Texila International Journal of Public Health
ISSN: 2520-3134
DOI: 10.21522/TIJPH.2013.13.01.Art019

Abuja's Rising Drug Threat: A Comparative Analysis of Cocaine and Methamphetamine Use

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Abstract

The use of drugs remains a threat to health and medical care delivery, the public health burden of Cocaine and Methamphetamine use is enormous, and there is a need for critical evaluation of their use in the capital city of Abuja. This study investigates the presence of Cocaine and Methamphetamine use and related difficulties in Abuja. It is a retrospective and cross-sectional study conducted in a public mental health facility. The sociodemographic profile and clinical record of patients using psychoactive substances for the periods of 2018 and 2022 were obtained from the records unit. Results were analyzed using SPSS 26 set at 95% CI, with respondents' profiles as follows: males n=116 (94 %) and females n=7(6%), 80% were single, with Mean age 28.9, and Standard Deviation SD ± 8.6. Clinical findings showed the average duration of substance use was 9.10 years with an average age of first substance use 19.42 years. Cocaine use was seen in n=17 (14%) methamphetamine use in n=5 (4.2 %). Ninety-nine per cent (99 %) of the subjects use other substances in addition to Cocaine or Methamphetamine, using both Methamphetamine and Cocaine was seen in n=2 (1.7 %). More subjects were seen to be using cocaine in the year 2022 than in 2018, with n=15(16.1%) in 2022 and n=2 (7.1%) in 2018, while Methamphetamine use was seen in the year 2022 only. This study concludes by bringing to light the presence of cocaine and methamphetamine use in our society, with serious repercussions.

Keywords: *Abuja, Cocaine and Methamphetamine, Drug Use.*

Introduction

Substance use or the use of Psychoactive substances, which are drugs that affect the body's central nervous system and change how people behave or perceive activities happening around them [1]. Substance use disorder is the problematic pattern of use of substances leading to clinically significant distress or impairment in daily life [2]. Psychoactive substances can change the behaviours of users in different ways with aggression, violence, and passivity. They may experience an increase or decrease in physical strength or sexual performance, and there can be an increase in risk-taking behaviour or taking part in a dangerous endeavour such as risky road racing, they may engage in behaviours not in keeping with their values [3].

Drugs are used for various reasons ranging from the influence of friends, recreational purposes, the wish to deal with difficulties in life, emotional trauma, lack of authority, to take away pain and discomfort and the wish to feel among others. The use can result in addiction with several consequences. Addiction is defined as a chronic, relapsing brain disorder characterized by compulsive drug-seeking behaviours and use, despite adverse consequences [2]. Functional changes in the brain occur in Addiction, these changes affect the brain in areas responsible for self-control, reward, and stress management. These changes last long after the person has stopped using

Received: 30.10.2024 ***Accepted: 07.02.2025*** ***Published on: 28.03.2025***
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those substances [1]. It's a chronic disorder occurring repeatedly for a long time, persistent or encountered. Substance use may begin as a form of self-medication to treat mental illness symptoms, but it may also increase vulnerability to mental illness as a causal effect, the cause of mental illness and substance use may be related, and the risk factors for both conditions may overlap [4].

The national picture of drug use has exhibited changing trends over time, and the drug use trends and patterns in the central capital have also changed with time, methamphetamine and cocaine represent an increasing drug menace to society [5]. The Nigerian capital of Abuja is experiencing a rise in the drug threat due to changes in the trends and patterns of psychoactive substance usage, with meth and cocaine emerging as potential drugs [4].

CNS (Central Nervous System) Stimulants, examples are cocaine, nicotine, and caffeine. (Amphetamine Type Stimulant) ATS, "ecstasy"-like compounds, cathinone, and some other NPS (New Psychoactive Substances), raise blood pressure, increase heart rate, and breathing, and enhance brain activity, they provide euphoria or a feeling of excitement, they boost alertness, attentiveness, and increase energy. They can give users illusory emotions of competence, intelligence, and immense power. Moreover, there may be undesirable effects such as low appetite, restlessness, anxiety, irritability, hostility, and violence [6, 7].

