Social factors of Health and Drug Addiction in Calabar Metropolis of Cross River State, Nigeria

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Abstract
Social dimensions of health and wellbeing of drug addict are factors that propels and as well determine the wellbeing of drug addicts in any social environment. The study specifically examine social factors such as social environment, educational level of people and social network as it influences drug addiction in Calabar Metropolis of Cross River State, Nigeria. Literature was reviewed on these variables while the social disorganization theory was employed as the study's theoretical framework. The research design employed was the Expost Facto with primary data from Federal Neuropsychiatric Hospital Calabar and University of Calabar Teaching Hospital. The study sampling techniques employed were purposive; convenience and simple sampling technique with a sample of 388 but after administration and collections, 381 instruments were retrieved and used for analysis. The two instruments-Questionnaire on Social Factors and Drug Addiction (QSFDA) and Interview Guide of Drug Addiction were used for the study. Data was analyzed using the Pearson Product Moment Correlation Coefficient, One Way Analysis of Variance (ANOVA) and Multiple Linear Regression analytical tools at 0.05 level of significance. From the analysis, findings revealed that the social environment an individual resides, level of education and social network have a significant influence on drug addiction in Calabar Metropolis of Cross River State, Nigeria. From the analysis, several recommendations were made and one of such is that, to deal with the dichotomy between social environment and drug addition, government through its agency, the National Drug Law Enforcement Agency should set up community task force in rural communities to check activities of addict in rural communities mostly in areas where they cultivate these hard substance, so that, such could be controlled. It was concluded that socio-economic factors at multiple levels have an association with the etiology of drug use and exacerbation of problems among drug users

Key words: Drug addicts, Expost Facto, health, social dimensions, wellbeing,

Introduction
Societies in all parts of the world have used substances that suppress pain and sorrow and also provide pleasurable sensations when consumed to promote the holistic wellbeing of individuals (Bernstein, 2008). These drugs are very important to human well-being but wherein it use surpass recommended dosage, these drugs poses a serious threat
to health (American Psychiatric Association, 2013). In everyday life, the excessive intake of hard substance or drugs brings severe health consequence to the user and when its use is uncontrollable, it leads to addiction which is an undesirable behavior by drug use. The wellbeing of individual and society is paramount and a necessity for societal growth and development. In the light of this, The World Health Organisation (WHO) states that “wellbeing exists in two dimensions, subjective and objective. It comprises an individual’s experience of their life as well as a comparison of life circumstances with social norms and values” which include health, education, work, social relationships, built and natural environments, security, civic engagement and governance, housing and work-life balance. Subjective experiences include a person’s overall sense of wellbeing, psychological functioning and affective states.

However, mans’ wellbeing in relations to drug use revolves around objectives and subjective dimension since drug use affects the health, education, work, social relationship, social environment, threat to security, civic activities, psychological functioning and an individual affective states. Though drugs including alcohol, tobacco and caffeine products are long traded products of enormous economic importance that have helped shape civilizations and the patterns of globalization, it adverse effect when they are used out of proportion is endemic to the health and wellbeing of the user and the society at large (Bernstein, 2008; Castells, 2000; Standage, 2010). For example, Tobacco use or smoking of hard substance is one of the leading causes of mortality and morbidity in recent times (Aina & Olorunsola, 2008). According to the World Health Organization (WHO) data, nearly 1 billion people in the world smoke tobacco which is a great economic burden on health systems and families of victim especially in developing countries with limited resources like Nigeria (Ajayi & Ekundayo, 2010). According to the Global Adult Tobacco Survey (GATS) data of Turkey, the smoking prevalence decreased among adults from 31.2% (16.0 million) in 2008 to 27.1% (14.8 million) in 2012. In Turkey, 41.5% of men and 13.1% of women currently smoke tobacco while in Nigeria 41.3% (13.5 million) people smoke tobacco in 2015 (NBS, 2016)

In Nigeria, alcohol and other substance of abuse is now a house hold problem (NBS, 2016). It is on this note, United Nations Office on Drugs and Crime (UNODC) World Report (2011) revealed that Nigeria tops the list of countries in Africa in the use of illicit drugs. According to another report by National Survey on Drug Use and Health, (2011) the annual prevalence rate for cannabis use in Africa is between 4% - 14%, with the Nigeria prevalence put at about 14% in the region, and is rated as the highest in the world. The annual prevalence of cocaine use in Africa in 2009 ranged between 0.2% and 0.8%, Nigeria prevalence is put at 0.7%, which again is among the top consumers within the region. The annual prevalence for opiate use in Africa is estimated at between 0.2% and 0.6%. In Nigeria the opiate prevalence rate was estimated to have increased from approximately 0.6% to 0.7% in 2009. This means that Nigeria is housing about 500,000 substance users. The prevalence rate for amphetamine use in Africa was put at between 0.2% and 1.4% and the Nigeria prevalence is put at 1.4%, also the highest in Africa (Ajayi, et al., 2010).

