



## Prevalent Use of Banned Medicines in Yenagoa Metropolis, Bayelsa State, Nigeria

**Diri E Gloria and Ighedose O Lucky\***

*Federal Medical Centre, Yenagoa, Bayelsa State, Nigeria*

**\*Corresponding Author:** Ighedose O Lucky, Department of Planning, Research and Statistics, Federal Medical Centre Yenagoa, Bayelsa State, Nigeria.

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### Abstract

Use of banned medicines has been on the increase in recent times. The effects have been widespread in a much negative proportion especially for youths, who are the leaders of tomorrow. The objective of this study was to investigate factors responsible for the prevalent use of banned medicines in Yenagoa metropolis, Bayelsa State capital, Nigeria. The study was a descriptive survey. The population were the residents of Yenagoa metropolis between ages 10 and 45. A total of 166 sample size was determined by using Cochran's formula for cluster sampling technique. Questionnaires were administered to obtain data for the study. Spearman Rank Correlation formula was adopted in analyzing the data at 95% confidence interval level. The result revealed that, the prevalent use of banned medicines in Yenagoa metropolis was positively and significantly correlated to physical and physiological dependence of users of these medicines ( $r = +0.862$ ), economic benefits of the dealers of these medicines ( $r = +0.913$ ); and corrupt officers of the government agencies in charge of drug laws ( $r = +0.988$ ). It is recommended that the Ministry of Health and the NDLEA should embark on vigorous enlightenment via mass media on the dangers of and punishment for utilization of banned medicines. The Government should engage unemployed persons with social empowerment programmes to discourage them from indulging in illegal business dealings like purchase and distribution of banned medicines within the metropolis, and indeed, the country at large.

**Keywords:** Banned Medicines; Prevalence; Physiological Dependence; Economic Benefits and Corrupt Officers

### Introduction

Medicines are chemical substances with body and mind inducing effects when taken. These effects can be manifested physically or emotionally through changes in one's behaviour and the level of comfort felt in the body since they have the ability to relieve discomfort or pains. Medicines are primarily used to cure illnesses and diseases. However, there are various types of medicines with different uses which affect the body differently - pain relieving effects, curing effects, stimulating effects, etc. Despite these positive effects, medicines have negative effects such as influencing one's behaviour negatively or damaging body

organs especially when taken without the normal dosage via doctors or pharmacists' prescription or when taken for another purpose other than the original purpose (abused). In fact, the only difference between medicines and poison is the dosage. Overdose or abuse of medicines therefore damages body organs and make people behave abnormally by committing heinous crimes in the society such as armed robbery, violence, rape, etc. or in extreme cases - murder [1].

Banned medicines are medicines whose consumption by members of the public is prohibited by the government. Members of the public are punished when caught consuming such medicines,

such as with jail terms, fine, etc. The government of Nigeria through the Nigerian Drug Law Enforcement Agency (NDLEA) and National Agency for Food and Drug Administration and Control (NAFDAC) ordered the ban of consumption of certain medicines that are commonly abused by people in the country. These medicines include: Codeine with its stimulating effects that make people lose their memory and coordination; Tramadol with its stimulating, libido and delay ejaculation effects; Rohypnol with anesthetic effects which has been found to be commonly used for date rape; Novalgin and Analgin with their marrow depression effects, Gentamicin 280mg, PiperazineOxyphenbutazone, Phenolphenthalein, Nitrofurazone, quiniodochlor, Dipyrone (Metamizole), Rosiglitazone, Droperidol, Cisapride, Furazolidone, Nimisulide, Phenylpropanolamine, etc. [2].

