was carried out in Lokoja, Kogi State, Nigeria from June to September 2018.

Methodology: A questionnaire-based study using a simple random sampling method to select respondents.

Results: A total of one hundred and sixty four questionnaires were administered after assent from the respondents and signed consent from parents or guardians. The respondents who were made up of 90 males and 74 females, 44 respondents fell between the age category of 10-13, 38 and 82 respondents fell within the categories of 14-16 and 17- 19 respectively. Of these respondents, 5 were educated to primary school level, 129 to secondary level, 27 of them to tertiary level and 3 of them had no formal education at all. The use of illicit drugs appeared to be increasing with age, for

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male respondent, 6.9% for ages 10-13, 14.2% for ages 14-16 and 32.5% for ages 17 to 19, among the female respondents same pattern was observed 0%, 11.76% and 11.9 % respectively for the same age categories. Furthermore, the use of illicit drug was more prevalent in males than in females, the prevalence rate for males was 20% and 9.46% in females. Overall, peer pressure was found to have the most influence among adolescents who use illicit substances and marijuana was found to be the most abused drug by adolescents in the metropolis, 46.67% in males, and 32.43% in females. However, the rate of abuse of codeine and non-codeine based cough syrups among females was also found to be higher and almost at par with marijuana 31.08%. Although there was a significant statistical relationship between age and drug abuse in males with a p-value of 0.024151 at $p < 0.05$, the relationship was not significant among females.

Conclusion: The abuse of marijuana being the most abused drug by adolescents in the metropolis, 46.67% in males, and 32.43% in females in addition to the abuse of new substances especially the high rate of codeine and non-codeine based cough syrups among females is an important finding with far reaching public health consequences. There is the need for increased awareness on the harmful physical, mental and social effects of substance abuse and stricter enforcement of drug laws and regulations to protect adolescents.

Keywords: Adolescent; street drugs; prevalence; peer influence; substance-related disorders.

1. INTRODUCTION

Drug abuse, is a patterned use of a drug in which the user consumes the substance in amounts or with methods which are harmful to themselves or others, and is a form of substance-related disorder. Differing definitions of drug abuse are used in public health, medical and criminal justice contexts [1]. One of the major impact of illicit drug use on society is the negative health consequences on the population, substance abuse contributes substantially to the global morbidity and mortality burden [2]. According to the United Nations, adolescents are individuals between the ages of 10-19 years of age, the word adolescence is derived from the Latin word *adolescere*, meaning "to grow up. This period is a transitional stage that is characterized by rapid physical and psychological changes that has a huge impact in the individual's social and behavioral health [3].

Drug abuse is increasingly becoming an epidemic in Nigeria owing to the large scale availability of illicit and controlled substances in the country, coupled with the inability of the National Drug Law Enforcement Agency (NDLEA) & The National Agency for Food Drug Administration and Control (NAFDAC) to effectively control the illicit trade in banned and controlled substances. The major casualty of this epidemic are young people whose population according to Nigeria's National Population Commission rose from 44 million in 2006 to 60 million in 2014 and is expected to rise to 73 million by the year 2020 [4]. Drugs became a public issue in Nigeria following the

discoveries of cannabis farms in the country by 1960s and the arrests of Nigerian cannabis traffickers abroad, and reports of psychological disorders perceived to be associated with cannabis use. However, it was not until the early 1980s that the problem of drug trafficking became a major social issue with the potential of disrupting international relations and social stability [5].

Drug prohibition laws and policies in Nigeria are premised on the health, social and economic implications of certain drugs especially those that have psychoactive substances. Defaulters and non-conformists are prosecuted and sent to prison for varying jail terms they also suffer forfeiture of all articles, vehicles or vessels used in the crime, manufacturing sites are sealed, while consignments of prohibited or fake drugs worth billions of naira are utterly destroyed. In spite of these punitive measures, people still embark on the cultivation, manufacture, exportation, importation, sales and consumption of drugs that are prohibited [6]. However, The development of a comprehensive drug policy which prioritizes demand reduction through public health measures such as prevention and treatment is hampered by the bureaucracy of drug law enforcement, whose direction cannot be changed without altering the structure of the organization [7].

A Psychoactive substance use among children in informal religious schools in northern Nigeria reported that stimulants, petrol, locally altered form of chloroform called "solution", volatile solvents, alcohol, Tramadol and sedatives was

bought in small and cheap “shots” from roadside street hawkers [8].