Cocaine is one of the alkaloids found in the leaves of the Erythroxylum coca plant, which has been growing naturally in Colombia and Bolivia for thousands of years. Native peoples in present-day Peru have been using these alkaloids for thousands of years to improve energy by chewing coca leaves while reducing hunger and thirst [8]. The Peruvian Incas utilized the leaves ritualistically to worship the gods and the leaves sacred in addition to their practical utility. It wasn't until the 1700s that the plant was produced in Europe because it needed to be grown in hot, humid tropical regions [8]. The American pharmaceutical companies as well as some prominent members of the medical profession praised it for its non-addictive properties and potential utility in weaning people off the risky "morphine habit." Although cocaine is well-known for being added to popular drinks in the late 19th century, the notion that it was a panacea-like miracle drug that wasn't addictive was short-lived, and since then cocaine has been used in medicine with escalating rarity. It is used in Eye surgeries and on some occasions, otolaryngologists utilize it as a local anaesthetic with vasoconstrictive effects [8].

Cocaine and Methamphetamine use has put immense pressure on public health worldwide, the Mexican drug cartel also propagates the two important stimulants,70% of cocaine in the United States that comes from South America is thought to travel through the Central America–Mexico corridor. The majority of methamphetamine production and distribution in the United States is currently believed to be controlled by organizations based in Mexico [9].

Methamphetamine, sometimes referred to as "meth," "crystal," or "ice," is a stimulant drug that is extremely addictive and can have detrimental effects on both individuals and communities. It is commonly taken as an ingestible white, odourless, bitter-tasting powder and smoked or injected. Methamphetamine is frequently used to boost energy, alertness, and attention. It can also give users a sensation of euphoria and boost their confidence [10].

In Nigeria, the Southeastern region, crystal meth goes by the moniker (MKPURU MMIRI) it is a slang that originated in the Igbo language and means "seed of water."[11]. Mkpuru Mmiri addiction can cause paranoia and the onset of hallucinations. In addition, individuals might harm themselves or other people and have a crawling or itching sensation beneath their skin.

It is currently very common among Nigerian youths in the southeast and is expanding quickly, with the potential to impact the entire nation [11]. Methamphetamine has been around for almost a century. Nagayoshi Nagai, a Japanese pharmacologist, discovered and synthesized it in 1883 for medical purposes to treat narcolepsy and asthma, while Akira Ogata crystallized it in 1919. This substance was not widely used until World War II (1939-1945), when countries like as Japan and the United States of America provided it to their soldiers for its stimulant effects [12]. Methamphetamine has been used in Nigeria for more than ten years, produced in small lab-like settings in Lagos State where the illegal substance market transformed in 2010 and 2016 [11].

The Study significance, drug use remains a continuous threat to health and medical care delivery, the Public Health Burden of cocaine and methamphetamine use is enormous, and there is a need for critical evaluation of their use in the capital city, this study investigates the presence of cocaine and methamphetamine use in our society and related difficulties. Co-occurring substance use disorders are highly prevalent among individuals with mental illness, and these dual diagnoses often complicate treatment outcomes [4]. Exploring the complex relationship between these two phenomena might inform integrated approaches to treatment and prevention.

The aim and objectives are to evaluate the trends of cocaine and methamphetamine use in Abuja, to compare the presentation of cocaine and methamphetamine use in 2018 and 2022, assess the socio-demographic profile and clinical metrics of the subjects, and explore the consequences of cocaine and methamphetamine use.

Materials and Methods

Study Location

The study is conducted in the Federal Capital Territory (FCT) Abuja, Nigeria in West Africa. The FCT was established in 1976 by combining portions of the former Plateau, Niger, Kwara, and Kaduna states; most of the territory was taken from Niger state [13]. The main territory is in the country's north-central area, the area is situated immediately to the north of where the Niger and Benue Rivers converge [14]. The states of Niger encircle it to the west. It shares borders with Nasarawa State to the east and south for 156 km, Kogi to the southwest for 17 km, Kaduna to the northeast for 45 km, and Niger to the west and north for 179 km. Geographically speaking, the Federal Capital Territory is situated in the centre of Nigeria [15]. Like many other big cities in Africa, Abuja is seeing an exponential increase in its population. It is the fastest-growing city in Africa, with an annual urbanization rate of 8.32% [14].

