REVIEW OF INTERVENTIONS FOR REDUCTION OF DRUG ABUSE AMONG YOUTHS IN NIGERIA

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TITLE

Review of Interventions for Reduction of Drug Abuse among Youths in Nigeria is my work.

A thesis submitted in partial fulfilment of the requirement for the degree of Master of Science in Public Health

By

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ABBREVIATIONS

AUC	African Union Commission
CAP	Criminal Against Persons
CINDs	Community Intervention Networks on Drugs
COVID	Coronavirus disease
CSOs	Civil Society Organizations
DAP	Drug Advisory Program
ECOWAS	Economic Community of West African States
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
EFCC	Economic and Financial Crimes Commission
FCT	Federal Capital Territory
FMOH	Federal Ministry of Health
GDP	Gross Domestic Product
GNI	Gross National Income
GISA	Global Initiative on Substance Abuse
IMC	Inter-Ministerial Committee on Drugs
INL	International Narcotics and Law Enforcement Affairs
ISSUP	International Society for Substance Use Professionals
LFN	Laws of the Federation of Nigeria
LGAs	Local Government Areas
LULU	Line Up Live Up programme
NACA	National Agency for Control of AIDS
NAFDAC	National Agency for Food and Drug Administration and Control
NCS	Nigerian Custom Service
NDLEA	National Drug Law Enforcement Agency
NDCMP	National Drug Control Master Plan
NENDU	Nigerian Epidemiological Network on Drug Use
NGOs	Non- Governmental Organizations
NHA	National Health Accounts

NHIS National Health Insurance Scheme

NIS Nigerian Immigration Service

NPF Nigerian Police Force

OTC Over the Counter

PCN Pharmaceutical Council of Nigeria

PPMVs Patent and Proprietary Medicine Vendors

SACs Special Area Commands

SRHIN Slum and Rural Health Initiative Network

UNICEF United Nations Children's Fund

UNODC United Nations Commission on Drug Use and Crime

UPC Universal Prevention Curriculum

USA United States of America

VU Vrije Universitet

WACs West African Countries

WADA War Against Drugs

WADPN West African Drug Policy Network

WENDU West African Epidemiological Network on Drug Use

WHO World Health Organization

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AUTHOR'S INTRODUCTION

I am Anene Ogechukwu Chinelo, a Medical Doctor and a Senior Registrar in Community Medicine Department at Alex-Ekwueme Federal University Teaching Hospital, Abakaliki, a teaching hospital in Ebonyi state, Nigeria. I have had thirteen years of post-graduate hospital experience. I observed many youths during medical consultations to realize negative societal influence affects their growth and development especially in matters related to drug abuse and sex. While counselling most of them, I discovered that they see these influences as a norm.

During the psychiatry rotations I had during my residency training, I discovered drug abuse is still a huge challenge as many individuals, especially youths, are saddled with the menace. I met two youths in my neighbourhood who practically almost destroyed their lives using and injecting drugs. I counselled them and recommended appropriate mental health services within the confines of the State. However, I later discovered that increasing abuse of drugs seems normal for several youths in schools and communities. This sparked up my interest to explore further the reasons for the increasing endangerment among them. Thus, this research critically reviewed and examined the different interventions (laws, policies, and other interventions) to reduce drug abuse among youths in Nigeria using the ecological framework.

It covers three specific objectives: to examine the interventions that are available and working at the national policy level and how they affect drug abuse; to differentiate interventions available and working at the other (Community/School, Organizational/family, and individual) levels; and to explain the challenges encountered in the implementation of the interventions across all levels. The author will also give recommendations based on the findings for further control of drug abuse to the Nigerian government.

ABSTRACT

Drug abuse in Nigeria is significantly terrifying, with cannabis being the most widely used substance. The prevalence of drug abuse in Nigeria is three times the global average and more so increasing among youths which calls for caution. This study aims to review the interventions available for the reduction of drug abuse among youths in Nigeria.

This study is a literature review supplemented with key informant interviews to understand the available interventions and the challenges with implementation at different levels in Nigeria using the ecological framework. The pool of participants consisted of nine respondents comprising seven men (77.7%) and two women (22.2%).

Results from the literature review and interviews suggest laws, policies, surveillance systems, and other interventions, including community-based, school-based, and individual programs exist. However, non-prioritization of drug use issues, lack of funding, unregulated open drug markets, internet drug advertisements, and lack of community ownership are impediments to reducing drug abuse among youths. Findings also showed the drug laws are outdated, and there seems to be no synergy in policy transformation among the coordinating agencies and the available policy.

Emphasis on good governance is needed in tackling these challenges to reduce drug abuse in Nigeria while ensuring piloted, available, and working interventions expand in all geopolitical zones of Nigeria. The author recommends amendment of the current law, youth participation, more capacity building on evidence-based prevention in communities, prioritization of drug use problems, and increased funding for drug control activities.

***Key words*:** drug abuse, youths, evidence-based intervention, Nigeria

CHAPTER ONE: BACKGROUND INFORMATION

1.1 Background Information on Nigeria

Nigeria consist of thirty-six administrative states and the Federal Capital Territory (FCT). Nigeria is in West Africa and shares borders with Cameroon and Chad in the east, the Niger Republic in the north, and the Republic of Benin in the west. Its coastline in the south lies on the Gulf of Guinea in the Atlantic Ocean.[1] The country is split into six geopolitical zones: North-East, North-Central, North-West, South-West, South-East, and South-South (See Fig1). It inhabits more than three hundred and fifty ethnic groups, of which the largest are the Igbo, Hausa, and Yoruba.

Nigeria is the most populated country in Africa and the seventh heavily populated worldwide, with about 198 million people.[2] By 2022 and 2050, this population is expected to increase to 201 million and 396 million, respectively. Thus, making the country the third-largest population after India and China. The Human Development Report, 2016, indicated life expectancy at birth is 53.1 years regarding health indicators.[3] Even with this, Nigeria invests minimally in public health with spending under one percent of the Gross Domestic Product (GDP).

According to this same report, the gender inequality index shows a significant disparity in the disposition of the labor workforce between males and females and the gross national income per capita. The literacy rate of the Nigerian population is 59.6 percent. At the same time, the country also ranks low, 152 out of 188 countries in the human development index, with many Nigerians living below the poverty line (about 53.5% living on $1.90 per day). Thus, the majority of the people, especially the young population, have a high dependency ratio.[3]

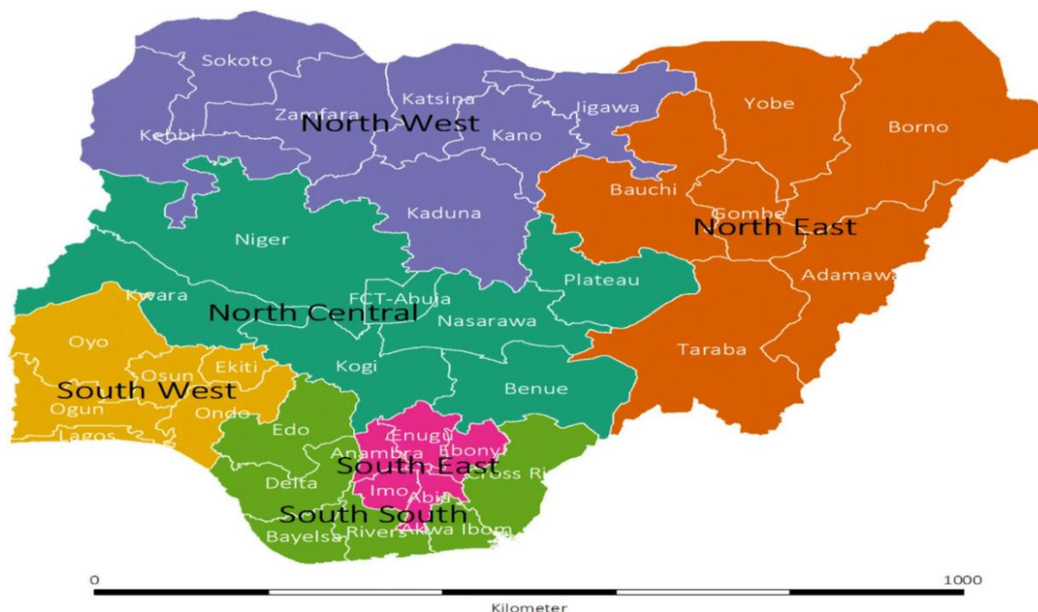


Figure 1: Map of Nigeria showing the 36 states, FCT, and six geopolitical zones

Source: https://gadm.org/maps.html

The Nigerian healthcare system (see annex 3) is set out into primary, secondary, and tertiary health care levels. The Local Government Areas (LGAs) are accountable for primary health care; the State Government provide secondary health care services while the Federal Government provides tertiary health care services, develop, and regulate policies while demonstrating overall oversight. The LGA level is the least financed and organized level of government; thus, financing and organizing primary health care has been complex.[4] Nigeria, as one of the middle-income countries, is still faced with the double-burden of communicable and non-communicable diseases, with about one in five persons using drugs suffering from drug-related disorders.[1]

Nigeria has an expanding private health sector providing 60% of health care services through 30% of its standard health facilities, including not-for-profit services provided by faith-based and non-governmental organizations; and private-for-profit providers.[2] The private health sector includes patent and proprietary medicine vendors (PPMVs), drug outlets, traditional medicine providers, and complementary and alternative health workers. The country has a plentiful supply of human resources for health just like other African countries but obviously with low densities of health workers to deliver required health services (1.95 per 1,000, for physicians 4 per 10,000 people) effectively and efficiently.[3,4] Recently, the country's current state has caused a lot of migration of health workers to foreign countries making the distribution of health workers highly inequitable. The healthcare delivery system coexists with alternative medicine patronized by citizens, especially those in rural areas.

Nigeria’s National Health Act (NHA) provides a framework for standards and regulation for health services incorporating the basic minimum health package of health services to all citizens within the National Health insurance System (NHIS).[5] The NHA made provision for this using the basic health care fund. However, the percentage accrued to the LGA responsible for primary health care is still very minimal and with delayed transfer of available funds. The country’s NHIS, which has existed since 1999, covers a little percentage of the population, about 5%, and only the formal sector employees, thus leaving out many individuals with out-of-pocket spending for health services.[6] A lot of disparities exist across the geopolitical zones, states, urban-rural divide in status, health service delivery, and availability of resources.[7] Thus, this strongly affects the quality and range of health care services in the country.

Youth, as a concept, varies in different parts of the world. The United Nations defined youth as fifteen to twenty-four years, but this age group is rather very narrow in some contexts like Africa and Nigeria. This is due to changes in their political, economic, and socio-cultural backgrounds.[8] Thus, the African charter defined youth as persons between ages fifteen and thirty-five years. Similarly, Nigeria defined theirs as persons from age eighteen to thirty-five years. Nigeria has a young population structure making up 35.6% of the population, with the last census in 2006. Males constituted 33.4%, while females were 37.9%. However, the National baseline youth survey carried out in 2012 by the national bureau of statistics and the federal ministry of youth development estimated youths eighteen to thirty-five to be 52.2 million.[8] Another report in 2014 currently estimates the youth population to be 60% of the Nigerian people.[9]

1.2 Overview of Drug Abuse

Drug abuse continues to be a contextual and social issue globally, especially since young people are involved and contribute to intentional or unintentional harm. Drug abuse is simply the use of prescribed or unprescribed drugs without clear medical reasons or its continual use more than prescribed dosage and time. Olurishe defines drug abuse as the deliberate or unintentional use of mind-altering drugs for reasons other than legitimate intended uses.[10] Using the term ‘‘abuse’’ however, have been construed to be judgmental; thus, use, misuse in terms of inappropriate use of prescriptions, or dependence is advocated.[11]

There are numerous classification systems for drugs of abuse, but none is thoroughly ideal. Classification issues arise since all drugs have multiple effects, and the legal status of a drug is dependent on its formulation and strength and, in most cases, on the users' age.[12] However, the classification system of legal and illegal drugs will be used.

Legal drugs are lawfully purchased and sold in the market, including those closely controlled like morphine, those that are lightly checked like alcohol and tobacco, and still those that are not controlled at all, like caffeine.[12] Thus, legal drugs include non-prescription, prescription drugs (over-the-counter drugs-OTC), alcohol, and tobacco. Although alcohol and tobacco are non-prescription drugs, they are not under OTC drugs. However, they are abused as social drugs, thus leading to the emergence of risk factors for chronic diseases such as lung cancer, alcoholism, heart disease, and death.[12] OTC drugs are legal drugs bought without a physician’s prescription. Analgesics such as aspirin, acetaminophen, and ibuprofen, cough syrups, emetics, laxatives, vitamins, and many others are in this category. Agencies usually regulate them. However, because drug users can abuse them, they develop a pattern of dependence since they do not provide a cure but relieve symptoms. This could further predispose them to create a dependency on prescription or illegal drugs.[12]

Prescription drugs such as opioid pain relievers (codeine, fentanyl, morphine), contraceptives, antibiotics, stimulants (amphetamines), sedatives, antidepressants, anaesthetics are bought only with written instructions from physicians or dentists. This is because they cause serious side effects for some individuals. They are also regulated by the food and administration agencies but can be abused, thus can lead to severe consequences.[12] These prescription drugs have a high potential for abuse. Also, because they are stronger than non-prescription drugs, there is a higher risk of developing dependence which further leads to the development of drug resistance.[12]

On the other hand, Illegal drugs are those drugs that cannot be cultivated, produced, purchased, sold, or utilized within the provisions of the law.[12] They often lack acceptable therapeutic value. They are further classified based on their physiological effects as stimulants (Cocaine, amphetamine, and methamphetamine), depressants (benzodiazepines, methaqualone, barbiturates, and others), cannabis, hallucinogens (Psilocybin), narcotics (Opium and its derivatives, heroin), and other drugs (see box 1).[12]

Some synthetic opioids are prescription drugs, including morphine, fentanyl, codeine which are legally used in some countries like the US, Canada, Germany as narcotic pain medication for moderate to severe pain. However, these countries have experienced an opioid crisis due to their

consumption.[13] The availability of these opioids is increasing in some other European countries like Australia, where there is problematic use of opioids because of rising prescription rates and supply of illegal drugs.[13] Similarly, in some countries like The Netherlands, Czechia, Switzerland, and Portugal, the use, possession, supply, importation, and exportation of cannabis are legal. However, it is seen as an illegal drug in a broader international context and thus prohibited. The legalization of cannabis in these countries is viewed to decriminalize personal drug use and possession.[13]

While cannabis and some opioids are legal in some countries, the Nigerian government classifies them as illegal. However, drug users still use substantial amounts of these drugs in Nigeria. Some other drugs called inhalants including glues, paint solvents, motor fuels, aerosol sprays, and other vapour types, are frequently abused by youths because they are inexpensive and easily available.[12] Nigeria continues to be a central hub for cocaine and cannabis trafficking, with the highest seizures in 2016, with cannabis leading among the list of drugs seized by the Nigerian Drug Law Enforcement Agency (NDLEA) the same year.[14] This continues to be a challenge in terms of illegal cultivation, production, and trafficking. Apart from cocaine and cannabis, ephedrine has also been trafficked through the country while amphetamines are also illegally manufactured.[14,15]

BOX 1: ILLEGAL DRUG TYPES[16]
Amphetamine-type stimulants: group of substances made up of synthetic stimulants controlled under the convention on Psychotropic Substances of 1971 and are group of substances called amphetamines including methamphetamine, methcathinone, amphetamine and the ecstasy-group substances (3,4-methylenedioxymethamphetamine (MDMA) and its analogues). Amphetamines- a group of amphetamine-type stimulants that includes amphetamine and methamphetamine
Cocaine: an alkaloid central nervous system stimulant drug derived from cocoa plant.
Opiates: subset of opioids made up of different products derived from opium poppy plant, and include opium, morphine, and heroin.
Opioids: generic term used for opiates and its synthetics analogues (majorly prescription or pharmaceutical opioids) and compounds that are synthesized in the body. Although they have the capacity of relief pain, they produce a sense of euphoria and can lead to coma, stupor and respiratory depression. Cannabis: a generic term for psychoactive preparations (example hash oil, hashish and marijuana) derived from cannabis sativa plant.

1.3 Prevalence of Drug Abuse

Globally, about two hundred and seventy-five million (5.5%) individuals aged 15-64 years had used drugs at least once in 2019.[17] Among these past drug users, about 36.3 million (13%) suffer from drug use disorders which correspond to a 0.7% prevalence of drug use disorders globally among 15-64 years population. In 2018, of the 269 million people estimated to have used drugs globally in the previous year, about 60 million are in Africa, representing 8.4% of the region's

population aged 15-64 years.[17] Thus, the estimated prevalence of drug use is higher in Africa than the counted global majority in 2018.