A Secondary analysis of 1149 school-attending adolescents (average age = 16.24 years, range = 13–23; 60% female) conducted using questionnaires reported that the three types of childhood abuse (emotional, physical and sexual) were positively associated with greater alcohol/drug problems, and drug use coping motives [9]. A recent study on Adolescent female school dropouts who use drugs reported that female adolescents from socioeconomically under-served communities who have dropped out of school, use substances, and engage in risky sex behaviour are at risk of HIV [10]. An epidemiologic survey of five communities, reported that four major disorders (anxiety disorders, major depressive episodes, drug abuse or dependence, and alcohol abuse or dependence) commonly begin in late adolescence or young adulthood. The median age at onset for anxiety disorders is 15 years; for major depressive episode, 24 years; for drug abuse or dependence, 19 years; and for alcohol abuse or dependence, 21 years [11].

Two longitudinal surveys based on random samples of high school students in New York State indicate four stages in the sequence of involvement with drugs: beer or wine, or both; cigarettes or hard liquor; marijuana; and then other illicit drugs. The legal drugs are necessary intermediates between non-use and marijuana. Whereas 27 percent of high school students who smoke and drink progress to marijuana within a 5- to 6-month follow-up period, only 2 percent of those who have not used any legal substance do so [12]. Furthermore, mental health problems such as depression, developmental lags, apathy, withdrawal and other psychosocial dysfunctions frequently are linked to alcohol and substance abuse among adolescents [13].

A review conducted by Omigbodun O and Babalola on the psychosocial dynamics of psychoactive substance misuse among Nigerian adolescents and published by the Annals of African Medicine reported that the psychoactive substance misuse has for many years been an issue of increasing health and social importance in Nigeria. This is especially so for the critical adolescent period marked by several changes including the psychological phenomenon of experimentation. Studies carried out in the last two decades in Nigeria have identified adolescents as a major group involved in the use of psychoactive substances [14].

1.1 Statement of the Problem

The large scale availability and largely unrestricted access to illicit drugs and controlled substances by young people in communities has become public health concern. Limited health management capacity and budget constraints have combined to exacerbate the problem with the likelihood of far reaching mental health consequences.

1.2 Objectives of the Research

The objective of this study is to gauge the perception, prevalence, pattern and types of abused substances still being used in Lokoja metropolis and provide valuable information for stakeholders and government to help improve public health management and enhance targeted health financing to help safeguard the young Nigerians between the ages of 10 - 19 years who are at risk.

This study is expected to answer the following basic research questions:

1. What are the current major drugs abused by adolescent in Lokoja metropolis?
2. What are the patterns of drugs abuse by adolescents in Lokoja metropolis?

2. METHODOLOGY

2.1 Design of Study

This study used a descriptive cross sectional survey design involving the administration of the self-administered standardized questionnaire to collect information and collected data were analyzed using statistical parameters.

2.2 Study Area

This study was conducted in Lokoja metropolis. Lokoja is located in North central Nigeria, It lies at the confluence of the Niger and Benue rivers on 7.80 latitude and 6.74 longitude and it is situated at elevation 53 meters above sea level. Lokoja has a population of a 195,261 at the 2006 census and current projected population of 228,470 [15].

2.3 Target Population

The target population of this study are formal or informally educated adolescents within the age

bracket of 10-19 years that are resident within Lokoja metropolis who are schooling or have completed school. Adolescents constitute one-fifth of the world's population. According to the 2006 census in Nigeria, adolescents comprised 31.7% of the population [16].

2.4 Sampling Technique

The sample size was 164 at 5% margin of error. A simple random sampling technique was adopted in selecting young people within the metropolis to whom the questionnaires were administered.

2.5 Ethical Considerations and Consent

The following ethical considerations were performed during this research

1. A signed consent form was obtained from the parents/guardian of all participants.
2. The aim and objectives of the study were clearly outlined for all respondents in the language and manner they understand.
3. The respondents were informed of the possible implication in terms of time and resource they might incur during the administration of the questionnaire.
4. All participants were also informed about their right to participate or to decline from participating in the study.
5. After the questionnaires were filled, a brief session was held about dangers of drug abuse and the contact of an drug abuse/rehabilitation NGO/support group was given to the adolescents to help respondents who wanted help.

2.6 Instrument of Data Collection

The anonymously-administered questionnaire utilized in data collection consisted of a modified version of the World Health Organization (WHO) student drug use questionnaire. This questionnaire was found to be reliable and valid enough for use and can also yield better results if slightly modified and when respondents become more familiar with questionnaire surveys [17].