Codeine was banned in 2018 following a study that reported the rate of its abuse and addiction among many persons in Nigeria; Tramadol also is no longer sold in pharmacies, and the possession of it has been criminalized following its addictive and negative effects as reported in many studies; NAFDAC banned Novalgin and Analgin in 2005 after two secondary school girls suffered severe adverse drug reaction from their consumption. Similarly, in 2013, NAFDAC banned Rohypnol after Cynthia Osokogu was raped and killed when she was drugged with it [2]. According to a 2014 NDLEA report, banned medicines use and abuse has been on the increase in Nigeria. Despite the effort of the anti-drug agencies to combat the menace, the prevalence and utilization of these medicines in Bayelsa State is quite alarming and has become a concern to the State. This is because most of the deaths recorded and crimes committed by individuals are attributed to the use of these banned medicines whose prevalence in the State cannot be quantified. However, current search indicates that factors responsible for the prevalence of use of banned medicines within Yenagoa metropolis have not been properly identified and addressed. In his research, Ibrahim opined that 93% of the respondents were addicted to the consumption of tramadol to relieve tiredness and for sexual intercourse [2]. Ebikapaye posited that, in Yenagoa Local Government, four (4) out of every ten (10) young adults you meet on the street abuse medicines [3]. To Ikenna, the reasons for prevalence and use of illicit medicines were irregular migration which accounted for 61.3%, trauma (24.9%), unemployment (3.7%) and peer pressure (6.5%) [4].

With benefits of hindsight, prevalent use of banned medicines is geometrical in Yenagoa metropolis. So, what factors are responsible for this? This has created a gap in knowledge. Thus, this study hypothesized three factors to include: physical and physiological dependence by the users, economic benefits of dealers, and finally, corruption among some officers of government agencies in charge of drug laws. These factors have not been empirically verified by previous studies.

### Objective of the Study

The objective of the study is to investigate the prevalent use of banned medicines in Yenagoa Metropolis and make recommendations. To do this, three hypothesis were formulated, namely:

- There is no significant positive correlation between physical and physiological dependence of users of banned medicines and prevalent use in Yenagoa metropolis.
- There is no significant positive correlation between economic benefits of dealers in banned medicines and their prevalent use in Yenagoa metropolis.
- There is no significant positive correlation between corrupt officers of government agencies in charge of drug laws and the prevalent use of banned medicines in Yenagoa metropolis

### Conceptual review and theoretical framework

#### Banned medicines in Nigeria

Banned medicines are prohibited medicines or substances by the Nigerian government. The abuse of medicines among youth has become a disturbing trend in Nigeria. This recently led to the federal government's ban on certain medicines like codeine as an active pharmaceutical ingredient for making cough syrup. The abuse of prescription medicines is so rampant and has gone beyond codeine. The ban on codeine-related medicines might only spur many youths to look for alternative medicines to satisfy their urge. Some of the over-the-counter medicines which have been abused depending on the defined use include antibiotics, antidiarrhoeals, laxatives, pain-relieving medicines, sedatives, amphetamines, etc. Below are some of the ban medicines in Nigeria and Bayelsa State in particular.

### Tramadol

This is a pain killer now used as an ecstasy drug by youths in Nigeria. Tramadol is an opioid pain medication used to treat moderate to severe pain. It is meant to be prescribed only by a physician; unfortunately, the drug has found its way to the streets. The pill comes in different milligrams from 50 to 500. The recommended analgesic dose of tramadol is 50 to 100mg, with a maximum of 200mg in severe treatment cases. Anything above 200mg will cause a massive euphoric effect similar to what is gotten from taking marijuana, or other opiate medications such as oxycodone etc. Tramadol is used by some men to prevent quick ejaculation. One or two tablets of 500mg is believed by some to increase libido and staying in power when the male user wants to impress a woman. The side effect of tramadol, when taken in high dosage, includes nausea, diarrhea, loss of appetite, dry mouth. Long term abuse can lead to convulsion, seizures, serious health damage, birth defects in pregnant women or even death [5].