According to the first national drug survey carried out in Nigeria in 2018, an estimated 14.3 million (14.4%) persons between ages 15 and 64 years had used drugs, other than alcohol and tobacco, in 2017.[1] This includes all those who used drugs once in the previous year as well as high-risk drug users. This is higher among the southern geopolitical zones (13.8% to 22.4%) due mainly to Oyo and Lagos than the northern geopolitical zones (10% to 13.6%), as shown in fig 2. The drugs included in each geopolitical zone were cannabis, opioids (tramadol, codeine, morphine), amphetamines, cocaine, tranquilizers, etc. (see annex 4). In the overall prevalence rates in 2017, for Lagos state, which includes the central city of Lagos, the prevalence rate of 33% is more than twice higher than the national average. Similarly, in Oyo state, which is home to Ibadan, Nigeria's third-largest city, the prevalence rate of 23% in 2017 is significantly above the national average. The 14.4% national prevalence is almost three times higher than the current global annual prevalence rate (5.5%) of all substances used among the adult population. Similarly, among the 14.3 million individuals, 20% already have substance use disorders; this figure also exceeds the global average by 11%.[1]

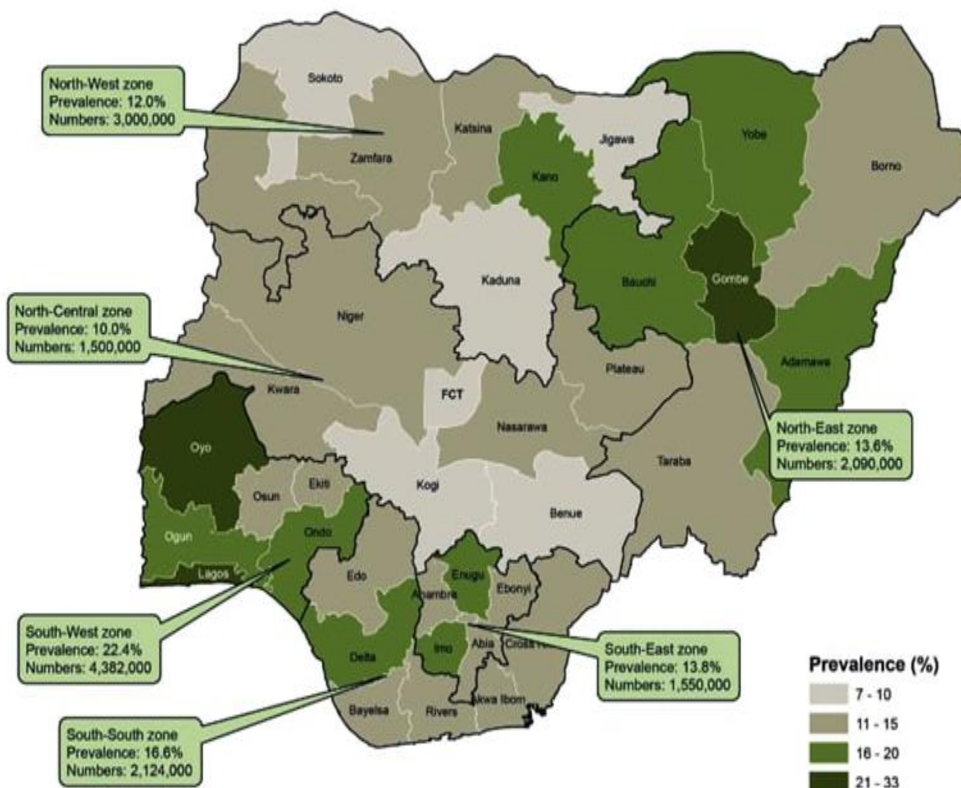


Figure 2: Map representing the prevalence of drug use across the geopolitical zones[1]

Source: National Drug survey Nigeria 2018

Overall, drug use is variably low among women compared to men. Globally, women are three times less likely to use cannabis, amphetamines, and cocaine than men. In contrast, women are more likely to abuse pharmaceutical drugs, especially pharmaceutical opioids, and tranquilizers, than men.[15] Generally, in Nigeria, while women are less likely than men to use drugs including cannabis, injected drugs, more women than men inject opioids like heroin, tranquilizers, and pharmaceutical opioids.[1]

Nevertheless, prevention and control of drug abuse among youths will require adequate knowledge of the statement of problems, the available drug interventions, and the challenges faced with their implementation.

Although all age groups abuse drugs, the overall past-year use of most drug types is high among the young population aged 25 to 39 years old.[1] This is particularly true for non-medical use of prescription opioids like codeine, tramadol, morphine, cough syrups containing codeine, or dextromethorphan (with mean age of initiation and injection being 21 years) cannabis. While using ecstasy and amphetamines is shared among the young population, the older population rarely uses them. However, the aging population considerably uses pharmaceutical opioids and cough syrups, especially between 45 and 64 years.[1]

The prevalent nature of drug abuse among the youths has been notable among street children, males, students, and commercial drivers. Most of these people abuse drugs for increased physical strength and to satisfy some personal desires. Commonly reported reasons for drug abuse include improving physical performance, sleeping, for pleasure, stress, peer pressure, easy accessibility, and curiosity.[18-22] Drug hawkers, patent medicine dealers, fellow drug users, open markets, underground pushers are known to be significant sources for drugs in Nigeria.[20-27]

Cannabis remains the most widely used drug worldwide, in Africa and young people, with West and Central Africa accounting for 9.4% of cannabis users.[17] In Nigeria, cannabis is also the most used drug, followed by pharmaceutical opioids and cough syrups that contain codeine and dextromethorphan (See Fig 3). The country's cannabis use is comparable to the 2021 United Nations Office on Drug Crime (UNODC) prevalence estimates of cannabis use in West and Central Africa (9.4%). Reasons for high cannabis use among Nigerians and youths are relative ease of cultivation, the demands from ready-to-buy users, and increased economic returns from cannabis trafficking and availability. About 4.7% of Nigerians had used opioids in the past year, thus placing the country among other countries globally with high estimates of non-medical use of opioids, including tramadol, codeine, or morphine. Other drug use habits increased with young people taking potent mixtures of different drugs at high risk of dangerous overdoses. A variety called gutter water is widely taken as a cocktail of drugs, including codeine, tramadol, lophenol, cannabis, and water. Some also use crude concussions as alternatives, including smoking lizard parts and dung as well as glue sniffing, petrol, sewage, and urine as inhalants.[28]

***Figure 3:** Number (in millions/thousands) of past-year drug users in Nigeria, 2017[1]*

Source: National Drug Survey Nigeria, 2018

CHAPTER TWO: PROBLEM STATEMENT, JUSTIFICATION, AND OBJECTIVES

2.1 Problem Statement

Drug abuse continues to be a significant risk behaviour among adolescents and youths, with severe implications on individual health, families, and society affecting physical, social, and mental wellbeing. Despite the known risk outcomes associated with drug misuse, youths continue to abuse drugs while exploring new thrills as they grow older. Growth through adolescence and early adulthood are very transformative, allowing various developmental changes in their mental capacity. Thus, at this stage, they are more vulnerable to drug use commencement.[17]

The current prevalence of drug abuse in Nigeria compared to the global estimate is almost tripled, making it a severe public health problem in the country now.[1] In the different geopolitical regions, cannabis, pharmaceutical opioids, and coughs are the topmost drugs used. Cannabis used primarily is cultivated in some parts of Nigeria, while many also underestimate the harmful nature of the drug.[29,30] This increases demand for its use by the populace, including the youths.

A nation made up of significant youths, especially unskilled and indulging in drug abuse, cannot be healthy and developed since they lose their potential for drug abuse.[31] The impact of drug abuse is complex and ranges from increased fatality such as suicides, road traffic accidents, violent crimes, rape, and poverty. More so, homes are fragmented, dreams shattered, and the probable workforce is lost or wasted as drug users fight to sustain the habits submerged in this subculture.[31] Thus, the society, youths themselves, their families, and the country at large become endangered.

Youths, the future of Nigeria, constantly promote this menace. This is especially when consumption begins very early in their lives. Those who start to abuse drugs before fifteen years of age regularly are at greater risk of developing addictions later with increased risk of chronic diseases such as cancer, human immunodeficiency virus, sexually transmitted diseases, diabetes, liver problems, and death.[32] Many young people have not used cannabis but inject some other drugs. Thus, depicting cannabis is not the only gateway to illegal drugs.[33] Regular use of illegal drugs by youths could lead to drug use disorders related to mental health disorders. There is also an association between drug abuse and socioeconomic loss, poor academic performance, loss of jobs, and poverty.[34]

The economic loss in terms of low productivity and the creation of an unfavourable environment for investors caused by drug abuse, in turn, affects the Gross National Income (GNI) of the country. It has increasingly led to other criminal activities within the communities and schools, including rape, burglary, robbery, drug trafficking, vandalization of people's assets, and an increase in the number of needy.[31] This further makes the government spend more in maintaining convicts while the social welfare system might not be able to cater to the growing number of the impoverished.

Many drug abuse problems are due to a mirage of factors, including individual and environmental factors. About 54% of youths are unemployed, while 21% of fifteen to twenty-four year olds have never attended school.[35] With increased unemployment in Nigeria, many youths from poor homes are jobless and idle. They lack opportunities for training and development of personal and social skills required for the work environment.[36] These youths become frustrated and tend towards the abuse of drugs to express their distress. They also lack adequate and correct information on drug

use with easy accessibility and availability of drugs in uncontrolled Nigerian markets coupled with increased advertising glamour about unregulated drugs on social media.[36] Youths in their curiosity tend to apply the advertised information to their lives while sharing ideas with their friends. Most parents do not invest time in communicating with their children, which affects the strength of parental guidance on drug use matters. Most youths rely on their buddies for information on drugs. This initializes drug use and further completes the circle of falling into abuse once not handled. Many youths are confronted with these challenging circumstances and often look for escape resorting to drug use and misuse.

Although the West African continent is known for significant illicit drug trades or trafficking, Nigeria leads with the highest drug trade and use in Africa.[37,38] It has also become the leading producer of methamphetamines in the region. Nigeria is committed to preventing new drug use and reducing drug abuse. However, generally, the public health dimension to drug control has been based on science and not evidence-based, which has further created diplomacy and conflict in drug control efforts.[39] For Nigeria to attain Target 3.5 of the third Sustainable Development Goal by 2030 –– ‘‘to strengthen prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol’’––, a collaborative effort is needed to curb the menace; otherwise reaching the goal will be difficult.[40] This research seeks to review and analyse the respective interventions, including governmental and interventions at other levels to reduce drug abuse among youths in Nigeria.

2.2 Justification

Nigeria adopted various measures to embrace the public health dimension in approaching the reduction of drug abuse. However, it is still home to a greater number of drug users, mostly youths. Current modeling trends for drug demand and use in Africa done indicate the number of persons using illegal drugs for non-medical uses will increase by over 14 million by 2050.[41] West Africa is central to this increase, with Nigeria as the trafficking hub. Also, there are reports on the prevalence and risk factors for drug abuse among youths across some regions. However, there is paucity of literature on why there is an increasing prevalence of drug abuse among youths or exploring available interventions for reducing drug abuse.[1,18,23,42-45] Researchers focus on treatment instead of evidence-based prevention practices. The current focus on the effect rather than the cause is counterproductive. This affects the efficient allocation of resources to tackle the cause of the problem. These evidence-based practices will prevent the onset and continuation of drug abuse while building effective prevention services in communities. Hence, critical examination of the policies, laws, and other interventions to reduce drug abuse in Nigeria is required to inform effective drug abuse control. Thus, this thesis sought to review and analyse the interventions at both national and other levels to reduce drug abuse among youths. The findings of this study will inform a better understanding of the problem of drug abuse among the young population in Nigeria and ways to improve drug abuse control.

2.3 Study Questions

1) What are the interventions available and working at the national policy and law level, and how do they affect drug abuse from a public health point of view?
2) What community, organizational, family, social networks, and individual interventions are available in Nigeria?

3) What are the challenges to the implementation of these interventions at both levels?

2.4 Objectives of the study

2.4.1 General Objective

To critically review and examine different interventions (laws, policies, and other interventions) to reduce drug abuse in Nigeria and further recommend measures for control of drug abuse in Nigeria.

2.4.2 Specific Objectives

1) To examine the available interventions and working at the national policy and law level and how they affect drug abuse.
2) To differentiate interventions available and working at the other (Community/School, Organizational/family, and individual) levels
3) To analyse the challenges encountered in the implementation of the interventions across all levels
4) To give recommendations using the adapted analytical framework (see fig 4) and based on the findings for further control of drug abuse to the Nigerian government.

2.5 Methodology

This section describes the research methodology used for the study.

2.5.1 Study Design

It is primarily a literature review complemented by key informant interviews data to illustrate literature findings. The literature review focused on Nigeria and its geopolitical diversity to compare and analyze results across the regions. Individual peer-reviewed articles relevant to the topic were explored, while snowballing technique was equally used to review reference lists important for use. Grey literature and reports on country-specific publications were also employed using Boolean operators. This combined approach of literature review and semi-structured interviews looks pretty suitable. It allowed the researcher to critically examine the identified problem and interventions for reducing drug abuse among youths across different levels in Nigeria.

2.5.2. Inclusion and Exclusion Criteria

Only articles relevant to the research topic were explored and used for the study based on the specific objectives for the study. Also, only key informants who gave their written informed consent to participate in the study were interviewed, and responses were included in the study. Participants who did not consent to participate were excluded from the study while articles before 2002 were excluded as they were too old to inform the research.

2.5.3 Data Collection/Article Retrieval

The search engine Google scholar and databases such as PubMed, Science direct, and the VU Library were used to access peer-reviewed literature relevant to the topic. Google search engine, government websites, World Health Organization (WHO), UNODC, West African Epidemiological Network on Drug Use (WENDU), and Nigerian Epidemiological Network on Drug Use (NENDU) were also used to access grey literature. Based on the keywords, about one hundred and twenty articles were identified initially. Seventy-three articles published within nineteen years and written in English were included in the research after a full review and based

on the specific objectives (See the literature search table 1). Some articles were excluded since they were out of the research context.

Key words:

The key words used were Drug laws AND "Nigeria" OR Nigeria OR Drug laws AND drug abuse, Drug laws AND (drug abuse*), Drug policies AND "Nigeria", Nigeria AND drug surveillance, Drug abuse AND treatment, School* AND adolescent OR student, Community-based AND prevention OR Nigeria AND drug abuse, Drug abuse AND Organizational Interventions OR Nigeria, Drug abuse OR Social Networks AND Nigeria, Drug abuse OR Surveillance Network AND Nigeria, Drug interventions AND challenges, School-based* AND challenges OR Nigeria, Community-based AND drug abuse OR Challenges, Drug abuse, AND Organizational Interventions OR Challenges,
Drug abuse OR Social Networks AND Nigeria, Drug surveillance network AND challenges. Words were joined using Boolean operators such as OR, AND to search for literature.

Table 1: Literature search strategy

S/N	OBJECTIVES	MESH TERMS & COMBINATIONS
1.	To examine the interventions that are available and working at the national level and how they affect drug abuse	Drug laws AND ("Nigeria" OR "Nigeria" OR Drug laws AND (drug abuse*) Drug policies AND "Nigeria" Nigeria AND drug surveillance
2.	To differentiate interventions available and working at the other (Community, organizational/school/family/and individual) levels	Drug abuse AND treatment School* AND adolescent OR student Community-based AND prevention OR Nigeria AND drug abuse Drug abuse AND Organizational Interventions OR Nigeria Drug abuse OR Social Networks AND Nigeria Drug abuse OR Surveillance Network AND Nigeria
3.	To explain the challenges encountered in implementation of the interventions across all levels	Drug interventions AND challenges School based* AND challenges OR Nigeria Community-based AND drug abuse OR Challenges Drug abuse AND Organizational Interventions OR Challenges Drug abuse OR Social Networks AND Nigeria Drug surveillance network AND challenges

2.5.4 Semi-structured Interview

Key informant interviews were conducted to get a full view of the research topic based on the participants' experiences and for triangulation of findings. A total of nine key informants were interviewed, including Consultant Psychiatrists, psychologists, global and national trainers on drug control, UNODC officials in Nigeria, officials of government drug enforcement and regulatory agencies, and non-governmental organizations involved in drug-related issues in Nigeria. This was to ensure the study is representational. They were about seven men and two women, of which the two women were from the lower levels of the country while one man was from the national level. The remaining six men are from different states in Nigeria. The interviews with individual

respondents were conducted via telephone to explore their perspectives and experiences on the research topic. Data were collected using in-depth interviews with these key informants facilitated by a topic guide (see annex 2). The researcher developed the questions and the key issues discussed were:

1) The National level laws, policies, and drug surveillance systems available and working to reduce drug abuse in Nigeria.
2) Interventions available and working at other levels
3) Challenges with interventions implementation at both levels (national and other levels)
4) Recommendations to reduce drug abuse

The interviews were conducted in English language and audio recorded with the consent of key informants. It also lasted for a maximum of 60 minutes. Probing questions were also asked depending on the flow of discussion about the research topic.