Substance abuse or drug addiction which is a broad spectrum, multi-etiological disorder has many negative long-lasting effects on individual well-being, particularly that
of young adults (Khodarahimi & Rezaye, 2012). The various forms taken by substance abuse disorders include health risk behaviours that are often linked together, and, as a rule, all of these disorders originate in three etiological factors that comprise: psychopathology, personality characteristics, and a negative social environment (Dryfoos, 1990). Several studies have examined the prevalence (Anumonye, 1980), epidemiology (Obot, 1993), prevention, (Asuni 1990; NDLEA 1994), pattern, (Odejide, Ogunleya, & Meletoyitan, 1993), rate, (Ebie & Pela, 1981), trends, (Adamson, Onifade, & Ogunwale, 2010), and influence of substance use disorders in Nigeria (Gureje, & Olley, 1993). It should be noted that Calabar Metropolis consists of Calabar Municipality and Calabar South Local Government area, addiction constitutes a health problem that affects many families and the general wellbeing of individual. Therefore, the study intends to investigate the social determinant that affects drug addiction in Calabar Metropolis of Cross River State, Nigeria such, social environment, social network as well as individual level of education. These factors form the main focus of this paper or article.

**Statement of the problem**

Drugs generally are good for relief and restoration of the human cells to normal when they are properly used and recommended by a professional physician (Ukpong, 2004). However, the indiscriminate use of drugs and other hard substance like alcohol and stimulants affects the health, social and psychological wellbeing of the individual. This has in recent times posed a serious health threats to abusers of these drugs and other hard substances. It indiscriminate use in Calabar Metropolis of Cross River State causes a psychological despair where the victims are mostly vulnerable to abnormal behavior leading to accidents, death, rape and other crimes.

However, one could wonder, the social dimensions or determinant as could be used interchangeably that may have been responsible for this frequent or prevalence of addiction in Calabar Metropolis of Cross River State. But there exist literature gaps is this area on how causes of addictions are socially motivated than psychological. This is could be, because social norms and value system could in most cases trigger the use of drug without knowing the adverse consequence this may have on the health and wellbeing of the individual. Beyond culture, there may be social and economic conditions such as the residential environment of individual, level of education or awareness about the effect of drugs and the social network of an individual that may trigger addiction.

In Calabar Metropolis of Cross River State, the physical, psychological, social and economic consequences of the drug problems among individual has been a thing of concern as most victims have falling to the cold hand of untimely death through motor accidents, crime and incarceration. This phenomenon though cuts across all ages, but more common among young people who persistently abuse substances and in effect experience an array of problems including academic difficulties, health related problems (including mental health) involvement in social vices such as stealing, bullying, rape, secret cult activities which may have negative consequences on family members, community and the entire society.

Furthermore, in Calabar Metropolis of Cross River State, despite the state recognition as the tourist center of the nation, drug addicts and mentally deranged persons still parades her major streets. The gruesome problems which drug addiction poses to the
individuals, groups and entire society constitute a threat to the effective functioning and health wellbeing of victims. Furthermore, the persistent increase in the production and usage of these drugs in Calabar Metropolis have endangered many young people (men and women), who have copied, adopted or acquired the lifestyle of drug addicts living in the area. Effort to curb this phenomenon by government through NAFDAC, NDLEA and Non-Governmental Organization has proved abortive as previous studies in Nigeria on drug addiction have dealt only on the problem as it manifests in different population and the effects on the individual health condition but not of the social indicators of the problem. Hence, there exists a gap in knowing the social variables such as level of education, social environment and social network as causal variables to the rate of addiction in Calabar Metropolis which informed this piece.