3. RESULTS AND DISCUSSION

A total of 164 questionnaires were administered 90 males and 74 females. Fourty four respondents fell within the 10-13 age category, 38 and 82 respondents fell between the 14-16 and 17 – 19 categories respectively. Of these respondents, 5 of them were educated to primary

school level, 129 to secondary level, 27 of them to tertiary level and 3 of them had no formal education at all. The use of illicit drugs appeared to increase with age for the male respondents being 6.9% for ages 10-13, 14.2% for ages 14-16 and 32.5% for ages 17 to 19 years. Among the female respondents, the same pattern was observed at 0%, 11.76% and 11.9 % respectively for the same age categories as for the males. This agrees with the findings of a longitudinal study of cannabis use and mental health services from adolescence to early adulthood which asserted that there was a marked increase in reported use from ages 15 to 18 years [18]. The conclusion of a study on sex, age, and progression of drug use in adolescents admitted for substance use disorder treatment also align with this finding. The study reported that the age of first use (ranging from 13.2 years for alcohol to 15.1 years for cocaine) was significantly younger for cigarettes, alcohol, and cannabis than for "harder" drugs like cocaine and heroine. Adolescents increased their use of almost every substance except inhalants with increasing age [19]. This however differs from the finding of a study which evaluated substance use changes and social role transitions which reported that illicit drug use generally declines as individuals move through young adulthood and into middle adulthood [20]. This variation could be due to the strong and robust evidence indicating that family roles and experiences contribute to changes in substance use reported by the study. Furthermore, the use of illicit drug was more prominent in males than in females the prevalence rate for males was 20% and 9.46% in females. This tallies with the findings of an NHSDA survey, which indicated that men reported a higher rate of illicit substance use (any illicit drug) than women, 8.5 percent to 4.5 percent, nearly double [21]. This also aligns with a research on gender differences in illicit substance use among middle-aged drug users which reported that men were more likely to be using drugs currently, compared with women (42.3% vs. 28.2%; $P = .007$) [22]. However, a study published in the pharmaceutical journal reported that women offenders' use of drugs is greater than men, with 66% of women reporting committing an offence to get money to buy drugs compared with 38% of men [23]. This variation is likely due to the sample population under consideration by the later study. Peer pressure appear to have more significant impact on the decision of adolescents to use illicit substances as in indicated by the respondents 50% for males and 57.14% for females. This discovery is in

Table 1. Shows the total number of respondents

Number of males respondents	Number of females respondents	Total
90	74	164

Table 2. Shows the age distribution of male respondents

Age 10-13	Age 14-16	Age 17-19	Total
29	21	40	90

Table 3. Shows the age distribution of female respondents

Age 10-13	Age 14-16	Age 17-19	Total
15	17	42	74

Table 4. Shows educational distribution of respondents

Primary	Secondary	Tertiary	None	Total
5	129	27	3	164

Table 5. Shows the number of adolescents who have used illicit drugs at least once (Male respondents)

Gender	Age 10-13	Age 14-16	Age 17-19	Total
Yes	2 (6.9%)	3(14.29%)	13(32.5%)	18 (20%)
No	27(93.1%)	18(85.71%)	27(67.5)	72 (80%)
Total	29	21	40	90

p-value is .024151; The result is significant at $p < .05$

Table 6. Shows the number of adolescents who have used illicit drugs at least once (Female respondents)

	Age 10-13	Age 14-16	Age 17-19	Total
Yes	0 (0%)	2(11.76%)	5(11.9%)	7(9.46%)
No	15(100%)	15(88.24%)	37(88.1%)	67(90.54%)
Total	15	17	42	74

p-value is .024151; The result is significant at $p < .05$

Table 7. Shows what influenced adolescent into taking drugs

Influence	Boys	Percentage	Girls	Percentage
Peers	9	50	4	57.14
Family member	5	27.78	2	28.57
Movies	0	0.00	1	14.29
Curiosity	3	16.67	0	0.00
Others	1	5.55	0	0.00
Total	18	100	7	100

agreement with the submission of Bauman et al. in their study on the importance of peer influence for adolescent drug use wherein they stated that peer influence is generally believed to be a major cause of adolescent drug behavior [24]. This also agrees with the conclusion of a study which used annual data from men followed from age 17 to 26, to examine whether substance use or offending

increased in the year after boys began affiliating with friends who engaged in substance use. The study reported that alcohol use, marijuana use, and offending for black participants only increased in the year after boys began affiliating with more peers who engaged in similar behaviors. Associations were strongest during adolescence for substance use [25].