2.5.5 Data Analysis

The semi-structured interviews focused on using the ecological framework (see fig 4) to explore the study's specific objectives. Responses were manually transcribed verbatim on the same day and checked for accuracy while ensuring password protection. Thematic coding and analysis were undertaken on each of the transcripts. Coding was drawn on the combination of themes previously reflected in the interview guide and inductive codes generated through the intentness of the data. The initial coding was done by the researcher and was considerably refined into a result. A second coding was done to break the coded data into smaller frames. According to participants' descriptions, the codes were generated. Manual analysis was done and involved assigning codes to relevant parts of the transcripts. The researcher reflected on the coded data, refined, merged, and clarified coded meanings. The researcher did the analysis and drafting.

2.5.5.1 Analytical Framework

Different frameworks were identified. First, the national strategic framework for alcohol and drug services is a stepped assessment and review of varying community treatment of substance use problems and choice of appropriate interventions for continuity of care with subsequent follow-up.[46] Secondly, the drug and alcohol recovery outcomes framework looks at the factors influencing recovery from drug and alcohol abuse.[47]

Both frameworks focused only on treatment and treatment recovery. Therefore, they cannot effectively analyse the interventions holistically across other levels, including national, organizational, and individual, to reduce drug abuse. However, the Ecological framework was used for the critical analysis of the research focus. It was perfectly appropriate as it represents four levels of influence specific to youths' health behaviour. The outermost layer (orange-lettered part) focused on interventions at the national level (laws and policies; surveillance programmes), the three other layers (red, black, and yellow lettered parts) representing the community, organizational, school, family, and individual levels, focused on other interventions existing in Nigeria at these other levels.

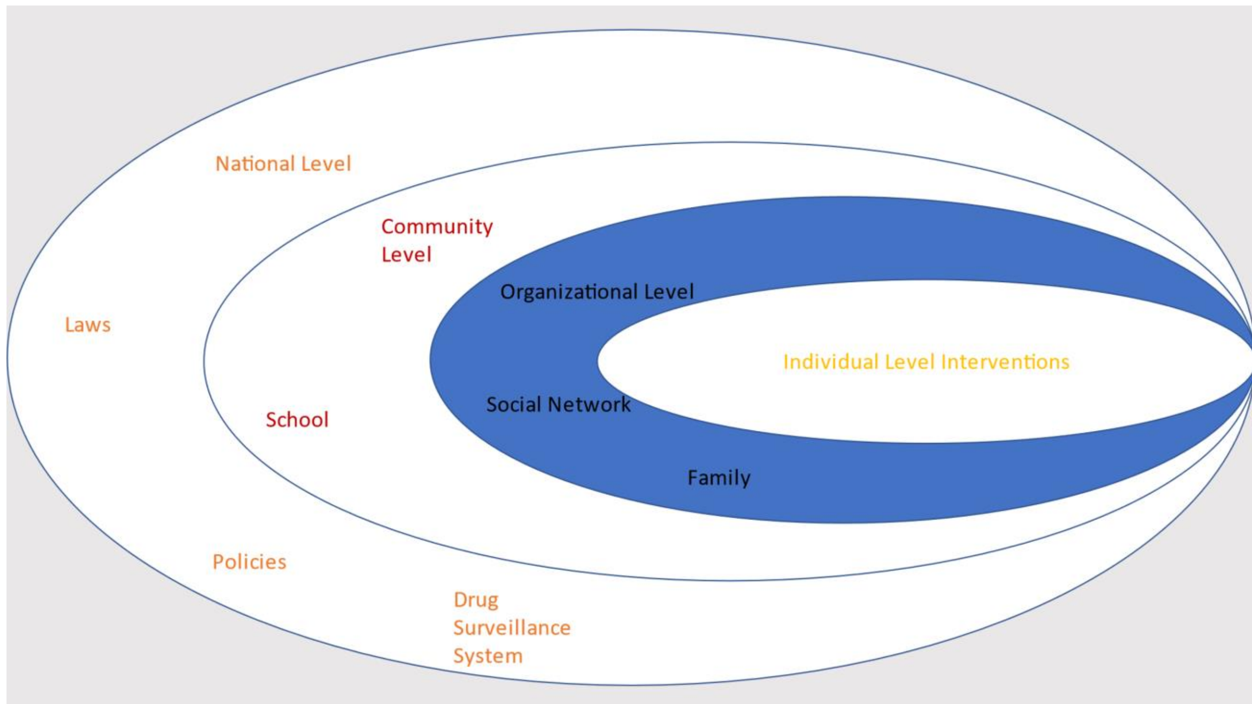


Figure 4: Ecological Framework by researcher

2.5.6 Ethical Considerations

Waiver of ethical clearance was obtained from the KIT research and ethics review board. Informed consent was also obtained from participants for the key informants' interview before the commencement of the interview. Subsequently, a certificate of consent was sent to them to participate in the research (see annex 1). Strict confidentiality was maintained as every information was derived, processed, stored, and password-protected, explaining the research purpose and interview conducted.

2.5.7 Limitations of the Study

The following are limitations of the study:

1) The study employed a literature review format and thus cannot assess drug users' perceptions (youths) on what exists across different levels quantitatively. Therefore, key informants were used to exploring further the research topic.
2) Studies on drug abuse and the research problem are porous across the regions, and thus some grey literature was explicitly used.
3) Self-reported data from the semi-structured interviews can be limited as it can rarely be independently verified.
4) There is potential for bias, such as memory bias, as the key informants may not remember experiences or events that occurred in the past.
5) The time available to explore the research problem and for proper analysis was constrained by the due date of the research assignment, which would have involved more key informants

CHAPTER THREE: STUDY FINDINGS/RESULTS

This section analyses the interventions for the reduction of drug abuse among youths in Nigeria. Interviews revealed interrelated themes for the study and aligned with the ecological framework and the study-specific objectives. The different layers of the framework were distinguished with coloured letters specific for each layer. For the national-level laws and policies (the outermost layer of the framework with orange notes), Community interventions (red lettered part), Organizational (black lettered part), and the Individual level (the yellow lettered part).

3.1 The Interventions to Reduce Drug Abuse in Nigeria

These include laws, policies, drug surveillance systems, community-based interventions including school-based interventions, organizational interventions including social networks, and individual interventions. They were analysed using the layers of the ecological framework.

3.1.1 Laws, Policies, and Drug Surveillance System Available

This theme reflects the first specific objective and uses the outermost (societal) layer of the framework for analysis to explore the different laws, policies guiding drug use, and the surveillance systems available at the national level in Nigeria.

During the colonial era till the country was birthed in 1914, there was limited information about drug policy in Nigeria. However, The Dangerous Drugs Ordinance of 1935 became the first recognizable law against drug abuse and trafficking. This very law lead at that time, the board of customs and excise and the Nigerian Police under the pioneer government to mitigate against issues of drug abuse and trafficking in the country.[37]

Afterward, in then-new independent Nigeria, the Indian Hemp (Cannabis) Decree of 1966 was propagated by the military government. Here, cannabis cultivation attracted a death penalty or 21 years' imprisonment, while drugs exportation was punishable by ten years' jail term.[44] Similarly, a stiff sentence of at least ten years' imprisonment was reserved for individuals found to smoke or possess cannabis. The Decree was amended in 1975, making the penal provisions less severe; thus, removing the death penalty for cannabis cultivation. However, the jail term for smoking cannabis got reduced to six months and with a fine.[48]

In 1984, the new government amended the Indian Hemp Decree of 1966, which reintroduced the death penalty. Also, according to Ogege, under the newly reversed law, individuals under 17 years of age were to be given 21 cane strokes, a fine of 200 naira if found smoking or possessing cannabis, and two years in reformatory.[49] The later part of the year 1984 birthed a special tribunal-Miscellaneous Offenses Decree abolishing the death penalty as the citizens made an outcry.[49] However, it incorporated life jail terms for importation, production, manufacturing, processing, and cultivation of heroin, cocaine, cannabis, Lysergic acid diethylamide, or other narcotic medications. Imprisonment of not more than twenty years was instituted if engaged in exportation, transportation, or trafficking of drugs. For the individuals who bought, sold, deal with, or are exposed to drug sales, a jail term of about fourteen years was given, while two years' imprisonment (not greater than ten years) was instituted for consuming or possessing drugs.[49]

The 1984 Miscellaneous Offenses Decree was amended in 1986 by another government substituting the death penalty with a life jail term. It also enacted a new and remarkable feature setting up a special tribunal for enforcing drug laws that allowed forfeited passports and assets.[40] Drug trafficking became disturbing in 1989 with an increase in drug smuggling and distribution in and out of Nigeria and across other nations worldwide.[48] Thus, it gave rise to Decree 48 of 1989 and led to the establishment of the NDLEA. However, the decree is known as the most significant drug policy in Nigeria, as NDLEA set the mandate to tackle drug abuse and trafficking, ravaging the country's reputation.[44]

The Decree 48 of 1989 was further amended in 1990 as Decree No. 33, in 1992 as Decree No. 15, in 1995 as Decree NO. 3 and in 1999 as Decree No. 62. Altogether, they formed the NDLEA Act of Parliament, CAP N30 Laws of the Federation of Nigeria (LFN) in 2004.[50] The 1995 Decree No. 3 was another giant stride as it gave NDLEA the authority of monitoring bank accounts of drug suspects. It placed limits on cash payments while mandating banks to report bank deposits above-set limitations.[48] In 1993, NAFDAC Act No. 15 (now CAP N. 1 L.F.N. 2004) was enacted, establishing NAFDAC with the mandate to regulate and control the import, export, manufacturing, distribution, advertisement, sale and food use, chemicals, medical devises, drugs.[1]

In Nigeria, the Inter-ministerial Committee on Drug Control (IMC) was formed in 1994, which produced the first (1999), second (2008-2011, extended to 2013), and third National Drug Control Master Plan (NDCMP 2015-2019). The plan serves as a national blueprint for four themes - drug law application, drug need reduction, access and control of drugs and mood-altering substances for therapeutic function, and collaboration in response to drugs and related crime.[51]

A fourth NDCMP plan was recently launched, extending for five years (NDCMP 2021-2025) and focusing on drugs from an enforcement perspective and as public health and educational issue.[52] It is understood with the present circumstance and the need to control drug supply and strong governance; thus, they form part of the four cardinal pillars for its achievement. This could be an advancement in efforts for a well-balanced, human rights-focused, and gender-responsive mitigation against the drug situation in Nigeria.

Most of the interviewed participants asserted that laws and policies have not changed in the past few years except for the NDCMP. This implies that only the NDCMP has been consistently revised in recent times compared to the enforcement law. They mentioned the laws were not far from criminalizing drug use for possession up to fifteen years' imprisonment but not up to twenty-five years. However, one of the respondents said the following:

''In practice NDLEA have decriminalized substance use, meaning people have not been taken to court for prosecution any longer and this has been the case for the past ten years. What is in the law is different from what is being practised.''

NDLEA oversee and implement drug laws in Nigeria; however, other entities are also involved in drug control in Nigeria, including the NAFDAC, Federal Ministry of Health (FMOH), National Agency for Control of AIDS (NACA), Nigerian Police Force (NPF), Nigerian Customs Service

(NCS), Economic and Financial Crimes Commission (EFCC), Nigerian Prisons Service (NPS), and Nigerian Immigration Service (NIS).[1]

Lately, following increased drug use among youths in Nigeria, the Presidential Advisory Committee was constituted by the current government in 2018 to eradicate drug abuse in the country.[53] Although charged with the responsibility of proffering sustainable solutions for control of drug abuse, their capacity to execute this is questionable. A director at NAFDAC clearly stated:

‘‘The inter-ministerial committee is only advisory. Part of the recommendation was, there should be a drug control commission that will coordinate all the lead agencies. This will be more effective due to powers vested by role than having an advisory committee.’’

Drug markets have existed in Nigeria; thus, the pharmaceutical council of Nigeria, apart from regulating pharmaceutical practice, also holds drug markets and the distribution of drugs in the country.[54] They also prohibit drug handling by unlicensed persons, especially prescription and controlled only drugs. The efficiency in action and translation of activities to Nigerian citizens' knowledge is key to an effective control; however, it is unclear whether this happens. Another respondent, a psychiatrist, affirmed:

‘‘In 2018, Nigeria restricted codeine containing drugs, but it wasn't banned but the citizens had misconceptions. Even with their activities, people are not well oriented with them."

While the laws and revised policies are in place, Nigeria made provision for a Mental Health Bill, which has just passed the second reading in 2019.[55] It seeks for the establishment of an agency- National Commission for Mental and Substance Abuse Services and protection of persons with mental health needs. There needs to be a linkage in managing mental health and drug issues since most drug-related problems are handled in mental health facilities for maximum protection of patients. The secretary of the Nigerian Society for Addiction Medicine and the head UNODC model treatment centre in the South-South geopolitical zone of Nigeria stated:

‘‘Because mental health and drug issues are closely aligned, the role of the commission will be to set standards and guidelines. If you are not accredited as a treatment centre whether private or public, you should not offer drug treatment services because the consumer, they don't really know what constitutes proper drug treatment services. They need to know their rights and that they can access treatment.”

Another participant mentioned Nigeria had made efforts to have a medication-assisted treatment opioid substitution therapy for more effective management of patients with drug issues.

‘‘We submitted the zero draft for medication assisted treatment opioid substitution therapy to Ministry of Health, hopefully December it would be rolled out.”

The FMOH acknowledges drug use disorders as a public health problem and thus, created a drug demand reduction unit in its department of hospital services. They oversee and coordinate drug treatment service delivery following the NHA. They also coordinate NENDU alongside NDLEA. Concerning drug distribution, the decentralization of narcotics was necessary to limit logistics issues. This corresponds to what a NAFDAC official stated:

> ***''Oshodi houses all narcotics before, decentralization was done, a tertiary institution was approved per zone in addition to the central medical store in Oshodi, example in South-south it is in the Federal Medical Centre Yenagoa, Northeast is in Gombe, whether you are coming from Taraba, you can access there.''***

At the state level, the need for their involvement in drug control pursuit dates to 1994, but there seems to be a lack of commitment towards drug control. UNODC supports awareness and sensitization programmes that occur through the European funded project; however, only about seven states out of thirty-six states have functional state drug abuse control committees.[1]

NDLEA established seven directorates and commands in each state; thus; drug counselling services are offered to individuals through these commands in respective states across the country.[1] Additionally, ten Special Area Commands (SACs) are located at Nigeria's international airports, seaports, and land borders to ensure drug control, especially it's supply. An informant said:

> ***''In terms of supply reduction, in the entire life of NDLEA, we have not had the amount and mass of seizure we have now in the past years, and it has been possible with the efforts of the current NDLEA chairman General Buba Marwa. They make arrests and seizures almost daily. There is a greater impetus in supply reduction war now.''***

Although some of the community-based campaigns in Nigeria are held on world drug day to convey drug use prevention and control messages to the populace, the NDLEA created an initiative, War Against Drugs Abuse (WADA), on 26th June 2021, to sensitize the Nigerian population. It is a civic call for everyone to take active roles in drug abuse control.[56] However, sensitization of citizens on health issues, including drug use, has been the norm mostly on specific world days related to the health topic. But, after the campaigns, it ends there. There has not been any assessment of the effectiveness of these campaigns on impacting the populace and reducing drug abuse. One of the respondents stated:

> ***''The campaigns are not monitored, saying what works here is difficult. We should stop seeing it as a war, it makes us feel we are at war, but at war with what?''***

Many countries assert to be successful in regulating illegal drugs demand, but abuse is still growing globally and in developing countries.[57] It reflects the inadequacy in the knowledge of illegal drug use in understanding the trends. Following the adoption of the UN political statement to reduce drug abuse, improve global data on drug consumption, and thus harmonize data collection methods, countries were mandated to have effective drug information systems.[57] Thus, the African

Union Commission (AUC), with support from the US Bureau of International Narcotics and Law Enforcement Affairs (INL), created Drug Epidemiology Programme in 2014.[58]

This gave birth to WENDU and National Epidemiology Drug Networks (in different nationalities of West Africa) as data sharing and monitoring networks on drug use. WENDU is a sentinel surveillance system with focal points in the respective countries, including Nigeria, to provide the database and information on the drug situation in the Economic Community of West African States (ECOWAS).

The Nigerian Epidemiological Network on Drug Use started February 2015 with eleven treatment facilities as model centres (see fig 6) and was based on the South African treatment indicator.[59] These treatment centres included three teaching hospitals, six neuropsychiatric hospitals, one national hospital, a private centre, and seven NDLEA commands used to collect information on drug issues.[1] It was revised in 2016, adapting the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) treatment demand protocol in line with international best practices. One of the respondents, who is the president of International Society for Substance Use Professionals (ISSUP), Nigeria chapter and who incidentally has been part of both WENDU and NENDU, a former staff of NDLEA, affirmed:

> ***''NENDU was part of the initiative of UNODC and European funded project. The drug treatment hospital-based centres were like a treatment hub for drug issues. The data was collected from these centres to have a good data for drug treatment.''***

NENDU, which serves as a standard drug treatment data tool, provides data monthly for the past five years on drug use. The NENDU report of 2017 reported one thousand eight hundred and five treatment episodes while about one thousand and forty-four and nine hundred and ninety treatment episodes were provided in 2015 and 2016, respectively. Although NENDU collates monthly reports through the model centres, the efficiency of its use in informing better drug treatment measures in Nigeria is unknown. One of the respondents said:

> ***''I know there is a monthly data collection of data with respect to NENDU but producing a yearly report is a different thing all together.''***

3.1.2 Community Based Programs

This section represents the red-lettered part of the framework.