Study Design

This is a retrospective and cross-sectional study in a mental health facility, Karu General Hospital, one of the FCT's major public mental health facilities. It was conducted among patients using Psychoactive Substances attending the clinic of Karu General Hospital in the FCT Abuja, Nigeria. The participants' medical data for the designated periods of 2018 and 2022 were obtained from the hospital's Health Information Management Unit. All pertinent data is retrieved, including the clients' sociodemographic data, clinical and drug-related Information, and ICD-11 diagnoses [16]. Microsoft Excel and the Statistical Package for Social Sciences 26 were used for the analysis.

The sample population inclusion criteria are medical records of patients attending a clinic in 2018 and 2022. All patients attending the Behavioral Medical Unit clinic of any age, patients receiving treatment for substance use disorder in the outpatient or as an inpatient and those with an identified diagnosis of drug-related problem based on ICD-10 or ICD-11 diagnostic criteria. The exclusion criteria,

people with a primary diagnosis of mental illness without psychoactive substance use, patients with other physical ailments like Dementia, Delirium, and Organ Failures, those without important information about their Psychoactive Substance use diagnosis, and those with missing records in 2018 and 2022 for any reason.

Study Tools

The information obtained from the subjects' medical records was entered into a predesigned proforma using the following parameters.

1. Sociodemographic profiles: age in years, gender, marital status, educational status, and occupational status.
2. Clinical and drug-related metrics, such as age at first use of substances, information on who introduced them to using substances, the first substance used, duration of use of the substances, feelings obtained from substance use, consequences from psychoactive substance use, any attempt to quit or stop using substances in the past, treatment type, substance used, ICD 10 or ICD 11 diagnosis, medications received, clinical follow-up details, family history of mental illness, forensic history, reasons given for using psychoactive substances in the beginning, the favourite substance and the most problematic or difficult substance to stop.

Data Management

The collected data was entered into the Statistical Package for Social Sciences Version 26.0 (SPSS 26) for analysis. Frequencies, descriptive, and inferential statistics were obtained with the main statistics set at a 95% Confidence Interval.

Results

A total of N = 123 records were retrieved for the study, with subjects from 2018 and 2022 fulfilling the inclusion criteria n = 28 (22.8%) for 2018, and n = 95 (77.2%) for the year 2022.

Sociodemographic Profiles of the Respondents

Male n=116 (94 %) and females n=7(6 %), 80% were single, and the mean age is 28.9 years, with a standard deviation SD ± 8.6. The minimum age is 15 years, and the maximum is 56 years. The educational level, n=32 (26 %) completed secondary school and n=53 (43 %) are university students. School dropouts at the secondary and university level are n=4 (3.6%) and n=12 (9.8 %) respectively. Employment status, n=34 (28.6%) are students and n=30 (25.6%) are civil servants. See table 1

Clinical Metrics on Substance Use

The average duration of substance use is 9.10 years with SD ± 7.8 and the age at first use of substances is 5 min and 44 max, with a mean age of 19.42 and SD ± 7.1. Seventy-nine per cent (79%) of the subjects were introduced to substance use by their friends mostly at school. Cannabis is indicated to be the favourite substance in n=19 (39.6 %) this view surfaces that of alcohol which remained a favourite substance to n= 13 (27.1 %) of the patients. Cannabis remained the highest as the most problematic or difficult substance to stop as indicated by 35 % of the subjects. See table 1

Cocaine and Meth Amphetamine use

Cocaine use is seen in n=17 (14%) Methamphetamine use is observed in n=5 (4.2 %) and 99.2% of the patients use other substances in addition to cocaine or Methamphetamine. Taking both Methamphetamine and Cocaine was seen in n=2 (1.7 %). More subjects were seen to be using cocaine in 2022 than in 2018, with n=15(15.8 %) in 2022 and n=2 (7.1%) in 2018 respectively, while Methamphetamine use is among n=5 (5.3%) in 2022. See Table 2. Pearson Chi-Square test of cocaine use in 2018 and 2022, at 95% Confidence interval, showed a Chi-Square value of 1.439 df (Degrees of Freedom): 1 and asymptotic Significance (2-sided) of 0.230.