### Rohypnol

This drug is known by many slang names such as Roko, Roofies, Roche, Renfol etc. Ideally, it should strictly be a prescription drug but can easily be purchased easily on the streets and across the counter in Nigeria. It is a tranquilizer, ten times more potent than valium. Rohypnol is used to treat severe insomnia and for anesthetic purposes. The drug is relatively cheap and gives the user a hazy feeling. The drug is often taken with alcoholic or assorted drinks. Addicts could sometimes crush the pill to be taken with marijuana or other herbs. This could also be injected. Rohypnol is nearly tasteless making it a pill of choice for drugging unsuspecting victims. The pill has a reputation of a "date-rape" drug because of its paralyzing effect. The effects start 20-30 minutes after taking the drug, peaks within two hours and may persist for eight or even 12 hours. A person can be so incapacitated (unable to act) that he or she collapses. The taker lies on the floor, eyes open, able to observe events but completely unable to move. Afterwards, memory is impaired and they cannot recall anything. The person also experiences loss of muscle control, confusion, drowsiness and amnesia. This drug was banned in 2015 by NAFDAC after Cynthia Osokogu was drugged with it, raped and killed [5].

### Alabukun

This is a cheap pain killer which can be gotten from hawkers, street side vendors and drug store. The drug is usually hawked around pubs. People swallowing Alabukun with alcohol have become a common sight not regarding the medical implication of doing so. Alabukun is a locally produced analgesic in powder form. According to its manufacturer, it is a combination of aspirin (Acetylsalicylic Acid -760mg) and Caffeine. Some Nigerians take it to neutralize alcohol or to treat hangover. Some mix it with cocaine and other substances that can be sniffed. This drug, which is a local medicine, has been highly abused in Nigeria although it was meant for treatment of common ailments such as cold, headaches and feverish conditions [6].

### Aspirin

It is also known as Tylenol. It is an over-the-counter pain killer but also sold on the streets and by road-side hawkers. The drug, because of its chemical composition, has an ability to numb the muscles, emotional pains and sometimes creates an exciting effect on the user. Most abusers use it to kill desperation, emotional trauma, and depression among others. To get the euphoric effect, the pills are usually taken with alcohol or soft drinks. Some crush the pills and mix with other substances for a 'higher effect'. Unfortunately, this drug when abused can become harmful to the body both physically and mentally. Abuse of Aspirin damages the liver and the heart. The drug is not good for diabetic and hypertensive patients. Aspirin without underlying prescribed condition can lead to intoxication and produce a condition of inebriation [7].

### Valium

This is also known as diazepam. This is one of the medicines which are not meant to be sold without a doctor's prescription. Valium unfortunately, is still being sold over the counter without prescription. It is also sold in the black market and can be found on the streets. Valium is an addictive benzodiazepine with longer lasting effect than other medicines in its class. The drug can be administered via oral injection or as a tablet. It can also be crushed, injected or mixed with other medicines. Valium affects the brain and produces fast euphoric high. Over time, it is hard for the abuser's brain to function normally without the drug. Use of diazepam can

be very helpful if used according to prescription, but when abused its negative effects can heavily outweigh the benefits [8].

### Codeine

Codeine is a common ingredient in cough medicine meant to relieve pain and to stop cough. Codeine is one of the most abused medicines in Nigeria. People buy bottles of cough medicines to hype themselves coughing and without instructions. Codeine is very addictive. Abusing codeine could lead to seizure, loss of memory, loss of coordination or even death. Codeine was banned in 2018 following a study that reported the rate it is abused by young people in Nigeria [2].

### Theoretical framework

The theoretical framework that underlined this work is the strain theory as propounded by Robert Agnew in 1938. The theory stated that certain strains or anxieties increase the likelihood of crimes. These strains (pressures) lead to negative emotions such as frustrations and anger [9]. These emotions create pressure for corrective actions, and crime is one of the possible responses. Crime may be used to reduce or escape from strain, seek revenge against the source of strain or related target (the society) or to alleviate negative emotions. For instance, individuals experiencing economic hardship or chronic unemployment or being fired from his/her job may engage in illegal medicines deals to generate money, or take illicit medicines with the aim to feel better from the frustration due to joblessness.

### Empirical review

Ibrahim carried out a study on tramadol abuse among patients attending an addiction clinic in North-Eastern Nigeria [2]. There were 3000 respondents in the study. Questionnaire was used to obtain data from them. Simple percentage method of data analysis was used. The result revealed that tramadol use in the study area was to relieve tiredness and promote prolong sexual intercourse. In the study, over 93% of tramadol users were males and 7% females with age range of 18-37 years.