Communities are saddled with drug control responsibilities, and thus, focused capacity development in communities towards prevention is pivotal for individuals to make informed choices. This creates a unique role for everyone in the community, thus conferring shared leadership for everyone involved in promoting public health and safety.[39] Community coalitions, including strategic stakeholders such as law enforcement, health agencies, parent groups, and businesses, combine efforts to address specific problems in the community through prevention programs that would not be feasible using one agency.

In Nigeria, most community-based interventions are carried out by the funded NGOs to stimulate efforts towards effective drug control through prevention and treatment programs.[60,61] They also launch campaigns to discourage individuals from illicit drug use. Almost all the informants strongly stressed that interventions carried out in the communities are more preventive in design. One of them asserted thus:

> ***''The interventions basically, it is more of prevention efforts and have to do almost exclusively with NGOs. They really work at the communities, and they try to galvanize community support''.*** Another stated ***''the truth is you cannot talk about community-based drug control response without talking about the work of NGOs.''***

Many of the NGOs in Nigeria have carried out many intervention programs in the pursuit of drug control. An NGO, Youth Rise Nigeria, advocacy and service delivery organization at the forefront of drug policy reform in Nigeria, offers evidence-based response to drug use while adopting public health and human rights strategies to drug control. Thus, they have a community-based drug in centre in Nyanya, Abuja.[62] The initiative facilitates community-level drug treatment services for young women and girls in at risk communities having little access to medical care. One respondent stated:

> ***''The essence of the drug-in centres is for fit young girls and women who use drugs to access counsellors, have games and sports while being offered a meal per day. They equally build their capacity on financial management, entrepreneurship as a one shop model. This creates a sense of community among these population and has been recognized by the African Union as a good model.''***

The Food and Genes Initiative, another NGO, with its 365 DAYS drug abuse sensitising campaign, partnered with Slum and Rural Health Initiative (SHRIN) to create health interventions in rural communities.[63] While 365 DAYS concentrated on counselling inhabitants on the negative effects of drug abuse, SRHIN carried out medical check-ups. About one hundred youths and seventy-five community members were reached out to in Owode LGA of Lagos state. Street conferences were also carried out as an awareness program targeting spectacular places where these youths gather to use substances. This was carried out in two states, namely Oyo and Ondo states.[63] They also, in partnership with other organizations in 2018, started 365 days of Drug Abuse Youth Sensitization, especially on tobacco and alcohol. This involves social media sensitization and offline campaigns targeting youths and teenagers in Nigeria.

Faith-based organizations are prominent in Nigerian communities and thus play a key role in diverse drug control activities, including prevention of and treatment of individuals with substance use problems. A respondent gave a clear description of individual-based treatment in communities, asserting:

> ***''In terms of treatment, I think we should also mention the role of faith-based organizations at the community level for example we have Christ against drug ministry, freedom foundation and a whole others scattered across the country that provides residential treatment services for people who use drugs, and they try to pair with some rehabilitation effort in terms of skill acquisition.''***

According to the 2019 annual report of the Global Initiative on Substance Abuse (GISA), an NGO at the forefront of delivering evidence-based drug control interventions, the first comprehensive Universal Prevention Curriculum (UPC) was given in the country. This was implemented in collaboration with The Colombo Plan, Drug Advisory Programme (DAP), and the INL, USA.[64] The prevention intervention was offered in the form of training. It involved a national training of trainers, including experts from drug law enforcement and regulatory agencies, professors, teachers, representatives from education and youth development ministries, state drug control committees, faith-based organizations, Civil Society Organizations (CSOs), and the youths themselves. The place of awareness creation cannot be overruled if effective drug control will be achieved and maintained. One of the respondents proclaimed:

> ***‘‘Sensitization has been ongoing, a lot of persons have been trained-national assembly, judges, teachers, NDLEA staff, police for them to understand drug use issues and implement policies that have been put in place. For the school-based system, hundreds of teachers have been trained that is the unplugged. Some of us have been involved like in the life skills program and have also been used to train people within the juvenile prison system to deal with issue of prevention.’’***

GISA, an NGO serving as the focal point for UPC for substance use disorders in Nigeria, started training people in January 2019 and has taught about four hundred practitioners on delivering evidence-based interventions.[64] It included twelve private secondary schools and six public schools in Lagos state. The report on the outcome has been approved for publication in one of the journals, one of the respondents stated. The second batch of UPC was conducted a month after the first batch of training in Lagos, Nigeria, on evidence-based substance abuse prevention in schools.[65] Sixteen-thousand and seventy-two persons were trained, involving vice-principals, teachers, counsellors are drawn from eighteen schools and students.

3.1.2.1 School-Based Programs

In Nigeria, the Unplugged Program (see fig 5), an evidence-based school drug prevention program although a community-based program, was offered by the government with support from UNODC and EU. It was implemented across the six geopolitical zones, and the FCT is targeting children aged 10-14 years and was delivered by trained teachers at the schools using ‘‘A Teachers Handbook, Students Workbook, and playing cards.’’ Within the package are 12 lessons to prevent tobacco, alcohol, and other drugs among these children based on a social influence approach.[66] The program serves as a sensitization mechanism for drug prevention, treatment, and care for school children.

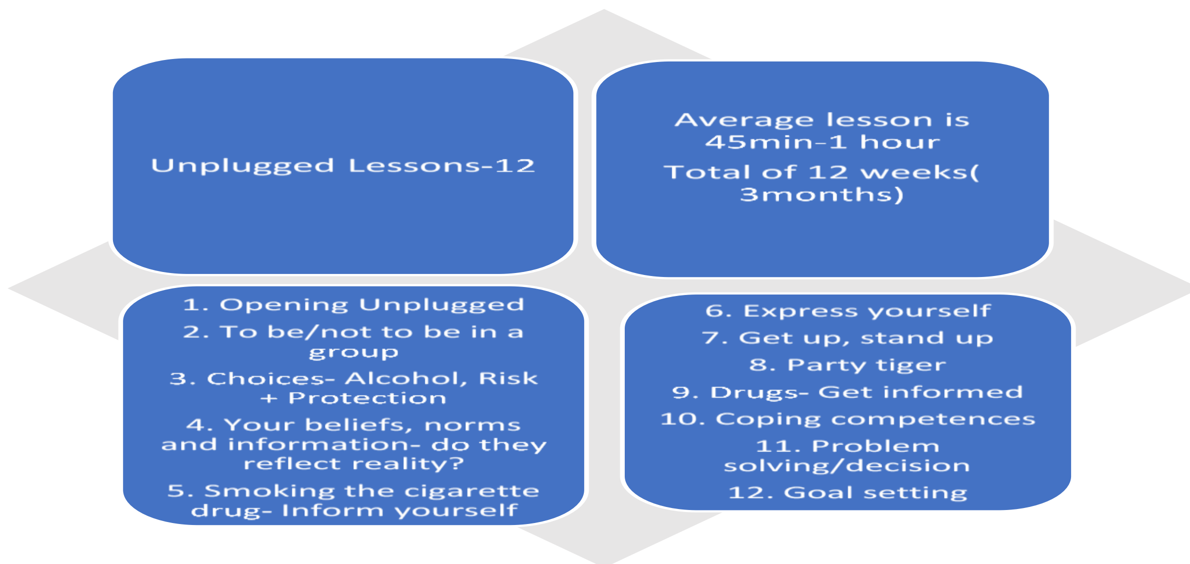


Figure 5: Unplugged Prevention Program, Nigeria

Popularly, the 'Unplugged program' is one of the significant breakthroughs so far in Nigeria.[66,67] School-based interventions have also been effective in other countries (see fig 7) for cannabis use, alcohol abuse, and cigarette smoking.[68] In Nigeria, the school-based program was proven to be effective. It thus was rolled out in all Federal government secondary schools, with many states increasing their interest in its incorporation in their respective states.[67] However, only Kebbi state has adapted the program in about sixty-nine schools within the state. Many respondents interviewed shared the same views on the school-based program 'Unplugged'. They accorded so many positive responses on its effectiveness through a randomized control trial (see fig 8), which resulted in the subsequent scale-up of the program across the country after its first pilot in some states. A national UNODC officer clearly stated:

''There was a randomized control trial to see if the program was effective in preventing drug use and it showed it was effective in preventing alcohol, cannabis and cigarette use among youths.''

Nigerian training and adaptation

HO GENT

Background

Unplugged is an evidence-base school intervention of 12 lessons for students 12-14 year old. UNODC started an EU-financed implementation project in Nigeria including adaptation, a RCT effectiveness study and training of trainers.

UNODC Nigeria installed

a **coordination group** with **FMOE** Federal Ministry of Education, **NDLEA** National Drug Law Enforcement Agency, **NAFDAC** National Agency for Food and Drug Administration and Control. A **project team** with **coordinating** officers, **an adaptation** expert in text editing, a research expert in **monitoring and evaluation**, a **master trainer**. Consultants were hired from **EU-Dap** (Torino University and University College Ghent) for the study, adaptation and the Training of Trainers (TOT).

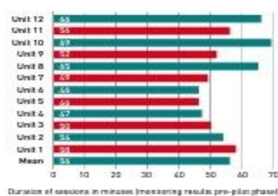
Unplugged works through three groups of **mediators** to reduce probability of excessive drinking, of regular smoking or of cannabis initiation.

30 countries

Unplugged has been tested °2004-2006 in Greece, Sweden, Germany, Italy, Belgium, Spain and Austria. Since then it has been implemented in the Czech Republic, Romania, Poland, Cyprus, France, Slovenia, Lithuania, Croatia, Russia, Kyrgyzstan, Slovakia, India, Morocco, Egypt, Jordan, Kuwait, Lebanon, United Arab Emirates, Brazil, Nigeria, Pakistan, United Kingdom, Ivory Coast, Peru.
Multiple studies have been published °2002-2018 on effectiveness, universality, gender differences, implementation factors, booster sessions, mediating factors, SES influence, ...

Unplugged in Nigeria 2015-2018

Pre-pilot phase 2015



- Training of teachers from schools in 6 different geo-political zones
- Monitoring delivery, teacher and pupil satisfaction
- Training of Trainers: identification of Nigerian potential trainers and TOT-meetings for first candidates.
- Adaptation of Unplugged pupil books, information cards and teacher handbook based on monitoring, school visits and expert opinion. Quality control of proposed adaptations with fidelity check on content and method.

Study phase with 32 schools in six zones including two large cities 2015-2016

- 16 intervention and 16 control schools, 96 classes, 4087 pupils
- Training of Intervention group teachers delivered by EU-Dap Master trainers co-training with Nigeria candidate trainers.

Post-study phase: training of control group teachers
Training Of Trainers TOT three phase model resulting in 7 certified Nigeria trainers: each trainer passes three phases with observation, 50% delivery and approximately 100% delivery of a training to 24 teachers. Master Trainer gives assignment, support and coaching, briefing and debriefing of activities and extensive personal reporting.

Roll out to the geo-political zones with 7 Nigerian trainers certified to train teachers including one Master Trainer certified to train trainers.

Adaptations of materials

Surface adaptations: food, places, names, illustrations. No back-translation, only a description. Replace "He was walking his dog" with "He saw a dog and ran away".

Deep adaptations: submitted for debate and approval.

1. Mention "hard drugs" because "drugs" also relates to medication. Changed to mentioning medication drugs can also be addictive.
2. Remove situation in quiz cards referring to "a girl is doubting if she would take a drink or not". Clarified that situations sometimes refer to a later age.
3. Remove situations where girls meet boys, which is culturally not acceptable. Remained boy-girl encounter in role-plays because they contribute to share complementary coping strategies, but replaced reference to dating by homework.

Adaptation of training

1. Difference in some mediating factors shown by the effectiveness studies, for example:
   - increased refusal skills significant for Europe but not for Nigeria
   - increase of negative beliefs significant for Nigeria but not for Europe
   - decrease of positive attitude significant for Europe but not for Nigeria
2. Modus vivendi for directive teaching style and using the pupil group as a resource
3. Important impact of another rhythm in lunch and tea breaks
4. Introduce Nigeria innovations shown in process evaluation: co-teaching in classes # 150 pupils pupils cascading with pupil books during break and lunch time

The effectiveness of the "Unplugged" program in Nigeria: adaptation, Training of Trainers and implementation. Peer van der Kreeft, Federica Vigna-Taglianti, Marta Alesina, Harsheth Virk, Ljiljana Damjanović, Emina Mehanović, Juliet Pwajok, Ibanga Akanidomo, Glen Prichard and Annemie Coone

Unplugged has been developed through three subsequent projects 2002-2011 with financial support of the European Union (Public Health and Justice). The Nigeria Unplugged implementation is part of "Response to Drugs and Related Organized Crime in Nigeria", a large-scale project funded by the European Union and implemented by UNODC (FEC/2012/306-744) (NGAV16).

HO GENT

Figure 6: ''Unplugged' 'Nigerian training and adaptation[69]

Source: https://123dok.org/document/lzgj52-effectiveness-unplugged-program-nigeria-adaptations-training-trainers-implementation.html

A cluster randomized controlled trial to evaluate the effectiveness of the "Unplugged" program in Nigeria: sample size and study design

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Unplugged is a Social Influence school-based curriculum developed and tested in the European Drug Addiction Prevention trial. It was shown to be effective in reducing cigarette smoking, drunkenness episodes and cannabis use among 12-14 years old adolescents. It has been largely adopted by schools of several countries in the world.

Methods

In the framework of a collaboration among the *Nigeria Office of UNODC*, the *Federal Ministry of Education*, the *National Drug Law Enforcement Agency* and the *National Agency for Food and Drug Administration*, a large scale project was funded by the European Union (project FED/2012/306-744) to promote healthy lifestyles in schools, families and communities in Nigeria. Unplugged was chosen as intervention to be implemented and evaluated in the school setting. The evaluation will follow a cluster RCT design. Assuming alpha 0.05 (two-sided), power 0.80, prevalence in the control arm 14.6% and in the intervention arm 10.2%, 45 pupils per class, ICC 0.025, the estimated sample size is 1943 per group (overall 3886), corresponding to 14 schools in the intervention and 14 in the control arm.

A pilot phase was conducted to pilot the program and the study instruments in 5 schools in Kwali (Abuja), Kaduna, Enugu, Ikot Ekpene, Yaba (Lagos) in Spring 2015.

Results

The Federal Ministry of Education provided a list of 60 federal schools based in the 7 Zones of the country. Thirty-two schools were randomized, 16 to the intervention arm and 16 to the control one. The randomization was performed at the central level, in OED Institute in Torino, and was stratified by zone taking into account the population size. Three classes per school will participate in the study. Pupils will be administered a baseline survey between November and December 2015, and a post-test survey between May and June 2016.

RANDOMIZATION TO INTERVENTION AND CONTROL ARMS

Zone	State	City	NAME OF COLLEGE	ALLOCATION
North Central	Benue	Makurdi	FGC, VANDEIKYA	CONTROL
	Kwara	Ilorin	FGC, ILORIN	INTERVENTION
	Nasarawa	Lafia	FSTC DOMA	INTERVENTION
	Niger	Minna	FGC, MINNA	CONTROL
North Central FCT	FCT	Abuja	FGBC, GARKI	CONTROL
	FCT	Abuja	FGC, RUBOCHI	INTERVENTION
North East	Borno	Maiduguri	FGC, MAIDUGURI	CONTROL
	Taraba	Jalingo	FSTC JALINGO	INTERVENTION
	Gombe	Gombe	FGC, BILLIRI	CONTROL
	Taraba	Jalingo	FGC, WUKARI	INTERVENTION
North West	Katsina	Katsina	FSTC, DAYI	CONTROL
	Kebbi	Birnin Kebbi	FSTC, ZURU	INTERVENTION
	Kebbi	Birnin Kebbi	FGC, BIRNIN-YAURI	CONTROL
	Sokoto	Sokoto	FSC, SOKOTO	INTERVENTION
	Zamfara	Gusau	FGC, ANKA	INTERVENTION
	Zamfara	Gusau	FGC DAURA	CONTROL
South East	Anambra	Awka	FSTC, AWKA	INTERVENTION
	Anambra	Awka	FGC, NISE	CONTROL
	Ebnoyi	Abakaliki	FGC, OKPOSI	INTERVENTION
	Imo	Owerri	FGC, OKIGWE	CONTROL
South South	Cross River	Calabar	FGC, IKOM	CONTROL
	Cross River	Calabar	FSC, OGOJA	INTERVENTION
	Edo	Benin	FSTC, UROMI	INTERVENTION
	Rivers	Portharcourt	FSTC, AHOADA	CONTROL
South West	Ogun	Abeokuta	FGC, ODOGBOLU	CONTROL
	Ogun	Abeokuta	FSTC, IJEBU-IMUSHIN	CONTROL
	Ondo	Akure	FGC, IDOANI	INTERVENTION
	Ondo	Akure	FSTC, IKARE AKOKO	CONTROL
	Osun	Oshogbo	FSTC, ILESA	INTERVENTION
	Oyo	Ibadan	FGC, IKIRUN	INTERVENTION
South West Lagos	Lagos	Ikeja	KING'S COLLEGE	CONTROL
	Lagos	Ikeja	FGC, IJANIKIN	INTERVENTION

Conclusions

This is the first experimental large scale study organized in Nigeria to evaluate the effectiveness of a school-based prevention program. Many cultural, political, and geographical critical issues in the country can threat the conduction of the study. However, all the involved Institutions were very enthusiastic about the project and were very collaborative in the pilot phase. We expect these premises will assure good outcomes from the study in 2016.