Discussion

This study investigates the use of methamphetamine and cocaine in Abuja, the nation's capital. Before 2022, meth use was restricted to the southeastern part of the nation, and it was produced in small labs in the south, Lagos State and other nearby areas [11]. It is now evident that the use of methamphetamine has reached the capital city, and the consequence of its use is seen as observed. Studies have shown various adverse effects of their use that are so severe, such as crimes and immoralities that harm society as a whole [11]. They can cause mood swings, anxiety, bewilderment, insomnia, and violent conduct. A user's appearance might drastically change, ranging from dull skin to rapid ageing. They may also experience dry mouth, discoloured, damaged, or decayed teeth, with difficult-to-heal pimples and sores. Mkpuru Mmiri addiction can also cause paranoia and hallucinations [11]. Compared to other stimulants, methamphetamine is more hazardous. This is because a greater proportion of the substance stays unaltered in the body, allowing it to remain in the brain longer and prolong its stimulating effects [10].

“Tweaking” The final stage of methamphetamine use occurs when the user experiences paranoia and irritability due to sleep deprivation for three to fifteen days. This practice is called "tweaking," and the one who engages in it is termed the "tweaker." Typically, tweakers need more methamphetamine to reach the desired effect. Higher dosages of methamphetamine can cause convulsions, skeletal muscle deterioration, brain haemorrhage, and psychosis. Furthermore, long-term use of it can result in psychosis, including delirium, delusions, auditory and visual hallucinations, and violent behaviour. Long-term, chronic methamphetamine usage can be extremely addictive, and stopping it suddenly can cause withdrawal symptoms that last for months [17].

The UNODC report of 2019 showed the use of cocaine and methamphetamine to be less common in the country, with an estimated 92,000 past-year users of cocaine and 89,000 past-year methamphetamine users, this has changed significantly. The prevalence of cocaine use now varies from 1.6 to 4.8% among secondary school students, 0.6 to 10% among college students, and 0.1 to 0.6% among the general population [4]. Despite the current major legal control mechanisms, the increased trafficking of drugs may have made cocaine easier to obtain, which could explain its widespread use in Nigeria [4].

Cocaine use is more common among those aged 25 and 39 years of age, and amphetamine users are between 30 and 39 years of age [5] [18]. Polydrug use or the use of multiple substances was seen among 94% of the subjects, with 32% using (three other psychoactive substances), 12.5 % taking four substances, and using five or more substances was seen among 6.5% of the subjects. Several studies have reported findings of polydrug use, UNODC reported half of all drug users in Nigeria used many substances throughout the previous year, either concurrently or simultaneously [5].

In this study, Cannabis remains the most used substance, and the first substance of use as seen among n=15 (38%), cannabis remained the most challenging substance to stop. In other studies, the most commonly abused substance among secondary school students in nine different states in Nigeria was experimentally shown to be alcohol, cannabis, tobacco, and cigarettes, whereas the least frequently abused substances are cocaine, caffeine, glue, heroin, energy drinks, miraa, Rohypnol, and tramadol [19]. Cannabis is the most commonly reported drug abuse among the various research populations, in the general population the prevalence of cannabis abuse is 10.8%, but among youths aged 25 and under, it is 22.7% [4].

The mean age of substance use in this study is 19 years, with the minimum age of first use being 5 years, this conforms with a report by UNODC that in the general population, the average age at which cannabis use began was 19 and cannabis remains the most widely used substance with 10.6 million persons, or 10.8% of the population, were estimated to have used cannabis in the previous 12 months [5]. In a nearby community Jos substance use was discovered to affect people of all ages. For the majority, substance use began in adolescence or early adulthood. It is more common in people aged 20 to 29 years [20]. The observed gender of 94% male and 6% female in this study is similar to the findings by Ibrahim et al in Maiduguri where 93% male preponderance was observed [21]. Most of the subjects in this study are students, secondary school students are n=32 (26%), university students are n=53 (43.1%) with n = 12 (9.8%) university dropouts and n=4 (3.6%) secondary school dropouts. Education is the most affected aspect of life by the consequences of substance use. This is confirmed by several other studies, probably because the mean age of drug use falls between 20 to 29 years, it is the expected age at which education is observed and also the peak age of peer influence [22-24].