Objectives of study
The general objective of this study is to investigate social factors of health and drug addiction in Calabar Metropolis of Cross River State, Nigeria. The specific objectives of the study seek to:

1. Examine if social environment have a significant influence on drug addiction in Calabar Metropolis of Cross River State, Nigeria
2. Determine if educational level have a significant influence on drug addiction in Calabar Metropolis of Cross River State, Nigeria
3. Evaluate the impact of social network on drug addiction in Calabar Metropolis of Cross River State, Nigeria

Statement of hypotheses
The following hypotheses are raised to guide the study:

1. Social environment does not have a significant influence on drug addiction in Calabar Metropolis of Cross River State, Nigeria
2. Educational level of individual does not have a significant influence on drug addiction in Calabar Metropolis of Cross River State, Nigeria
3. There is no significant impact of social network on drug addiction in Calabar Metropolis of Cross River State, Nigeria

2.1 Literature review

Benavides & Bibb (2004) noted the social environment where people live could be a stimulant to drug use and addiction. Individual who reside in an environment where hard nicotine or other substances are produced are likely to become addicts. That is, the uses of these substances in those environments or societies are not only a historic process, social or biological but it may be environmental in nature. Environmental issues are increasingly becoming a focus of many communities lifestyle choices. Greener living is also a policy of governments, communities, law enforcement that promotes more environmentally social
decisions and condemns destruction and pollution (Benavides & Bibb, 2004; Gossop, 2001).

One of the outstanding activities in Calabar Metropolis of Cross River State is the Calabar Carnival festival, which is annually celebrated all over in December. It was proposed by erstwhile Governor Donald Duke, to make the state the hub for tourism and hospitality in Nigeria. The Calabar Carnival festival, popularly called “The African Biggest Street Party” was initiated in 2004 and during this period, a lot of drug related activities are observable. The vision was envisaged to make the state the number one tourism destination for Nigerian and tourists all over the world. Usually, the celebration begins with dry runs to enable participants' bands to get familiar optimally at the main event. Although, much have been said on the benefits and usefulness of the cultural Calabar festival such as, the promotion of our rich cultural heritage, improvement of our internally generated revenue in the state, while Nigeria will generate more foreign currency earnings coming in to ease the pains of the scarcity of forex. Nothing had been said about the consequences of flux of tourists with movement of various kinds of dangerous drugs during this period and thereafter.

Within a short span of years, particularly from the period of Calabar Carnival started 2004 till date, there had been a witnessed galloping increase in the use of drugs among youths who participate in the street party. Even though, the abuse of drugs in it's entirely is not alien to the Nigeria culture. Intoxicating substances such as alcohol has been in production and use in most communities such as Henshaw Town, Anantigha, Idundu, Akasoko, Atimbo among others (Ukpong, 2004). Uptill 1980’s the population was not yet well introduced to the use of other hard drugs, till when the country was caught up in the web of international drug expo. Indeed, the use of cocaine, heroin and other hard drug spread to Calabar by these tourists. There is evidence that some of the youths who participate in the Calabar Carnival Festival acquired the habit of taking hard drugs through peers groups and friends who distribute them in coke bottles, canned juice, Eva bottled water, etc. during the parades. Such dangerous drugs include Tramadol, Coedine, and Amphetamides etc. Although this view point is one of the strongest hypotheses on the introduction of hard drugs in Calabar Metropolis, the position of Calabar as an Export Free Zone (EFZ) and tourist destination act as a transit point in the international drug trade and the involvement of the Nigerian tourists and businessmen involving in the Calabar Carnival cannot be underestimated (Olanniyan, 2003).

Okoza et al, (2009), Chikere, and Mayowa, (2011), Owoaje, and Bello (2010) Augustine, and Godiya, (2014) observed that, level of education, most especially tertiary level has been proven to be a consistent predictor to substance abuse (National Survey on Drug Use and Health, 2011). Perhaps, the university is serving as an enabling vehicle for the utilization of independence from homes and guidance by the students. At the same time, education is one of the principal means of preventing drug abuse. It should be appreciated, however, that preventive education is a process which will produce results only in the long term, in particular with the close cooperation of parents.

Oshodi, Aina and Onajole (2010) reported that, despite worldwide concern and education about psychoactive substances, many adolescents have limited awareness of their adverse consequences. They further explained that curiosity, social pressure and peer group influence are noted to be primary reasons for substance misuse. Makanjuola,
Daramola and Obembe (2007), Aina and Olorunsola (2008), and Buddy (2009) lamented that a substantial percentage of the national budgetary allocation is utilized for treatment and rehabilitation of people with substance use problems in Nigeria. Unfortunately, scientifically validated information on the overall effectiveness, and cost-effectiveness of various approaches, is not usually available.

The relationship between substance use and academic outcomes, however, clearly has the potential to be bidirectional. While substance use during adolescence is associated with later academic problems, early school failure and low attachment to school have been identified as 3 leading risk factors for substance use, as well as good predictors of low educational attainment in the future, independent of drug use (Hawkins et al. 1992, Jessor & Jessor, 1978). Substance use appears to be both a cause and a result of academic problems, and disentangling these pathways is an empirical challenge.