Response to Drugs and Related Organized Crime in Nigeria

This project is funded by the European Union

Figure 7: A Cluster randomized controlled trial to evaluate the effectiveness of the Unplugged program in Nigeria[70]

Source: ***https://www.eudap.net/PDF/20110a_EUSPR_Nigeria%2520study%2520design_DEF.pdf***

3.1.3 Organizational Interventions

This includes the black-lettered part of the framework at the organizational level, including social networks and family interventions.

3.1.3.1 Social Networks

The UNODC engaged CSOs to support drug prevention in the country. They were formed to support community-based interventions on drug prevention, treatment, and care in Nigeria. Thus, they created a network of CSOs called Community Intervention Network on Drugs (CINDs) in 2016. It's made up of organizations that focus on prevention, treatment, harm reduction, and advocacy with one hundred and fifty registered organizations while receiving support from UNODC. Because of their presence and flexibility in communities and not being bound by political rigors, they can implement practical community-centered approaches to prevent drug abuse.

The majority of the CSOs are in three geopolitical zones, namely South-South, South-West, and North-Central.[1] Some other networks for drug users are existent across some states in Nigeria, and there are a few national networks. The West African Drug Policy Network (WADPN) organized a media round table with Youth Rise Nigeria.[71] They launched and flagged a drug policy recommendation and advocacy campaign called "WE ARE PEOPLE''. This encourages significant change in drug users' perception while also encouraging governments to adopt a health-centered approach rather than a sanctioned approach to drug abuse.

Also, the UNODC supported the establishment of a Drug Help Net, which is a network of physicians, psychotherapists, nurses, and counsellors by calling on phone individuals using drugs and their respective family members in need of the same aid.[72] This arose as a specific COVID-19 intervention. Over one thousand three hundred and seventy-five drug users and their families have benefitted from the network involving one hundred and twenty-nine professionals. Telephone call credit for the web is being provided for the professionals to enable proper follow-up of clients. The drug help net is an efficient means for harm reduction among people who use drugs.

Similarly, there is a UNICEF U-report, a free SMS social monitoring tool for community participation, designed to address issues faced by youths in Nigeria.[73] Questions are asked to discuss a topic, and afterward responses are polled. One respondent declared:

> ***''In the UNICEF poll, of about 80000 youths, what we found in that poll was that almost 50% of them said they were aware or knew someone that had a drug problem which points to a possible increase in drug use that is becoming more visible or obviously than more seen by people.''***

3.1.3.2 Family Programs

This section is under the organizational level (black-lettered part) of the framework. The importance of strengthening family programs cannot be over-emphasized since they play a central role in shaping the beliefs and behaviour of youths and will foster strong family bonds and encourage good parenting. They are the most productive way of stopping substance abuse among adolescents.[74] Thus, two years ago, Nigeria piloted the strengthening of the family program for adolescents 10-14 years old in seven federal government colleges with support from UNODC.[75]

The program was designed by the University of Iowa, United States but implemented under UNODC and is directed at parents and their children aged between ten and fourteen. It consists of a skills development curriculum for parents, adolescents and generally the family and divided into seven sessions using videos, workshop analysis, educational games, and other family activities.[76] The drug Help Net also serves as a platform for reaching out to and engaging families on drug-related issues. One of the respondents declared:

> ***''We had piloting within the EU project, strengthening family's program where you have the parent and the child, they come as a family basically. The first few sessions they do it separately where the children are in one group and the parents are in one group in the last few hours of the session, they come together to go through what they each learnt in each group and to harmonize it. This was piloted in seven schools, one in each geopolitical zone and in the FCT."***

In Nigeria, most family-based programs are also carried out by NGOs. They provide victims of drug abuse and their family members with emotional and material succour in terms of treatment.

3.1.4 Individual Interventions

This section reflects the interventions available at the individual level (the yellow-lettered part of the framework). The intervention programs are in the form of prevention, treatment, rehabilitation, detoxification, counselling services, and after-care to address risk factors of drug abuse.[77,78] The residential rehabilitation services provided are in terms of skills acquisition. The focus of the research is on prevention thus; prevention interventions will be analysed. Risk and protective factors such as laws and norms favorable to drug use, perceived drug availability, peer drug use, family history of antisocial behaviour, positive family bonds, a network of non-drug using peers affect an individual's risk to drug use. Life skills prevention program has tested in different randomized trials and found to be effective in targeting these risk factors and preventing tobacco, alcohol, cannabis and other psychoactive drugs.[79] This provides youths with the information and skills needed to develop the right attitudes and norms towards drug use while resisting peer and media pressure to use drugs. The life skills program consists of three major components covering three critical domains that promote drug use: drug resistance skills, personal self-management skills, and general social skills.

A study carried on psychosocial skills intervention for substance use among street children reported improvement in their knowledge of substance use with a significant reduction in tobacco use, solvents, ethanol but not stimulants.[80] UNODC has developed a life skills evidence-informed training programme to target individual risk factors using sports to achieve positive skills formation and thus promote the social development of youths.[81] This programme called Line Up Live Up (LULU) programme, has been piloted in eleven countries in the past two years and thus is relevant, effective, and sustainable. Currently, the program is yet to be implemented in Nigeria. A UNODC official in Nigeria stated:

''In Nigeria, it is targeting the street children, the Almajiris, out of school children and so forth because we have found that the number of drug use among that population is twice as high as that of the general population so having this program will help in terms of addressing drug use in that population.''

3.2 Challenges with Implementation of all the Interventions

Nigeria faces different challenges in the implementation of these interventions. Thes challenges were analysed using the ecological framework.

3.2.1 Challenges with the Implementation of Interventions at the Policy and Law Level

NDLEA being the core agency for drug control functions, operates under the ministry of justice; thus this structure and orientation limits their capabilities in professional tackling drug issues from a public health angle.[82] Much emphasis is laid on drug law enforcement or sanctioned approaches and supply reduction. A key informant championing youth course in drug abuse reduction also affirmed:

''Law is the fundamental barrier to an effective drug control in Nigeria. It criminalizes drug use and thus affects demand creation. Until we review the Nigerian law and ensure it does not penalize drug use, we will be building castles in the air.''

Although many establishments are involved in drug control in Nigeria, it's challenging to synchronize strategies, champion courses, and deliver effective outcomes. Although NDLEA has the enforcement aspect of drug control, NAFDAC, on the other hand, is charged with just drug regulation activities while different ministries oversee both bodies. Maintaining synergy between these agencies in policy deliverables may be challenging if measures are not in place for collaborative policy delivery. Many key informants asserted there is a disconnection between the law and the NDCMP while the laws overlap. One of the respondents stated:

''There is no synergy of purpose, there is tug of war between agencies. Everyone tries to monopolize everything; thus, information is not shared in real time which could lead to leakages.''

Although the law criminalizes the use, possession, or supply of drugs, in practise, NDLEA decriminalizes offenders as many persons have not been prosecuted for years except recently in the aspect of supply reduction. Furthermore, there is a disconnection in both legislative drug documents. The law stated sanctions for the prosecution of drug users or traffickers, thus criminalizing offenders, while the policy incorporated drug issues as a public health problem and affirms decriminalization of offenders. However, this disconnect is significant to drug control problems in Nigeria. A key informant asserted thus:

''There is a conflict between the Act and the provision of the NDCMP plan or policy document. The plan has decriminalized substance use but the law which is still being applied or the provision still criminalizes substance use.''

Funding public health activities have always been a challenge in low and middle-income countries of which Nigeria is not exempted. The government commitment to drug abuse issues is variably low, thus projects and programs are underfunded. In the past nine years, apart from salaries, most of the NDLEA activities are driven by European Union-funded projects which the UNODC is administering with support from other global donors.[39] So many of the participants in the interview did not overrule this fundamental part, stating it is very crucial to the implementation of almost if not all the interventions available in Nigeria. One of them said:

> ***‘‘Government willingness in terms of funding is a problem, you create a committee, but the committee is not funded, and they spend half of their lives looking for fund into execute the things they want to do. It goes beyond looking for funds for world drug use day because it is basically what happens. They just want uptakes than the strategy for what they want to do, and this replicates itself across all levels.’’***

In many markets in Nigeria, business owners who are not pharmacists and uninformed sell drugs while individuals go and buy them.[83] A respondent also stated:

> ***‘‘Open drug markets- Onitsha head bridge, Odumota, and Kano is the greatest challenge we have. We must do something to bring them together in one place in line with the national distribution guidelines.’’***

For a deliverable approach taken towards reducing drug abuse, having holistic data is very beneficial in understanding necessary steps for change. The NENDU only uses eleven model treatment centres as data collection and monitoring sites.[59] This is not representative of the whole federation. A lot of states do not have mental health facilities; how much more rehabilitation centres. Thus, data collated and reported is limited and cannot be generalized. It equally captures only the number of persons using drugs, drugs commonly used, and those who inject drugs. However, leaving out other outcome measures such as the number of mortalities, etc. A consultant psychiatrist working in one of the model centres stated:

> ***‘‘For now, NENDU scope of coverage is very small thus, most other places where treatment is taking place they are not monitored. Some critical information is not gathered for example drug-related morbidity, drug-related emergency room visit which is a critical kind of information we should have, psychiatric morbidity that is directly attributable to drug consumption, on drug-related mortality like drug-related suicide. In terms of economic cost of drug consumption, we are not gathering information too.’’***

3.2.2 Challenges with Implementation of Interventions at Community, Organizational and Individual Levels

This section analyses the challenges using the other layers of the framework.

Because individuals in communities and service providers lack adequate knowledge on drug use and abuse, they lack ownership in the race for effective drug control. There are no community-

drug control committees in existence.[1] Thus,, Nigerian policies are not clearly articulated to relay relevant information on drug use, its effects on health, and prevention to the public.[1] In this regard, the communities become overwhelmed. A respondent affirmed:

''There is high level of ignorance as far as drug issues are concerned in Nigeria, even the government policies in some cases are not directed with scientific evidence and that makes it even worse. Majority of the actors are not equipped on drug control issues so that is where for example there is over reliance on law enforcement activities and at the same time policies driven by impulse. This makes difficult policy formulation, delivering treatment interventions and so.''

The school-based program, although effective, uptake has been poor compared to the number of states and geopolitical zones available in Nigeria. More is needed. The strengthening families' program has been piloted in Nigeria, but there is paucity of data on its effectiveness in Nigeria.

With the current pandemic, so many unregulated sources of information are advertised and sold via the internet on markets.[37] People book drugs online and later transport them in parcels to the end-users through drug sellers. This poses a significant challenge as many drug users have easy access to unregulated and uninformed messages on drug use. This hampers the influential role of NGOs in giving evidence-based interventions to drug users in the community. A NAFDAC official mentioned:

''People bypass health facilities and go to stores plus individual medication. Most importantly, the television adverts are misguided, we have not built enough capacity to ensure officials monitoring the adverts understand the consequences.''

With Nigeria sharing boundaries with other West African countries that are drug traffickers and with porous borders, there is easy accessibility and affordability of substances. This has been reported to further compound the problem. A respondent stated:

''Over the years, it looks like the agencies for drug control have not been effective as they should be, there is issue of easy accessibility, easy affordability making it look like it is a norm.''

Funding is also a substantial limitation not just at the national level but at the other levels, including community, organizational, and individual. This is because there is a limited budget for health care financing in Nigeria and more, so drug-related issues are not prioritized. Also, NGOs are dependent on donor agencies for funding which, when not available, are limited in their capacity to carry out drug control efforts within communities and among families.

In mental health facilities, including faith-based owned residential facilities, drug counseling and prevention are carried out, but these facilities are limited for drug control activities. A UNODC report published seventeen years ago identified seventy-two centres, with the majority being

psychiatric facilities and not necessarily drug abuse treatment facilities.[84] Only about fourteen of them were suitable for capacity building, and with the distribution of these centres skewed to the South-West geopolitical region. A few years later, Onifade et al. surveyed treatment services in Nigeria and found that 48% of the centres were in the South-West geopolitical zone, with 58% being managed by NGOs.[85] Thus, the situation has not changed in the past years. With the large population size of Nigeria and the increasing prevalence of drug abuse among the population, the available centres however, cannot meet the needs of drug users in the country. A respondent asserted:

‘‘Very few states have mental health facilities much less drug treatment facilities. What happens NGOs try to work at the primary health care level with the aid of grant they receive but there is no systematic approach to transferring policy document development and practice. It does not exist now.’’

Also, these mental health facilities lack adequate personnel.[86] If there are a limited human resources for drug control activities across all levels, it will be challenging to foster positive changes in drug prevention. A respondent stated:

“A lot of people think it is a spiritual thing, a lot of sensitization and awareness is very key, but personnel are a major challenge.’’

The NHIS covers only a few percentages of the Nigerian population and, in its basic minimum package, does not cover health care costs for people who use drugs. Thus, many drug users access treatment incurring catastrophic expenses during treatment.[37,87] This limits the extent to which drug control can be achieved as the unemployment rate in Nigeria is equally a challenge. Only the rich can afford available drug treatment health services within the mental health services. Many people are thus denied their human right to partake in preventive, treatment, and rehabilitative activities for drug control at those facilities. Similarly, the NHIS of Ghana does not cover treatment for drug abuse; thus patients pay for drug treatment services.[88]

Drug treatment centres for counselling, preventive, and treatment measures are often associated with a stigma against drug users. This dramatically affects the accessibility of prevention interventions by individuals within communities. Ezigbo et al., in their study of challenges in the treatment of drug abuse, reported stigma to restrict people’s access to treatment, especially when unemployed, impoverished, or uneducated.[89] A psychiatrist said:

‘‘That is why I think some organizations like Faith based organizations because they are closer to the community, and they have to address problems in young people like this, we could come together because services are located majorly now in psychiatric facilities and there is stigma attached to it.’’

In summary, currently, in Nigeria, laws and policies exist for drug control activities with institutional bodies relevant for the implementation of these interventions but have been unfavourable. The NENDU works but is unrepresentative of the whole nation. On the other hand, at the community, organizational and individual levels, there are available interventions including community-based programs by NGOs, community intervention networks and other social networks, life skills programs, and piloted strengthening families' programs. Nevertheless, for the families' program, there is no evidence of the evaluation of the program on the effectiveness in Nigeria. Several factors hinder the implementation of the available interventions. Central to all levels is funding and lack of ownership by the Nigerian government in drug control activities. Other challenges such as limited funding, non-coherence between law and policy documents, asynergy between drug control agencies, easy accessibility to drugs, and open drug markets hinder drug control efforts.

These interventions, however, have been helpful to a reasonable extent in reducing drug abuse issues but with the diversity of the regions in the country, more still needs to be done. However, this has been worsened with the stigmatization of drug users. Combining all these challenges, people become ignorant of evidence-based drug information and interventions, thus limiting effective drug control.

3.3 Suggested Recommendations by Key informants

The semi-structured interviews had key informants answering the question on the topic guide (see annex 2) on what they recommend for the reduction of drug abuse among youths in Nigeria. They gave varying responses based on their experiences and capabilities in drug control in the country.

Key recommendations were made on the uncoordinated nature of the drug control agencies clamouring for an effective synergy. One respondent stated:

> ***"Synergy of agencies is needed. We must collectively solve this problem."***

Because drug abuse is a public health and social problem, everyone needs to be aware of evidence-based prevention strategies for effective drug control. Another respondent affirmed:

> ***"Most importantly, we must engage positively children, youths, families, schools, workplace, and communities. Because people think trafficking drugs usually target weak institutional links in the control chain. This will also require interagency collaboration to strengthen these links."***

Addressing drug abuse in Nigeria, even with all measures, will also be dependent on the human capacity available for drug control activities. A key informant asserted:

> ***"We need to build workforce and create a new cadre of workers that know what to do particularly at the middle and lower levels counselling staff because the current health workers are burdened."***

Youths are often challenged with the correct information, especially with the influx of drug information on the internet. Appropriate course of action is required in the respective institutions in the country to ensure drug abuse is offered as a subject. One of the respondents recommended:

''Substance use and prevention should be taught at every level in Nigeria.''