**Table 8. What is the most abused drug among your peers within your neighborhood?
(Male respondents)**

Substance	Number	Percentage
Codeine and non-codeine Cough syrup	25	27.78
Marijuana	42	46.67
Tramadol	12	13.33
Pentazocine	8	8.89
Cocaine	0	0.00..
Heroin	0	0.00
Glue	1	1.11
Methamphetamine	0	0.00
Others drugs	2	2.22
Total	90	100%

**Table 9. What is the most abused drug among your peers within your neighborhood?
(Female respondents)**

Substance	Number	Percentage
Codeine /non-codeine Cough syrup	23	31.08
Marijuana	24	32.43
Tramadol	15	20.28
Pentazocine	2	2.70
Cocaine	0	0.00
Heroin	0	0.00
Glue	0	0.00
Methamphetamine	3	4.05
Others drugs	7	9.46
Total	74	100 %

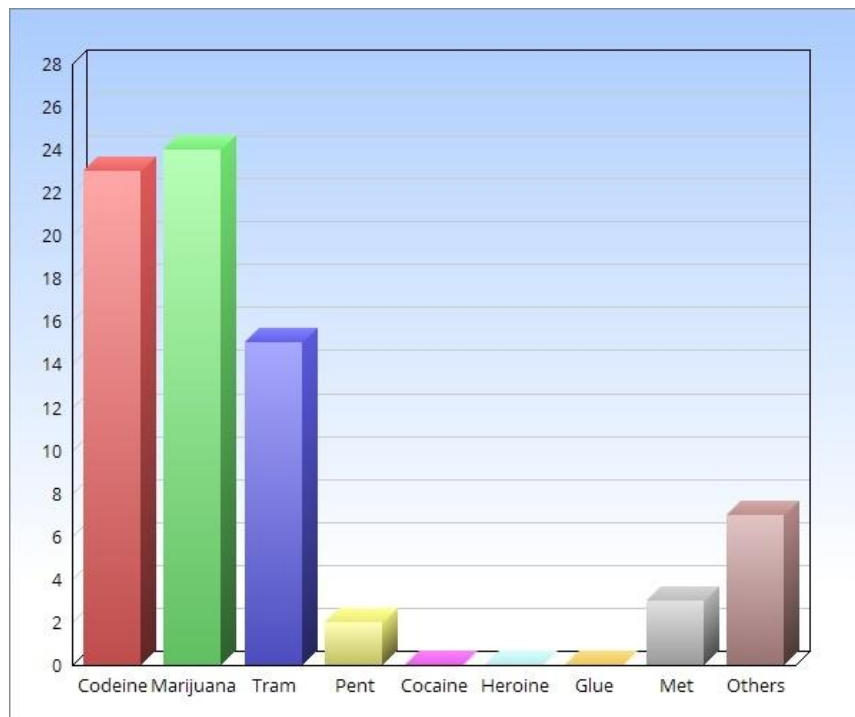


Fig. 1.

In addition, marijuana was found to be the most abused drugs by adolescent in the metropolis 46.67% in males and 32.43 in females which also aligns with the findings of a study which examined the pattern of substance use prior to age 16, and their associations with young adult substance use behaviors and substance use disorders which reported that alcohol, tobacco and marijuana are the most commonly used drugs by adolescents [26]. This is in agreement with the report of a study published in the International Journal of Mental health and addiction which reported that marijuana remains the most abused illicit drug in many African countries [27]. However, a study on the socio-demographic correlates of psychoactive substance abuse among secondary school students in Enugu, Nigeria reported that marijuana was the least abused (4.1%) substance among secondary students [28]. This variation could be likely due to the cultural settings of the study area as reported by Nwagu et al. [29]. The abuse of codeine and non-codeine based cough syrups was also found to be almost at par with marijuana among females at 31.08%. This phenomenon was described as a new trend by a review on drug abuse in Nigerian States of Kano, Sokoto, Katsina, Zamfara and Kebbi. These findings on the increased abuse of prescription medicine by adolescents are a public health concern [30].

4. CONCLUSION

It is important to note that drug abuse is continuously being redefined by the society with the continuous change in patterns and types of substances being abused. The abuse of marijuana being the most abused drug by adolescents in the metropolis, 46.67% in males, and 32.43% in females in addition to the abuse of new substances especially the abuse of codeine and non-codeine based cough syrups among females is an important finding with far reaching public health consequences. This study has provided key information and patterns of an endemic drug abuse problem which must be addressed so as to avoid the likelihood of a drug abuse epidemic owing to the significant population of young people using illicit drugs, controlled pharmaceutical products and other deleterious substances in our communities.

5. RECOMMENDATIONS

In the light of the findings from this study it is recommended that:

1. Both in and out of school adolescents and their peers should be educated from time to time on dangers of substance abuse. These enlightenment programs should offer personal, social, resistance and communication skills, as well as information about the short and long term effects of drug abuse.
2. Family involvement in the fight against drug use is also very vital in view of the emergence new drugs which were previously not considered as substance of abuse. The involvement of parents in monitoring and supervision of adolescent activities, communication and social interaction will aid in the early detection of suspicious activities.
3. Religious organizations, Non governmental organizations, civil society and related groups should be encouraged to network with government agencies and health authorities to clamp down on drug peddlers, drug couriers, production facilities and their owners
4. The enforcement of drug laws and regulations should be stricter to ensure restricted access of illicit substances to adolescents.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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