Ebikapaye carried out a study on the rapid increase in the prevalence of substance use among adolescents in Yenagoa Local government Area. 750 respondents participated in the study. The instruments for data collection were questionnaires. Chi-square was used for the data analysis. The result revealed that, four out of every ten young adult on the street abuse medicines [3].

On his part, Ikenna investigated the prevalence of drug use and illicit trafficking in Nigeria with a study population of 382 with 238 males and 144 females. It was a descriptive cross sectional study, applying judgmental and snowballing sampling techniques. The study comprised qualitative and quantitative methods of data collection and simple percentage technique was used for data analysis. The results revealed that the reasons for prevalence and use of illicit medicines were irregular migration (61.3%), trauma (24.9%), unemployment (3.7%) and peer pressure (6.5%) [4].

Ibrahim, Abubakar, and Kabiru investigated the burden of drug abuse in Nigeria. There were 4000 respondents in the study with a descriptive statistical analysis technique. The result revealed that the most abused and prevalent medicines were codeine, cannabis, cocaine, amphetamine, heroin, diazepam, cough syrup and tramadol among students and youths. The verified reasons for the prevalence were to increase performance, to reduce stress and to derive pleasure [2].

### Materials and Methods

This study employs a descriptive survey design to examine prevalent use of banned medicines in Yenagoa, the capital of Bayelsa State, Nigeria. The population covers adult males and female residing in Yenagoa metropolis. Cluster sampling technique was adopted, where the participants were divided into subgroups comprising 20 communities; a simple random sampling technique was applied to each cluster. The sample size of 166 respondents was determined with the aid of Cochran's formula  $n = Z^2(P)(1-P)/e^2$ . The instrument for data collection was a structured closed ended questionnaire with a reliability of 0.87 Cronbach Alpha results. It had five sections, viz: Section A - personal information of the respondents; Section B - questions on prevalence of banned medicines; Section C - questions on physical and physiological dependence on banned medicines; Section D - questions on economic benefits of the dealers of banned medicines; and Section E - questions on corrupt officers of government agencies in charge of drug laws. Spearman rank Correlation coefficient was calculated to establish the degree of relationships between the predictors. Statistical Package for Social Sciences (SPSS) V.23 was used for the analysis.

### Ethical consideration

The participants were informed about the research and its objectives. They were assured of confidentiality during and after

the study; and that information given would be used only for the research purpose. They consented.

**Results**

Table 1 shows the demographic characteristics of the respondents. 148 respondents filled and returned the questionnaires out 166 administered in the Yenagoa metropolis. 78(52.7%) were males and 70(47.3%) were females. For age, 32(21.6%) were within age bracket 10-18; 45 (30.4%) within age bracket 19-27; 40 (27.%) within age bracket 28-36; while 31(20.9%) fell within age bracket 37- 45. For occupation, Students = 43(29.1%), Civil Servants = 23(15.5%); Traders = 27(18.2%); Farmers = 15(10.1%), while Self-Employed reported 40(27.0%).

**Table 2: Factors Influencing Prevalent Use of Banned Medicines**

Physical and physiological Dependence of Users – From this Table, it is showed that the null hypothesis which states that “there is no significant relationship between prevalent use of

Sex:	Frequency	Percentage (%)
Male	78	52.7
Female	70	47.3
Total	148	100
Age:	-	-
10 – 18	32	21.6
19 – 27	45	30.4
26 – 36	40	27.0
37 – 45	41	20.9
Total	148	100
Occupation Status	-	-
Students	43	29.1
Civil Servants	23	15.5
Traders	27	18.2
Farmers	15	10.1
Self-employed	40	27.0
Total	148	100

**Table 1:** Demographic characteristics.

Source: Researchers’ SPSS Computation, 2023.