Without training on evidence-based preventive methods across all levels, relevant stakeholders would not be efficiently equipped for drug prevention activities. Another respondent affirmed:

''We need to continue the sensitization and advocacy for all key stakeholders because the more they understand the problem on hand, they more they are going to support the intervention that are being put in place.''

CHAPTER FOUR: DISCUSSION

From the finding, laws, and policies exist at the national level and other interventions such as community-based, school-based, individual interventions, social and drug epidemiological networks at the different levels. These available interventions, however, are not without challenges.

4.1 Existing Law

Considering the structure basis of the law, they are headed by different ministries coordinating drug law enforcement and regulatory agencies. This structure creates diversity in managerial roles and functions of these agencies, thus affecting drug abuse control at different administrative levels in Nigeria. Even with the laws, they are mainly based on sanctions that are very repressive and have not effectively in the past years helped in drug control. This finding was also the view of most of the respondents; however one respondent clearly stated in practice, NDLEA have decriminalized drug use. In other words, there is a mismatch in both public laws and what is being practised. The NDCMP decriminalizes drug use or its possession indicating there is conflict in both the Act and policy, which can equally confuse the Nigerian citizens and further hinder drug abuse control. This gap must be addressed. While the available is effective in a supply reduction, there is no measure for the porous borders for drug trade which further jeopardizes the effects of supply reduction on the ground. This will increase access and availability of drugs to drug users, including youths and drug sellers, thus affecting drug abuse control.

Traditional approaches to using sanctions are very common in other West African countries but have been shown to be counterproductive in demand reduction. Even with the sanctions, people still prefer to pay the fines and continue to abuse drugs without a proper understanding of the act's consequences. This finding explains that the approach has not prevented drug abuse or reform drug users' and pushers' knowledge of drug abuse effects.

4.2 Coordination of Drug Control

Although both NDLEA and NAFDAC have the responsibilities of drug control among other establishments, a presidential committee was created. The challenge is that their work is only advisory and a deviation from the already recommended drug control commission provision to control all lead agencies. This has created asynergy between the lead agencies and, thus, drug abuse control interventions delivery is affected. A drug control commission will be more appropriate if efforts towards drug abuse control would be harmonized. The different ministries coordinating the drug control agencies can effectively work under the commission.

4.3 Policy Makers' Commitment

The majority of the drug abuse control interventions are sponsored by EU or UNODC and not the Nigerian government except for the school-based program which was carried in partnership with them. This shows the lack of political will by the Nigerian government in translating policies to deliverable measures concerning this public health issue. Central to the intervention challenges across all levels is funding. Most respondents highlighted the same. Nigeria, in its policy, acknowledges drug abuse as a public health problem but does not give it critical attention in terms of funding. The budgetary allocation for health is very poor; thus drug problems are not prioritized.

UNODC and EU seem to be the major sponsors of drug-related intervention projects in the country and communities, since they also sponsor NGOs in drug prevention strategies. This is a significant hindrance and grossly affects drug abuse and its control. Whatever interventions, whether life skills, sports-based, school-based, training, etc., require appropriate funds for effective delivery and smooth running of interventions. This, however, could demotivate effective responses from relevant stakeholders involved in drug control delivery. More so, it is not enough to declare WADA without considerable backup financially to deliver evidence-based interventions which heavily require funds.

Similarly, in most developing countries, including Nigeria, many preventive interventions, including community-based, family, and school interventions organized by NGOs with inclusive support from Faith-based Organizations, are dependent on funds from international donors. Without funding, it, therefore, means drug use control interventions are hampered to a great extent within the communities. Many of the respondents reflected on this also. More funding from the government is needed as drug abuse is made a serious priority.

4.4 Effective Programs

At the community level, Nigeria has done well in the school-based program called ''The Unplugged''. Having been rolled out in all federal government schools and sixty-nine schools in Nigeria and Kebbi state respectively, it is indeed a breakthrough. Considering achieving sustainable drug abuse control and the geographical complexity of Nigeria, the program needs to expand. Its adaptation in one state compared to the remaining thirty-five states and FCT is still unacceptable. Most of the youths in poor communities attend state schools or even schools in the villages in different local government areas of the country. Massive expansion, including mostly the federal government colleges, seems inequitable as many other youths of school age will be uncovered. This limits effective drug control.

The life skills program has been proven effective, but it has yet become a national, state, or local program. The LULU program hopefully seems to be the would-be game changer to this fit when implemented. In states and the communities, without drug control committees, people will not take ownership of drug control activities within the respective states and communities. Youths as stakeholders should be part of these committees to ensure their decision-making during drug control interventions. However, these committees are unavailable in both states and communities how much more youth involvement as actors. Thus, this limits the effective delivery of evidence-based interventions.

The UPC programme has also been very successful in capacity for different actors for drug control. It has been implemented twice and only in one state and thus does not represent the various geopolitical regions in Nigeria. This advertently will affect drug control if only an aspect of the country benefits from UPC. Possible extension to other states and communities should be considered since it is effective.

Youth Rise Nigeria, an NGO, established a drug-in centre where youths and their families come together to be counselled on drug control and other skill acquisition activities. This has been proven to be working. Such centres could be made more available and near to reach in different regions

of Nigeria. In this way, many youths, even in the poorest communities, would have prompt access to evidence-based drug information from the centres.

4.5 Regulation of Open Drug Markets and Internet Sources

Whereas decriminalizing drug use or its possession would be a significant step in the right direction, the wild nature of the open drug markets is still a rugby tackle. They further make drugs highly accessible and available for use and abuse. These markets though supposed to be regulated by the PCN and NAFDAC appear to be a mirage. This causes more influx of drugs into the society, making them very accessible and available for use by youths. These youths, who are also poised with every sense of curiosity, tend to utilize the opportunity. More so, the unregulated online sources which release adverts regularly also contribute to the drug abuse problem. NAFDAC that is charged with advertising regulation of not just foods but drugs seems to lack the capacity to do so. This thus affects their drug abuse control. These markets though supposed to be regulated by the PCN and NAFDAC appear to be a mirage. This causes more influx of drugs into the society, making them very accessible and available for use by youths. These youths, who are also poised with every sense of curiosity, tend to utilize the opportunity.

More so, the unregulated online sources which release adverts regularly also contribute to the drug abuse problem. NAFDAC that is charged with advertising regulation of not just foods but drugs seems to lack the capacity to do so. One of the key informants stated so, and this indicates many youths will presently continue to be exposed to unregulated drug information on social media, which may also not be evidence-based. One of the key informants stated so, and this indicates many youths will presently continue to be exposed to unregulated drug information on social media, which may also not be evidence-based. Legalizing drugs should not be the heart of the drug policy discussion, instead, issues should be on purposeful thinking concerning ways to reduce the potential harm they cause. This necessitates reducing the unrestricted chance for operation and profit-making of drug market actors from drug sales which have proliferated Nigeria.

The social networks available, including the CINDs, Drug Help Net, UNICEF E-poll, are grossly inadequate. Considering the fact, this is the digital age and most youths and their families are often saddled with so many internet sources for drug information. This finding requires that measures be intensified to create more networks to incorporate more families and youths.

4.6 World Drug Day

Sensitization as preventive measure has been the norm and usually includes drug law enforcement officials, law officials, other relevant stakeholders using scare tactics. But the evaluation of the effectiveness of these activities is questioned since most of the activities are usually done once yearly on world drug day. Individual NGOs funded by UNODC carry out drug prevention campaigns in communities and states. The constant once-a-year drug sensitization translates to inconclusive actions without focus, especially with the declared war against drugs. A day in the national calendar for drug abuse prevention campaigns is poor and needs to be revisited to include many more contact times with the citizens. A report from GISA also corroborated this view that quite a several activities for drug control are more of sensitizing the citizens, which are not evidence-based and thus cannot be effective.[55] Also, many times, it is a one size fits all approach

and thus Nigeria has not had any transformational change towards drug control. They in other words, lack the evidence-based knowledge needed for drug control. This high level of ignorance, also reported by almost all the respondents, is a significant setback to drug abuse control.Declaring war against drugs is not enough; communities need to take ownership of drug control since they are central to drug abuse problems. Thus, they also need to be aware of the evidence-based approaches for drug control. However, this is lacking as there are no drug control committees in Nigeria.

Review Limitations

The ecological framework used was instrumental in analysing the research focus but missed workplace interventions. Thus, this was not analysed.

The study has limitations within which findings need to be interpreted carefully. First, there is limited research on drug abuse issues in Nigeria, especially concerning the interventions hence other articles from grey literature or organizational websites were used. Also, some data older than ten years were used. Secondly, it was challenging to access and review articles from the different geopolitical zones to better compare the research context using the analytical framework and based on the specific objectives. This heavily suggests there is a need for more research in substance use problems to inform effective drug control. Thirdly, while narrative analysis is appropriate for holistic, rich, and detailed data, one individual's experience can limit the representation of different stakeholder views. Fourthly, the limited number of key informants used could limit the generalization of the study.

The study was relatively inexpensive, simple, and less time-consuming, as compared to primary research studies and involving quantitative methods. However, if they were not carefully chosen, the few respondents could have been biased (selection bias) or would have given wrong information on drug issues. The respondents showed a thorough response to the topic guide questions, thus giving a detailed insight into the research problem and informing possible ways to alleviate them. It also allowed the exploration of new ideas and issues that were not initially anticipated in the research.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Drug abuse is an alarming issue in Nigeria and goes beyond comprehension, with the current national estimates exceeding the current global prevalence figure by almost three times. More so, the increasing involvement of youths in illicit drug use is devastating considering its effects on them and Nigeria at large. Globally, it is a developmental issue that makes it crucial to be tackled and prevented while treating those who have caused great harm. With Africa contributing a significant toll to drug trafficking and Nigeria being the centre of attraction in the web of trafficking, adequate measures must be in place to reduce this menace. This necessitated the study that reviewed the available interventions for reducing drug abuse among youths in Nigeria based on the specific objectives and using the ecological analytical model. This is to be able to make recommendations based on the findings from the study. In the form of sanctions, law enforcement efforts have not been valuable in transforming change towards drug control and, therefore, have limited efforts in delivering effective drug control. Similarly, with unreviewed and inconsistent law in line with current international guidelines, it is challenging to inform policy change and translation into deliverable actions.

Factors such as limited funding, liberal drug markets and inadequate scaling up of programs stem from lack of good governance and the political will in Nigeria to support drug control activities. Across all levels, they leave most drug control activities for EU/UNODC. Policy formulation and its subsequent translation are hampered with the great disparity among drug control and delivery agencies. A unified umbrella, drug commission is crucial to effective coordination of agencies and drug abuse control efforts. Central to all issues apart from funding is that many drug users and even stakeholders exhibit a high level of ignorance, and thus, this affects effectiveness in the delivery of evidence-based change desired. Many resorts to unregulated information sources on the internet, which may not provide evidence-based information and ultimately lead to drug abuse.

Many of the communities are highly overwhelmed. NGOs are also perplexed in function without adequate funding. This critically results in poor community ownership of drug control programmes. These findings are not surprising, given that Nigeria is a country with a diverse peculiarities in population, ethnicity, and cultural differences and with a slow legislative process. If drug abuse will be reduced among the people, especially youths in Nigeria, there must be a collaborative effort towards drug control using evidence-based methods. They must also be backed with good governance, maximum funding, and incorporation of drug studies into school curricula across all levels and institutions in the country.

5.2 Recommendations

Solving drug control issues in Nigeria require a concerted effort. The recommendations are grouped within three people themes as follows:

5.2.1 Policy Makers

a. **Prioritizing Drug Use Problems in the Health Budget**

The current allocation for health services in Nigeria needs to be reviewed. For proper review negotiation, drug use problems can be seen as a priority public health problem not just in policy but in health financing by the FMOH. This will justify the need for FGN specific attention on drug use issues and thus its inclusion in the Nigerian health budget. This will avail adequate funding required for drug control activities and other mental health services availability. Once drug use problems are prioritized, drug treatment services should be incorporated into the current NHIS basic minimum package of services to include more Nigerians and limit catastrophic expenditures on the part of drug users accessing treatment.

b. **Monitoring and Evaluation: Investment in Research**

Given the significant burden of drug abuse in Nigeria among youths and the paucity of data on interventions for drug use and its control, the National Research Institute of Nigeria, the Mental Health Services Administration, and other vital research sponsors should consider a significant investment in research on interventions to reduce drug abuse in the six geopolitical zones. It should also include research to understand drug use and its effects in communities for further control of drug abuse while ensuring the recommendations are implemented. Educational campaigns carried out yearly on world drug day should be monitored and evaluated for the probable effect and value of an education programme. This is to promote safe and drug-free Nigeria. it was tailored to sensitize individuals, families, communities, and patients who use drugs about the risk of drug abuse and the benefits of effective drug control.

c. **Revision of the NDLEA Act**

The NDLEA Act is crucial to drug control activities and thus needs to be revised and in tandem with the current NDCMP. This will ensure uniformity and effective policy translation across all levels and create synergy between drug control agencies.

d. **Improvement in law enforcement**

A critical reassessment of the Nigerian drug law will require stating clear objectives that meet current drug behavioural patterns. With clear objectives, strategic steps can be derived to encourage enforcement of the laws.

5.2.2 Community

a. **Capacity Building on Substance Use Prevention**

Efforts should be made to have community-drug controlled committees who, as stakeholders, will uphold drug control activities while ensuring community ownership. Community members will need to be actively engaged to ensure effectiveness maximally. Also, the UPC training of trainers needs to be expanded to involve youths and other actors in drug control in different states of Nigeria.

b. Evidence-based Interventions

Interventions involving youths, parents, and families need to be tailored according to their needs, especially the youths. These needs include life skills, parental skills, school-based prevention, and more especially according to the developmental stage of the youths involved. This will require promoting a supportive and healthy environment within communities in Nigeria to involve more families and individuals who use drugs.

5.2.3 Youths

a. Youth Participation

Youths should be consulted as stakeholders and informed about how their input will be used while ensuring good partnership between them and other stakeholders. This will allow them to be recognized, express themselves, learn and contribute to drug abuse control activities, thus ensuring the development of young persons. This will also yield positive outcomes in terms of having a safe and more inclusive community.

REFERENCES

1.UNODC (2018). Drug Use in Nigeria. Available from: https://www.unodc.org/documents/data-and-analysis/statistics/Drugs/Drug_Use_Survey_Nigeria_2019_Book.pdf (accessed 24th April 2021).

2. Federal Government of Nigeria (2018). Second National Strategic Health Development Health Plan Availablefrom:https://www.health.gov.ng/doc/NSHDP%2520II%2520Final.pdf (accessed 6th July 2021)

3. UNDP, Human Development Report: Human Development for Everyone, 2016 Available from: http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf (accessed 9th July 2021)

4. Pharm Access Foundation (2015). Nigerian Health Sector: Market Study Report Available from: https:// rvo.nl/sites/default/files/Market_Study_Health_Nigeria.pdf (accessed 3rd July 2021)

5. Uzochukwu BSC, Onwujekwe O, Mbachu C (2015). Implementing the Basic Health Care Provision Fund in Nigeria: A framework for accountability and good governance Available from: https://resyst.lsthm.ac.uk/sites/resyst/files/content/attachments/2018-08-22/Implementing%2520the%2520Basic2520Health%2520Care%2520Provision%2520Fund%2520in%2520Nigeria.pdf (accessed 5th July 2021).