Some previous researchers in health economics have investigated the causal link between substance use in high school and educational attainment. These researchers have focused on alcohol use. Cook and Moore (1993), for example, use data on high school seniors from the National Longitudinal Survey of Youth (NLSY) and an instrumental variables methodology to study the impact of frequent drinking (drinking on at least two days in the past week) on the number of years of education completed. Using state-level alcohol policies as instruments, they find that seniors who are frequent drinkers complete 2.3 fewer years of college compared to seniors who are not frequent drinkers (Cook & Moore 1993). More recently, Koch & Ribar (2001), also using a sample from the NLSY, estimate the effect of the age of initiation of alcohol use on the number of years of schooling completed by age 25. They demonstrate that state-level alcohol policies are not good predictors of alcohol use initiation, which casts doubt on their value as identifying variables in this case. As an alternative approach, they take advantage of data on siblings and estimate:

1. family fixed effects models; and
2. instrumental variables models using sibling age of alcohol use initiation as an instrument.

The findings suggest that at most, the age of alcohol use initiation increases the years of schooling completed by 0.47 years for men and by 0.36 years for women. This upper bound result comes from the sibling IV model, which relies on the assumption that each respondent’s sibling’s age of drinking initiation is exogenous to the model. As the authors acknowledge, this assumption is difficult to defend, as many unobserved family and environmental characteristics, such as a family history of alcoholism, are likely to affect both siblings’ drinking behaviors and educational outcomes.

Two previous studies in the health economics literature focus on estimating the effect of marijuana use on high school completion. Bray et al. (2000), using data on 1,392 students from a southeastern US public school system, report that marijuana initiation during high school more than doubles the odds of high school dropout. Similarly, Yamada et al. (1996), based on data on high school seniors from the National Longitudinal Survey of Youth (NLSY), find that recent marijuana use is associated with a lower probability of
graduation. These results are consistent with findings from the psychology and sociology literature, which suggest that marijuana and other illicit drug use detract from the likelihood of high school completion (Kandel & Davies 1996; Newcomb & Bentler, 1985, 1986). However, none of these studies on illicit drug use adequately address the issue of whether drug use is a cause or just a correlate of high school dropout. If students who use drugs disproportionately have behavior problems, academic deficiencies or disadvantaged backgrounds, they may not have graduated from high school even if they hadn't used drugs. In order to control for concurrent factors that may confound an observed empirical relationship between substance use and educational attainment, some models include a set of personal and school characteristics measured in the current grade (10th or 12th grade). These variables are:

1. whether or not the standardized percentile score on mathematics achievement test is in the lowest quartile;
2. a dummy variable indicating daily smoking;
3. a dummy variable indicating that the principal thinks drugs are a moderate to serious problem at this school; and
4. a dummy variable indicating that the school policy is to expel students for a first occurrence of illegal drug possession at school.

Schinke, Botvin and Orland (2014) observed that poor social, economic circumstances and association affects the health of individual throughout life. People down the social ladder usually indulge in drug use due to the nature of interaction and association they come across in life. Due to this, they run at least twice the risk of serious illness and premature death of those near the top. Ilhan, Yildirim, Demirbas and Doğan (2009) in a study of substance use, social networks, and the geography of urban adolescents in Washington, USA, reported a prevalence of psychoactive substance use among the respondents as 65%. The authors reported that most popular psychoactive substances used such as alcohol, cannabis and cocaine were supplied by their associate or work partners. Substance Abuse and Mental Health Services Administration (SAMHSA), reported a high prevalence of cannabis use (12.8%) among young adults aged 18 to 25 years (Jeynes, 2009).

Scholars argued that company and individual has a powerful influence on the development of problem drinking among adult drug users who report considerable difficulty in abstaining from drugs when they are in certain social setting where drugs are used. The peer group reinforces the drug use habit through an inbuilt sub-cultural support system apart from pace for the initiation which they aid in establishing (Schinke, Botvin, Orland, 2014). Social learning is critical for human survival but sometimes it can go wrong if the behaviour being imitated is self-destructive, just as it is possible to learn bad behaviour from watching other people in the society. Therefore, environment where drugs are produce may likely influence individual behaviour towards drug consumption.

Types of drugs
Jyotika and Pradeep (2017) outlined and broadly classified drugs into Depressants, Narcotics, Stimulants and Hallucinogens. It sub typologies are as follows:
Depressants (Downers) Depressants, also known as sedatives and tranquilizers, are substances that can slow brain activity.