Factors	Spearman Corr. Coefficient	p-value	Statistical Significance @ 0.05
Physical/Physiological Dependence	+0.862	0.000	Significant
Economic Benefits of Dealers	+0.913	0.000	Significant
Corrupt Officers of Government Agencies in charge of laws on banned drugs	+0.988	0.000	Significant

**Table 2:** Factors influencing use of banned medicines.

Source: Researchers’ SPSS Computation, 2023.

banned medicines and physical/physiological dependence by users in Yenagoa metropolis was rejected ( $r = +0.862$ ) indicating or suggesting a positive and significant correlation between physical and physiological dependence on banned medicines and users in Yenagoa metropolis [ $p < 0.05$ ]. It can be inferred that the prevalent use of banned medicines has a strong nexus with this predictor.

Economic Benefits of the Dealers – Further, the hypothesis which states that “there is no significant correlation between prevalent use of banned medicines and economic benefits of the

dealers in Yenagoa metropolis” was rejected [ $r = +0.913, p < 0.05$ ] as shown in Table 2. This means that there is a strong positive correlation between the two variables. It presupposes that so long as the dealers continue to benefit from the sale and distributions of these banned medicines, the prevalent use will be sustained and possibly continue on the upwards trend.

Corrupt Officers of the government agencies in charge of drug laws – Table 2 also shows that, the null hypothesis which states that

“there is no significant positive correlation between prevalent use of banned medicines and corrupt officers of government agencies in charge of drug laws in Yenagoa metropolis” was rejected [ $r = +0.988, p < 0.05$ ].

### Discussion of Findings

From the findings of this study, prevalent use of banned medicines in Yenagoa metropolis, Bayelsa State, Nigeria is strongly correlated to physical and physiological dependence of users on these medicines, the economic benefits of the dealers, as well as to the corrupt nature of some officers of government agencies in charge of drug laws. These factors have both individualistic and combined effects on the individuals and the society and are additions to factors discovered in findings in the works of previous researchers [10].

As people are addicted to the use of these medicines in finding physical and physiological reliefs, they would continue to depend on them and the dependence has been highly noticed, especially among the youth population. This has resulted in the prevalence of these banned medicines which has continued to be on the increase. This finding is in line with previous findings which states that, 93% of respondents were addicted to the consumption of tramadol to relieve tiredness and sustain long sexual intercourse; instigate misbehavior among youth and younger people of secondary school age brackets leading to delinquent behavior and deranged mental acuity [11-15].

In as much as illicit dealings on banned medicines remain lucrative in Yenagoa metropolis, the prevalence would keep on increasing. Individuals experiencing economic hardship or chronic unemployment or who are fired from their legitimate jobs could engage in illegal medicines dealings to generate money to counter the strain or pressures from wants and economic hardship. The nexus in this research between economic factor and the sale and distribution of banned medicines synchronizes firmly with the strain theory that certain strains or anxieties increase the likelihood of crimes. These strains (pressures) lead to negative emotions such as frustrations and anger [16].

Finally, the presence of corrupt officers in charge of drug laws like some officers in the Nigerian Police Force and NDLEA who pay

less attention to their primary assignment but concentrate more on taking bribes from dealers of banned medicines, would always birth utilization of banned medicines. This finding finds footing on the sack of 35 corrupt officers by NDLEA from its employ [17].

### Conclusion/Recommendations

The prevalence and utilization of banned medicines in Yenagoa metropolis cannot be overemphasized. The present study has empirically examined possible factors that encourage the prevalence and utilization of these medicines in Yenagoa metropolis, Bayelsa State, Nigeria. It was found that there is a positive and significant correlation between factors such as physical and physiological dependence of users of these medicines, the economic benefits of the dealer, as well as the attitudes of corrupt officers of the government agencies in charge of drug laws. The researchers therefore make the following recommendations:

- The Ministry of Health and National Drug Laws Enforcement Agency (NDLEA) should embark on vigorous enlightenment campaign via radio and television on the dangers of using banned medicines and its attendant consequences.
- Government, should through social empowerment programmes engage the unemployed to discourage them from indulging in illegal businesses like sale and distribution of banned medicines.
- Drug laws enforcement agencies such as the Police and the NDLEA should do more to rid the agencies of corrupt officers and ensure proper border patrols to nib in the bud, sale and distribution of banned medicines; bring to book, anyone caught in this illegal drug dealing.

### Conflict of Interest

None.

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