Individuals who used substances reported experiencing severe issues as a result of drug use, such as neglect of family responsibilities, absenteeism at work or school, or poor performance at work or school [19]. Similar findings were obtained in this study where the consequences of drug use have led to mental/physical health issues as seen among thirty-one per cent of subjects, and family/social difficulties seen among 28 per cent of the subjects. The burden of drug abuse worldwide is viewed in the following four areas organized crime, illicit financial flows, corruption, and terrorism/insurgency. The 2018 study "Drug Usage in Nigeria" by the UNODC, Nigeria's first comprehensive national drug usage survey, showed one in seven people between the ages of 15 and 64 reported using drugs in the previous 12 months. Drug-related problems affect one in five people, and numerous criminal offences, including shoplifting, sex work, burglaries, and theft, have been linked to drug misuse [5]. In South America, where the huge burden of cocaine, methamphetamine, and opioid use is observed, the disease burden attributable to these substances was studied with findings of high DALYs (Disability Adjusted Life Years [25].

The Statistical findings of the Pearson Chi-Square test of cocaine use in 2018 and 2022, at a 95% Confidence interval, showed a Chi-Square value of 1.439 df (Degrees of Freedom): 1 and asymptotic Significance (2-sided) of 0.230, indicating no significant association between the two variables for the years 2018 and 2022. The observed differences are likely due to chance.

The limitations of this study include the fact that it is a hospital-based study, and the sample size is small. There is a need for a community study to validate these findings. The 2022 sample is larger than that of 2018, which led to the appropriation of the sample in the ratio of 1:5 for 2018 and 2022. In the years 2019, 2020, and 2021, the facility was adopted as a COVID-19 centre, with resultant COVID-19 restrictions and low client turnout.

Conclusion

Conclusively, this study is an eye-opener, it shows the presence of the use of cocaine and methamphetamine in our community with consequences. In Nigeria, methamphetamine usage and abuse are on the rise. To checkmate it, all hands must be on deck. It is a significant problem with extremely damaging effects, it has the power to make the abusers useless to their families, themselves, and society as a whole.

Recommendation

1. Cocaine and methamphetamine have a high potential for addiction, action must be

taken to prevent their continuous production, distribution, and sale in the nation.

2. The family should take the lead in combating drug abuse. Any substance misuse inclinations should be prevented before they begin by family members.
3. To achieve the required control effects, the government should improve the regulatory agencies' operating capabilities, such as those of the NDLEA and NAFDAC.

Table 1. Clinical and Drug-related Parameters of Psycho-Active Substance Use (N=123)

	Minimum Age	**Maximum Age**	**Mean**	**Std Deviation**
Age in years	15	56	28.89	8.56
Duration of use of PAS	1	35	9.10	7.78
Age at first use of PAS	5	44	19.42	7.12
Gender	**Frequency**	**Percent %**	**Valid Percent %**	
Male	116	94 %	94.3%	
Female	7	6%	5.7%	
Number of PAS (polydrug use)	**Frequency**		**Percent %**	
One other PAS	29		24 %	
Two other PAS	31		25 %	
Three other PAS	39		32 %	
Four other PAS	15		12 %	
Five other PAS	8		7 %	
Consequences from PAS	**Frequency**		**Percent %**	
Poor Academic Performance/ School drop out	19		15 %	
Dismissal from Place of work	1		0.8 %	
Mental/physical health issues	32		26 %	
Homicidal tendencies	1		0.8 %	
Financial Difficulties	11		9 %	
Depression and suicidality	1		0.8 %	
Family and social difficulties	29		24 %	
Absenteeism from work	2		1%	
Seizures/ convulsions	1		0.8 %	
First Substance used	**Frequency**		**Percent %**	
Cannabis	15		38 %	
Cigarettes	6		15 %	
Alcohol	11		28 %	
Tramadol	4		10 %	
Shisha	1		3 %	
Crack cocaine	2		5 %	
Most Challenging substance	**Frequency**		**Percent %**	
Crack cocaine	3		2.4 %	

Cannabis	7	5.7 %
Other substances	3	2.4 %
Tramadol	5	4 %

Source: Hadiza.mustapha@nileuniversity.edu.ng

Table 2. Research Year vs Presence of Cocaine Use Crosstabulation

Presence of Cocaine Use			
	Yes	**No**	**Total**
The research year 2018 counts	2	26	28
2022 count	15	78	93
Expected count	17	104	121

Source: Audu HM

Conflict of Interest

None declared by the author

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