6. Alawode GO, Adewole DA. Assessment of the design and Implementation of Challenges of the National Health Insurance Scheme in Nigeria: a qualitative study among sub-national level actors healthcare and insurance providers. BMC Public Health 21, 124 (2021) DOI: https://doi.org/10.1186/s12889-020-10133-5

7. WHO (2018). Nigeria: Country Cooperation Strategy at a glance Available from: https://apps.who.int/iris/bitstream/10665/136785/csbrief_nga_en.pdf (accessed 5th July 2021)

8. Federal Republic of Nigeria (2019). National Youth Policy: Enhancing Youth Development and Participation in the context of Sustainable Development Available from: https://www.prb.org/up-content/uploads/2020/06/Nigeria-National-Youth-Policy-2019-2023.pdf (accessed 1st August 2021)

9. Youth Rise Nigeria (2015). WE ARE PEOPLE: The Unintended Consequences of the Nigerian Drug Law on the Health and Human Rights of Young People Who Use Drugs Available from: http://filesever.idpc.net/library/We-are-people-nigeria.pdf (accessed 5th August 2021)

10. Olurishe TO. Drug and substance abuse in Anglophone West Africa: A mini review. West African Journal of Pharmacy (2019) 30 (2) 1-12

11. Kelly JF, Sautz R, Wakeman S (2016). Language, Substance Use Disorders, and Policy: The Need to Reach Consensus on an ‘‘Addiction-ary’’ Alcoholism Treatment Quarterly, 34:1, 116-123, DOI:10.1080/07347324.2016.1113103

12. McKenzie JF, Pinges RR, Seabert DM. An introduction to Community and Public health. Ninth Edition. Burlington Massachusetts: Jones & Bartlett Learning, (2017) ISBN 9781284108415

13. OECD (2019). Addressing Problematic Opioid Use in OECD Countries, OECD Health Policy Studies, OECD Publishing, Paris Available from: https://dx.doi.org/10.1787/a18286f0-en (accessed 30th July 2021)

14. Federal Republic of Nigeria, NDLEA 2016 Annual Report, Lagos, Nigeria, 2016 Available from: https://ndlea.gov.ng/annual-reports/ (accessed 25th June 2021)

15. UNODC, Transnational organized crime in West Africa: a threat assessment, February 2013. Available from: https://www.unodc.org/toc/en/reports/TOCTAWestAfrica.html (accessed 20th May 2021)

16. Degenhardt L, Hall W, Warner-Smith M, Lynskey M. Chapter 13: Illicit Drug Use. Available from: https://www.who.int/publications/cra/chapters/volume1/1109-1176.pdf (accessed 25th July 2021)

17. World Drug Report (2021). Global Overview: Drug Demand and Supply. Available from: https://reliefweb.int/report/world/unodc-world-drug-report-2021-enar (accessed 28th June 2021)

18. Jatau AI, Sha'ban A, Gulma KA, Shitu Z, Khalid GM, et al. The Burden of Drug Abuse in Nigeria: A Scoping Review of Epidemiological Studies and Drug Laws. Public Health Rev, 29 January 2021 Available from: https://doi.org/10.3389/phrs.2021.1603960

19. Yunusa U, Bello UL, Idris M, Haddad MM, Adamu D (2017). Determinants of substance abuse among commercial bus drivers in Kano Metropolis, Kano State, Nigeria. Ajns. 6 (2), 125-130. Doi: 10.11648/j.ajns.20170602.16

20. Yahya Muhmammed Bah. Drug Abuse Among Street Children. Biomed J Sci & Tech Res 10 (4)-2018. BJSTR. MS.1D.001982 DOI: 10.26717/BJSTR.2018.10.001982

21. Famuyiwa O, Aina OF, Bankole-Oki OM (2011). Epidemiology of psychoactive drug use among adolescents in metropolitan Lagos, Nigeria. Eur Child Adolesc Psychiatr. 20 (7), 351-359 doi: 10.1007/s00787-011-0180-6

22. Anyanwu O, Ibekwe RC, Ojinnaka NC, Udo Schumacher (Reviewing Editor) (2016) Pattern of substance abuse among adolescent secondary school students in Abakaliki, Cogent Medicine, 3:1, DOI: 10.1080/2331205X.2016.1272160

23. Hamman H, Othman AT, Lian LH. Adolescents and Drug Abuse in Nigeria. Journal of Biology, Agriculture and Healthcare Vol. 4, No. 1, 2014

24. Ajayi AI, Somefun OD (2020). Recreational drug use among Nigerian university students: Prevalence, correlates, and frequency of use. PLoS ONE 15(5): e0232964. doi: 10.1371/jornal.pone.0232964.

25. Gobir A, Sambo M, Bashir S, Olorukoba A, Ezeh O, Bello M, et al. (2017). Prevalence and determinants of drug use among youths in a rural community in northwestern Nigeria. Trop J Health Sci. 24 (4), 5-8.

26. Dankani I (2012). Abuse of cough syrups: a new trend in drug abuse in northwestern Nigerian states of kano, Sokoto, katsina, Zamfara and kebbi. Int J Phys Soc Sci. 2 (8), 199-213.

27. Erah F, Omatseye A (2017). Drug and alcohol abuse among secondary school students in a rural community in south-south Nigeria. Ann Med and Surg Pract. 2 (2), 85-91.

28. Obiechina GO, Isiguzo BC. Curbing the menace of drug use among secondary school students in Nigeria. European Journal of Research and Reflection in Educational Sciences Vol. 4 No. 1,2016 ISSN 2056-5852

29. Independent Newspapers Limited (2021). Cannabis' Potency Increasing, More Youths Underrating Risks - UNODC Alarmed Available from: https://independent.ng/cannabis-potency-increasing-more-youths-underrating-risks-unodc-alarmed-2/ (accessed 5th August 2021)

30. Abikoye G, Edewor DO, Sunday D, Abayomi O, Obot IS, et al. Socioeconomic context of cannabis cultivation and trafficking in selected Nigerian communities. Bulletin on Narcotics, Volume LXII, 2019, pp 9-26 DOI: https://doi.org/10.18356/fa33b4cf-en

31. Eric P (2017). Canadian Social Science, 13 (1), 49-53. Available from: http://www.cscanada.net/index.php/css/article/view/9072 Doi: http://dx.doi.org/10.3968/9072

32. Kumper KI. Family-Based Interventions for the prevention of Substance Abuse and Other Impulse control Disorders in Girls. ISRN Addiction Volume 2014, Article ID 308789, 23 pages https://dx.doi.org/10.1155/2014/308789

33. Nalia, A (2014). Study: The Gateway Drug is Alcohol, Not Marijuana. http://onlinelibrary.wiley.com/doi/10.1111/j.1746-1561.2012.00712.x/abstract (accessed 2nd August 2021)

34. World Drug Report 2020 (United Nations Publications, Sales No. E.20.XI.6) Available from: https://reliefweb.int/report/world/unodc-world-drug-report-2020

35. National Baseline Youth Survey Report, 2012. National Bureau of Statistics and Federal Ministry of Youth Development pg. 55 Available from: www.nigerianstat.gov.ng/pages/download/191 (accessed 4th August 2021)

36. Francis A. Drug Abuse among In-School Adolescents in Nigeria. International Journal of Research and Scientific Innovation (IJRSI)/ Volume VII, Issue 1, January 2020/ ISSN 2321-2705 Available from: www.rsisinternational.org

37. Nwannennaya C, Abiodun TF (2017) Illicit Drug Trafficking in Nigeria: Obstacle to National Development and Security. J Pol Sci Pub Aff 5(1): 1-6

38. West African Commission on Drugs (2014). Not Just in Transit; Drugs, the State and Society in West Africa. Available from: https://www.globalcommissiondrugs.org/wp-content/uploads/2017/02/WACD_En_Report_WEB_05114.pdf

39. Agwogie Martin (2019) Sustainable Approach to Eradication of Drugs and Substance Abuse in Nigeria Available from: https://gisainitiative.org/sustainable-approach-to-eradication-of-drugs-and-substance-abuse-in-nigeria/ (accessed 15th July 2021)

40. World Health Organization. Regional Office for the Western Pacific (2016). Sustainable development goals (SDGs): Goal 3. Target 3.5: Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol [poster]. Manilla: WHO Regional Office for the Western Pacific. Available from: https://apps.who.int/iris/handle/10665/208283 (accessed 30th July 2021)

41. Donnenfield Z, Schunemann J, Welborn L. Drug demand and use in Africa/ Modelling trends to 2050. Available from: https://enact-africa.s3.amazonaws.com/site/uploads/2019-08-28-drug-demand-and-use-in-africa-research-paper-cb.pdf (accessed 20th May 2021).

42. Ikoh MU, Smah SO, Kwanya IO, Clemeny UA, Aposhi ZA (2019). Review on Factors Affecting Entry into Drug Abuse among Youths in Lafia Metropolis: Implication on Security. J Drug Abuse Vol. 5 No. 1:2

43. Obadeji A, Kumolalo BF, Oluwole LO, Ajiboye AS, Dada MU, Ebeyi RC. Substance Use among Adolescent High School Students in Nigeria and its Relationship with Psychological Factors. J Res Health Sci. 2020; 20(2): e00480

44. Ogunsola SO, Fajemisin EA, Aiyenuro AE, Tunde AA (2020). Experiences and projections for Drug Abuse Sensitization and Eradication among Youths in Southwest, Nigeria. J Alcohol Drug Abuse Depend Subst Abus 6:018. DOI: 10.24966/ADSD-9594/100018

45. Ugwuoke KA, Mfon FB, Omotola KD. Drug Policy and Control in Nigeria: The Role of the National Drugs Law Enforcement Agency. Nov Appro Drug Des Dev 2019: 495): 555648. DOI: 10.19080/NAPDD.2019.04.555648

46. Doyle J, Jvanovic J (2010). National Drugs Rehabilitation Framework Document. National Drugs Rehabilitation Implementation Committee. Dublin: Health Services Executive. ISBN 978-1-906218-34-8

47. Ni Ogain E, Hodgson L (2017). Drug and Alcohol Recovery Outcomes Framework Available from: www.drugsandalcohol.ie/27096/1/Drug_and_Alcohol_Recovery_Outcomes_framework.pdf (accessed 6th March 2021)

48. Obot IS (2003) Assessing Nigeria's Drug Control Policy, 1994-2000. International Journal of Drug Policy (2004): 17-26.

49. Ogege GO (2010) Drug Prohibition and the Problem of Conformity in Nigeria. J Psychology 1(2): 91-97

50. National Drug Law Enforcement Agency (2021). Drug Laws. Available from: https://ndlea.gov.ng/drug-laws/ (accessed 8th July 2021) 39.

51. UNODC. National Drug Control Master Plan (2015-2019). Available from: https://www.unodc.org/documents/nigeria/publications/National_Drug_Control_Master_Plan_2015_2019.pdf (accessed 6th July 2021)

52. UNODC (2021). Launch of National Drug Control Master Plan (2021-2025) for Nigeria Available from: https://www.unodc.org/nigeria/en/press/launch-of-national-drug-control-master-plan-2021-2025-for-nigeria.html (accessed 5th July 2021)

53. FAAPA (2018). Nigeria: Presidential committee to support NDLEA on war against drug abuse Available from: http://www.faapa.info/blog/nigeria-presidential-committee-to-support-ndlea-on-war-against-drug-abuse/ (accessed 20th July 2021)

54. Akinkotu E (2021). FG to stop open sale of drugs next month-PCN available from: https://punchng.com/fg-to-stop-open-sale-of-drugs-next-month-pcn (accessed 18th July 2021)

55. Premium Times (2019). Bill to protect persons with mental health scales second reading in Nigerian State. Available from: https://www.premium timesng.com/news/top-news/307687-bill-to-protect-persons-with-mental-health-scales-second-reading-in-nigerian-senate.html (accessed 25th July 2021)

56. Premium Times (2021) War on drug abuse deadlier than insurgency, banditry. Available from: https://www.premiumtimesng.com/news/top-news/470106-war-on-drug-abuse-deadlier-than-insurgency-banditry-buhari.html (accessed 28th June 2021)

57. UN (2002). Developing an Integrated Drug Information System. Available from: https://www.unodc.org/documents/publications/gap_toolkit_module1_idis.pdf (accessed 24th July 2021)

58. UNODC (2016). The ECOWAS Project supports the establishment of an information platform on drug use in West Africa. Available from: https://www.unodc.org/westandcentralafrica/en/2016-29-09-epidemiology-training-dakar.html (accessed 25th April 2021).

59. Dominique L, Harsheth V, Akanidomo I (2017). Treatment Indicator: Experience of its Implementation in Nigeria, a paper presented at Lisbon Addiction Conference October 2017 Available from: http://www.emcdda.europa.eu/system/files/attachments/7170/11H30_5_Dominique%20Lopez.pptx (accessed 7th July 2021)

60. Mahibbu-Din MO. Assessing the Roles of NGOs in Health Care Services in Nigeria. JoNPS Volume 3, Number 2, December 2019, Pp 163-183 DOI: Https://doi.org/10.31920/2516-3132/2019/3n2018

61. Enyioko N. Role of Non-Governmental Organizations (NGOs) in Rural Development: A Study of the Six listed NGOs in Rivers State, Nigeria (November 21, 2012) Available from: https://dx.doi.org/10.2139/ssrn.2178989

62. YouthRiseNigeria (2021). Drug Treatment For Women Who Use Drugs (DROP-IN-TREATMENT CENTRE) Available from: https://youthriseng.org/drug-treatment-for-women-who-use-drugs-drop-in-treatment-center/ (accessed 16th July 2021)

63. Ogunsola SO, Fajemisin EA, Aiyenuro AE, Tunde AA (2020) Experiences and projections for Drug Abuse Sensitization and Eradication among youths in Southwest, Nigeria. J Alcohol Drug Depend Subst Abus 6:018

64. Global Initiative on Substance Abuse (GISA). 2019 Annual Report Available from: https://gisainitiative.org/annual-reports/ (accessed 17th July 2021)

65. Vanguard (2021). GISA conducts second batch of training on substance abuse prevention n schools Available from: https://www.vanguardngr.com/2021/05/gisa-conducts-second-batch-of-training-on-substance-abuse-prevention-in-schools/ (accessed 27th July 2021)

66. UNODC (2018) Nigerian experience on prevention and sensitization programmes Available from:https://www.unodc.org/documents/commissions/CND/Subsidiary_Bodies_HONLAF/28_Documentation/Presentations/Unplugged_in-Nigeria_HONLAF_Sept_2018_02.pdf (accessed 20th June 2021)

67. Vigna-Tagilanti F, Damjanovic L, Alesina M, Mehanovic E, Akanidomo I, et al. The effectiveness of the ''Unplugged'' program in Nigeria: study design and results Available from: https://iris.unito.it/bitstream/2318/1709850/1/poster%2520Effectiveness_FVT_EUSPR%25202018_em.pdf (accessed 29th June 2021)

68. Faggiano F, Vigna-Taglianti F, Burkhart G, Bohrn K, Cuomo L; EU-Dap cluster randomized controlled trial. Drug Alcohol Depend. 2010 Apr 1; 108(1-2): 56-64 doi: 10.1016/j.drugalcdep.2009.11.018. Epub 2010 Jan 18. PMID: 20080363

69. Unplugged: Nigeria training and adaptation Available from: https://iris.unito.it/bitstream/2318/1709851/1/EUSPR18%2520poster%2520unplugged%2520in%2520nigeria%2520adaptation%2520and%2520training.pdf (accessed 3rd August 2021)

70. UNODC (2021). A cluster randomized controlled trial to evaluate the effectiveness of the ''Unplugged'' Program in Nigeria: sample size Available from; www.eudap.net/PDF/201510a_EUSPR_Nigeria%2520study%2520design_DEF.pdf (accessed 4th August 2021)

71. African Law Foundation (2018) Narrative Report of 2018 Programme of WADPN-Nigeria Available from:https://afrilaw.org/project-details/narrative-report-of-2018-programme-of-wadpn-nigeria/ (accessed 20th May 2021)

72. UNODC (2021). How to provide Drug Treatment and Counselling Services in times of COVID-19? UNODC launches Drug Help Net, a network of Nigerian Doctors, Psychologists, Nurses and Counsellors to provide over-the phone assistance to Drug Users in Need Available from: https://www.unodc.org/nigeria/en/unodc-launches-drughelpnet-a-network-of-nigerian-doctors-psychologists-nurses-and-counsellors-to-provide-over-the-phone-assistance-to-drug-users-in-need.html (accessed 18th July 2021)

73. U Report NIGERIA VOICE MATTERS (2021) UNODC Poll: Substance abuse Available from: https://nigeria.ureport.in/opinion/3921/ (accessed 30th June 2021)

74. UNODC (2021). Families: Family skills training programmes in drug abuse prevention Available from: https://www.unodc.org/unodc/en/prevention/familyskillstraining.html (accessed 4th August 2021)

75. Mawouena B (2019). Africa's Best Practices in Drug Use Prevention, Treatment and Recovery. Available from: https://www.cicad.oas.org/cicaddocs/Document.aspx%3FId%3d5430&Ved accessed 30th July 2021

76. UNODC (2021). The Strengthening Families Programme: Prevention of drug use, HIV/AIDS and crime amongst youth through family skills training programmes in low-and middle-income countries Available from: https://www.unodc.org/ropan/en/DrugDemandReduction/strong-families.html (accessed 3rd August 2021)

77. Azuike R, Rapu T (2011). Substance Abuse Treatment in Nigeria: Case study of A Non-profit Rehabilitation Centre Available from: https://www.academia.edu/1415982/Substance-abuse-treatment_in_nigeria-case_study-of_a-non-profit_rehabilitation-centre (accessed 23rd July 2021)

78. James BO, Olotu SO, Agilara OO, Arigbede OO, Anozie GI, Ogiku HO, et al. Drug Treatment presentations at a treatment centre in Southern Nigeria (2015-2018): Findings and implications for policy and practice. Nigerian Postgrad Med J 2019; 26: 211-5

79. Botvin GJ, Griffin KW. Life skills training: preventing substance misuse by enhancing individual and social competence. New Dir Youth Dev. 2014 Spring; 2014 (141): 57-65, 11. Doi: 10.1002/yd.20086. PMID: 24753278

80. Adebiyi AO, Owoaje ET. Psychosocial Skills Intervention for Substance Use amongst Street Children in a Local Government Area in South West Nigeria Journal of Community Medicine and Primary Health Care Vol.29, No2, September 2017

81. UNODC (2020) Youth Crime Prevention Through Sport: Insights from the UNODC ''Line Up Live Up'' Pilot Programme Available from: https://www.unodc.org/dohadeclaration/en/sports/publications.html (accessed 25th June 2021)

82. Youth Rise (2021) Drugs, the Law and Human Rights: Analysis of the Nigerian Drug Law Enforcement Agency Act Available from: https://youthriseng.org/wp-content/uploads/2020/11/ANALYSIS-OF-THE-NIGERIAN-DRUG-LAW-ENFORCEMENT-AGENCY-ACT-Final-pdf (accessed 10th July 2021)

83. Ezenwa M, Orjiakor T, Ukwuma M, Oraetue H, Ude E, Nweze T. Tracking opiate routes in Nigeria: identifying trafficking routes through dealers and users of tramadol and codeine. Bulletin on Narcotics https://doi.org/10.17863/CAM.50293

84. Ediomo-Ubong E, Pates N, Pates R. Supply control, demand reduction or harm reduction? Developments and directions for drug policy in Nigeria Addiction Research & Theory 2018, Vol.26, NO. 6, 465-469 https://doi.org/10.1080/16066359.2017.1406480

85. Onifade PO, Somoye EB, Ogunwobi OO, et al. A descriptive survey of types, spread and characteristics of substance abuse treatment centers in Nigeria. Subst Abuse Treat Prev Policy 6, 25 (2011) DOI: https://doi.org/10.1186/1747-597X-6-25

86. Dataphyte (2020). Reasons 50 million Persons with Mental Disturbance Lack Care In Nigeria. Available from: https://www.dataphyte.com/economy/reasons-50-million-persons-with-mental-disturbance-lack-care-in-nigeria/ (accessed 24th July 2021)

87. Azagba S, Shan L, Qeadan F, et al. Unemployment rate, opioids misuse and other substance abuse: quasi-experimental evidence from treatment admissions data. BMC Psychiatry 21, 22 (2021). https://doi.org/10.1186/s12888-020-02981-7

88. UNODC (2017). West African Epidemiology Network on Drug Use Report: Statistics and Trends on Illicit Drug Use and Supply/2014-2017. https://www.unodc.org/documents/westandcentralafrica/WENDU_REPORT_VF_V5_291019_FINAL_VERSION.pdf

89. Ezigbo PO, Elekwachi CL, Nweze CF. Challenges in the Treatment of Drug Abuse in a Nigerian Female Health Worker: A Case Study Applying the Wawa Technique J Contemp Psychother (2012) 42: 257-264

90. Iroju O, Gambo I, Ikono R, Olaleke J. Interoperability in Nigeria Healthcare System: The way forward I.J. Information Engineering and Electronic Business, 2013, 4, 16-23 DOI: 10.5815/ijieeb.2013.04.03

91. Indiana University (2021). Addictions: Understanding the disease of addiction Available from: https://addictions.iu.edu/understanding-addiction/index.html

ANNEX

ANNEX 1: INFORMED CONSENT FORM

INFORMED CONSENT FORM FOR SEMI-STRUCTURED KEY INFORMANTS INTERVIEW (KII) WITH RELEVANT KEY INFORMANTS AND WHOM I INVITE TO PARTICIPATE IN THE RESEARCH "REVIEW OF INTERVENTIONS FOR REDUCTION OF DRUG ABUSE AMONG YOUTHS IN NIGERIA"

This Informed Consent Form has two parts:

Information sheet (to share with you the study information)

Certificate of consent (for your proof of voluntary participation in form of signatures)

You will be given a copy of the full Informed Consent Form (ICF)

Part 1: Information Sheet

Good morning/afternoon, I am Anene Ogechukwu Chinelo, a Master of Public Health student at Royal Tropical Institute (KIT), Amsterdam. I am doing a research on ''Review of Interventions for Reduction of Drug Abuse Among Youths in Nigeria''. I will inform and invite you to be part of this study. You have the right to decline your participation at any time.

PURPOSE OF THE STUDY: This study aims to review the interventions for reduction of drug abuse among youths in Nigeria, and the challenges encountered during implementation of the interventions in the country. Your professional views are necessary in informing this research. Thus, I will be grateful for your maximum support if you consent to participating in the study. I will have a short interview with you on questions based on the specific objectives of the study and your professional views.

DISCOMFORT AND RISK: All the questions I will ask are related to your professional views to validate study results. Personal questions will not be asked and your permission for participation is essentially voluntary. You also have the right to stop the discussion if encounter any inconvenience.

PARTICIPATION DURATION: The interview will last for 60 minutes and will also depend on your willingness to participate. If at any time you feel uncomfortable answering any question, you are free not to discuss so. The decision on whether to participate in the study or any specific question will not have any effect on you, or your job. If you the decision to participate, an informed consent form will be obtained from you.

CONFIDENTIALITY: The interview will ensure strict confidentiality. Even though your name will be recorded on the consent form, it will be kept separate from the interviews. Your interview responses will be combined with other stakeholders' responses without cross identification of your responses. The information obtained will only be used for the stated purpose. A number will be used instead of your name to identify your information and will be known only to the researcher who will ensure proper storage of the information, avoiding sharing it with anyone.

BENEFIT AND COMPENSATION: There is no direct benefit to you, but your voluntary participation is very beneficial in finding out more about the drug abuse reduction interventions, what works, does not work and the challenges encountered in your countries.

SHARING THE RESULT: The result from the study will be shared with policy makers to inform decisions on promising initiatives and addressing barriers to drug abuse reduction among youths in Nigeria. Nothing you share with me during the interview will be used to identify you.

WHO TO CALL IN CASE OF NEED: If any problem arises, or if you have any questions, please contact Anene Ogechukwu Chinelo, with the contact number on WhatsApp +2348037904720 ; +3168733729

I will answer any questions you have with sincerity. If I do not have the information you need, I will tell you so and if you wish, I will ensure getting an answer for you.

Do you have any questions? (If yes, note them)

1. Yes ………………………… 2. No ……………………………

Key Informants Interview Declaration Form: I will require you to write your name and approval for your participation in the study by signing or writing your name in the spaces provided below.

I have been allowed to ask questions, I may have and every such questions or inquires have been answered to my satisfaction. I have been duly informed orally and in written form who to contact in case I have questions. I hereby consent to this study.

Name of participant: ……………………………………………………………………………………………

Date: ……………………………………………

Interviewer's Declaration:

I Anene Ogechukwu Chinelo, Date …………………….. hereby declare that I have clearly explained to the participant the objectives, benefit, and risks of participating in the research. I have received his/her consent.

PART II: CERTIFICATE OF CONSENT

I have been invited to participate in the research on "'Review of Interventions for Reduction of Drug Abuse Among Youths in Nigeria''. I have read the information. I had the opportunity to ask questions about it and any questions I have been asked has been answered to my satisfaction. I consent voluntarily to participate in this research.

Name of participant …………………………………………………………………………………………….

Signature of participant ………………………………………………………………………………………

Date …………………………………………………

I confirm that the participant was allowed to ask questions about the research and all questions asked by the participant have been answered correctly to the best of my ability. I confirm that the individual has not been forced to give consent and the consent have been given voluntarily.

A copy of this informed consent form has been provided to the participant.

Name of Researcher ……….............................

Signature of Researcher ....

Date ……..

ANNEX 2: SEMI-STRUCTURED INTERVIEW TOPIC GUIDE

General Questions

1. What is your role in drug abuse reduction in Nigeria?
2. To what extent do you think the problem of drug abuse is in Nigeria?
3. Who are those most affected by drug abuse in Nigeria?
4. What do you think are the causes of drug abuse among youths?

Specific Questions According to objectives and in relation to adapted framework for use in the study.

5. At national level, are there laws and policies in Nigeria for reduction of drug abuse, its supply (and trafficking) and reduction of harm?
    a. What works?
6. What drug abuse intervention programs exist in Nigeria at the lower levels (as the community, organizational, interpersonal, and individual)?
    a. What works?
    b. Are there surveillance systems for drug information in Nigeria?
    c. If so, what works? How do they collect, monitor, and evaluate data on drug abuse? From where are they collected?
7. What challenges are encountered with respect to implementation of these interventions at the national, and lower levels (community, organizational and individual) in Nigeria?
8. What can you recommend addressing the drug abuse situation in Nigeria?

ANNEX 3: The Organogram of Nigerian Health System

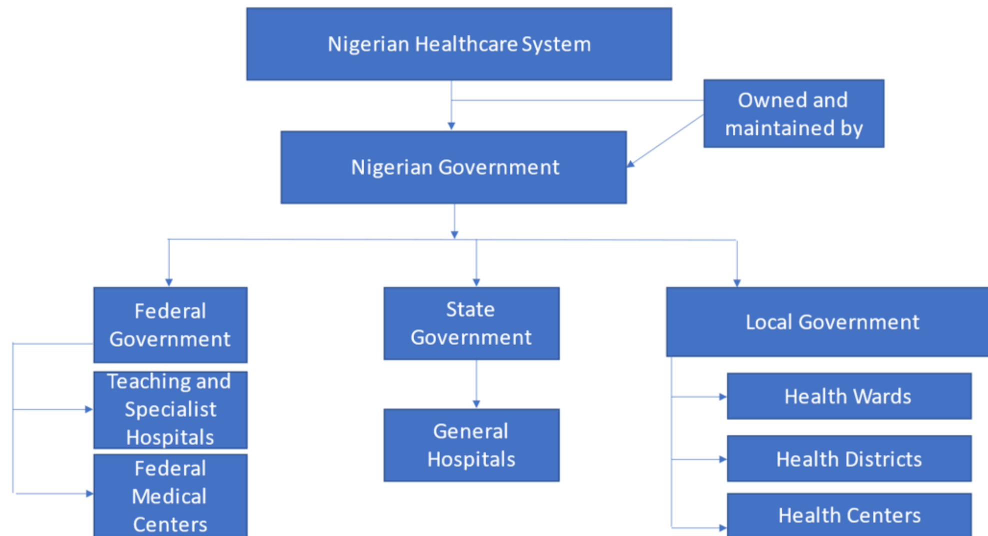

Figure 8: The Organogram of Nigerian Health System[90]

Source:https://www.semanthicscholar.org/paper/Interoperability-in-Nigeria-Healthcare-System%3A-The-Olaronke-Ishaya/076f6d922a2fa039c5031d3fd1841156710a2523

ANNEX 4: ANNUAL PREVALENCE OF DRUG USE BY GEOPOLITICAL ZONES

Table 2: Annual prevalence of drug use by drug type in North-Central Zone[1]

Drug type/class	Estimated prevalence (%)	Low estimate (%)	High estimate (%)	Estimated numbers*
Any drug use	10.0	9.7	10.4	1,500,000
Cannabis	8.4	7.9	8.8	1,250,000
Opioids	1.1	0.9	1.3	164,000
Heroin	0.02	<0.0001	0.09	3,600
Pharmaceutical opioids	1.1	0.9	1.3	160,000
Cocaine	0.01	0.0001	0.1	1,800
Tranquilizers/sedatives	0.1	0.0001	0.3	17,000
Amphetamines	0.1	0.0001	0.4	21,600
Pharmaceutical amphetamines	0.1	0.0001	0.3	14,500
Methamphetamine	0.05	0.0001	0.01	7,200
Ecstasy	0.03	0.0001	0.3	4,600
Hallucinogens	0.02	0.0001	0.01	2,700
Solvents/inhalants	0.2	0.0001	0.9	30,400
Cough syrup(containing codeine or dextromethorphan)	1.4	0.7	2.1	216,000

Based on state population estimates aggregated into geopolitical zones, North-Central was 14,956,817 people aged 15-64(UN, Population division estimates,2016). State level estimates were adjusted for polydrug use and aggregated at the zone level. The estimates have been rounded.

Table 3: Annual prevalence of drug use in North-West Zone[1]

Drug type/class	Estimated prevalence (%)	Low estimate (%)	High estimate (%)	Estimated numbers*
Any drug use	12.0	12.0	12.3	3,500,000
Cannabis	8.4	8.0	8.9	2,100,000
Opioids	2.7	2.4	3.0	690,000
Heroin	0.06	0.0001	0.16	16,000
Pharmaceutical opioids	2.7	2.4	3.0	670,000
Cocaine	0.02	0.0001	0.1	4,200
Tranquilizers/sedatives	0.2	0.0001	0.4	42,700
Amphetamines	0.04	0.0001	0.2	9,300
Pharmaceutical amphetamines	0.03	0.0001	0.2	7,200
Methamphetamine	0.01	0.0001	0.3	2,100
Ecstasy	0.9	0.0001	2.3	215,000
Hallucinogens	0.04	0.0001	0.01	9,500
Solvents/inhalants	0.4	0.0001	1.5	110,000
Cough syrup(containing codeine or dextromethorphan)	1.5	0.8	2.2	373,000

Table 4: Annual prevalence of drug use in North-East Zone[1]

Drug type/class	Estimated prevalence (%)	Low estimate (%)	High estimate (%)	Estimated numbers*
Any drug use	13.6	13.2	13.9	2,090,000
Cannabis	8.1	7.6	8.5	1,250,000
Opioids	6.6	6.1	7.0	1,013,,000
Heroin	0.08	0.0001	0.19	12,000
Pharmaceutical opioids	6.5	6.0	7.0	1,000,000
Cocaine	0.03	0.0001	0.1	1,800
Tranquilizers/sedatives	0.1	0.0001	0.3	125,000
Amphetamines	0.4	0.0001	0.9	60,000
Pharmaceutical amphetamines	0.2	0.0001	0.6	37,000
Methamphetamine	0.15	0.0001	0.01	23,000
Ecstasy	0.6	0.0001	1.8	92,000
Hallucinogens	0.04	0.0001	0.01	6,500
Solvents/inhalants	0.7	0.0001	2.1	114,000
Cough syrup(containing codeine or dextromethorphan)	3.0	2.0	4.0	460,000

Table 5: Annual prevalence of drug use in South-West Zone[1]

Drug type/class	Estimated prevalence (%)	Low estimate (%)	High estimate (%)	Estimated numbers*
Any drug use	22.4	21.9	22.9	4,382,000
Cannabis	14.1	13.6	14.7	2,760,000
Opioids	7.9	7.4	8.4	1,540,000
Heroin	0.04	0.0001	0.12	8,300
Pharmaceutical opioids	7.8	7.3	8.4	1,530,000
Cocaine	0.04	0.0001	0.1	7,900
Tranquilizers/sedatives	1.1	0.0001	1.7	207,000
Amphetamines	0.3	0.5	0.7	58,500
Pharmaceutical amphetamines	0.2	0.0001	0.6	40,700
Methamphetamine	0.1	0.0001	1.0	17,800
Ecstasy	0.06	0.0001	0.5	12,600
Hallucinogens	0.01	0.0001	0.01	2,600
Solvents/inhalants	0.2	0.0001	0.9	36,000
Cough syrup(containing codeine or dextromethorphan)	3.6	2.5	4.7	700,000

Table 6: Annual prevalence of drug use in South-East Zone[1]

Drug type/class	Estimated prevalence (%)	Low estimate (%)	High estimate (%)	Estimated numbers*
Any drug use	13.8	13.5	14.2	1,550,000
Cannabis	10.9	10.4	11.4	1,226,000
Opioids	3.2	2.9	3.5	360,000
Heroin	0.07	0.0001	0.2	7,600
Pharmaceutical opioids	3.1	2.8	3.5	352,000
Cocaine	0.1	0.0001	0.2	9,000
Tranquilizers/sedatives	0.5	0.1	0.8	51,000
Amphetamines	0.2	0.0001	0.5	18,000
Pharmaceutical amphetamines	0.1	0.0001	0.4	11,000
Methamphetamine	0.06	0.0001	0.8	6,700
Ecstasy	0.06	0.0001	0.4	6,700
Hallucinogens	0.02	0.0001	0.01	2,300
Solvents/inhalants	0.04	0.0001	0.4	4,600
Cough syrup(containing codeine or dextromethorphan)	2.7	1.7	3.6	301,000

Table 7: Annual prevalence of drug use South-South Zone[1]

Drug type/class	Estimated prevalence (%)	Low estimate (%)	High estimate (%)	Estimated numbers*
Any drug use	16.6	16.2	17.1	2,124,000
Cannabis	14.8	14.2	15.3	1,883,000
Opioids	3.3	3.0	3.7	428,000
Heroin	0.13	0.0001	0.27	16,600
Pharmaceutical opioids	3.2	2.8	3.6	411,000
Cocaine	0.03	0.0001	0.1	3,300
Tranquilizers/sedatives	0.3	0.0001	0.6	38,000
Amphetamines	0.5	0.0001	1	58,900
Pharmaceutical amphetamines	0.3	0.0001	0.7	34,700
Methamphetamine	0.18	0.0001	1.5	23,300
Ecstasy	0.07	0.0001	0.5	9,400
Hallucinogens	0.02	0.0001	0.01	3,000
Solvents/inhalants	0.03	0.0001	0.3	3,900
Cough syrup(containing codeine or dextromethorphan)	2.4	1.5	3.3	307,000

ANNEX 5: Original Socioecological Framework

Figure 9: Ecological Model [91]

Source: *https://addictions.iu.edu/understanding-addiction/index.html*