Barbiturates Barbiturates such as amobarbital, pentobarbital, phenobarbital, and secobarbital are depressants, or sedatives.

Narcotics Narcotics or opioids are drugs that are used medically for pain relief but that have strong addictive potential (Begley, 2001b).

Stimulants (Uppers) Stimulants act on the central nervous system to increase energy and alertness while suppressing appetite and fatigue. They include cocaine (such as freebase and ‘crack’), amphetamines (for example Dexedrine, Benzedrine), methamphetamine (methedrine: ‘speed’, ‘crystal’, ‘ice’, ‘crank’), MDMA(ecstasy), nicotine, caffeine and amphetamine like products (preludin or Ritalin.)

Amphetamines Amphetamine (contracted from alpha-methylphenethylamine) is a central nervous system (CNS) stimulant. Amphetamines are used in high doses for their euphoric rush.

Nicotine Nicotine is found in tobacco products including cigarettes, cigars, and smokeless tobacco. Tobacco is used by smoking, chewing, sucking and applying to the teeth and gums etc.

Hallucinogens Hallucinogens, also called psychedelics, are a class of drugs that produce sensory distortions or hallucinations, including major alterations in color perception and hearing.

Marijuana/Cannabis Marijuana is derived from the Cannabis sativa plant. It is generally classified as a hallucinogen because it can produce perceptual distortions or mild hallucinations.

PCP (Phencyclidine) Phencyclidine was developed as an anesthetic in the 1950s but was discontinued as such when its hallucinatory side effects were discovered.

All these drugs are widely used by individual mostly above dietary or medical prescription or recommendation. At such, they affect individual social and psychological functioning. The resultant effect is that, it can lead to crime, death and in most cases rape and road accidents

**Theoretical framework**

**Social disorganization theory**

The theory was developed in 1942 by Shaw and Henry. The theory involves around a state characterized by the breakdown of effective social control resulting in a lack of functional integration between groups conflicting social attitudes and personal maladjustment. The social disorganization theory lays the background to the idea that the closer individuals are bonding into an informal network of social relationship, the greater the degree of conformity. When individuals are in a heterogeneous environment where there is variance in economic and social status, there will be no value, which creates conflict situation.

This theory therefore predicts conditions where antisocial behaviours (addictive) are most likely to thrive due to the opportunities and lapses created by structural heterogeneity of values and consequently disorganization. Where there is cultural heterogeneity, conflict in values and rules, the social control mechanisms will also be in conflict, weak and minimally functional. Apparently, addicts will deviate from the norms because the rules in existence may either be too loose or too harsh in application.
Material and methods
The study utilized Expost Facto and descriptive survey design in the process of data collection. The essence of using this design is based on the fact that data was sourced from primary and secondary data. The study area is Calabar Metropolis of Cross River State which comprises of Calabar Municipality and Calabar South Local Government Areas. The population consists of Health care facilities (Federal Neuropsychiatric Hospital, General Hospital Calabar and University of Calabar Teaching Hospital) in and outpatient department record of drug addicts. Data from the study was elicited from 2015 to 2019. According to NDLEA/NDC (2015-2019) the total number inpatient drug addict in Calabar Metropolis is three hundred and eighty eight (388) addicts. This number exclude outpatient addict. However the total number of outpatient addict was unknown, hence emphasis was laid on inpatient addicts. Since the study is purely qualitative through interviews and case studies, a total of 5 to 6 case studies interviews were conducted. This study sample was due to the enormity of the subject or problem under investigation (in patient addicts). The addicts were selected at Federal Neuropsychiatric hospital, Calabar and University of Calabar Teaching Hospital. The research adopted three sampling techniques- purposive convenience and simple sampling technique. The purposive sampling technique was used in selecting Departments and units that specialized on drug related cases in the Hospital. The convenience sampling was used to select participants into the study at a time that is convenience for the researcher after proper arrangement and consultation was made with hospital management and participants. The instruments that were used in collecting data from the field for this study were the questionnaire and case studies interview guide. The questionnaire was titled- Questionnaire on Social Factors and Drug Addiction (QSFDA) and Social Factors of Drug and Addiction Interview Guide (SFDAIG). Items for the instruments were designed as follows;

- Has your social environment influenced you?
- Does drug environment enhance the prevalence of addiction?
- Whether level of education enhances drug addiction?
- Does people level of awareness improves the knowledge of drug addiction?
- Dose association with addict cause addiction?
- Does drug addiction affect the social functioning of individuals?

To establish the internal consistency of the instrument, a pilot test was conducted in General Hospital which was not part of the health institution for the study to establish the reliability of the instrument, from the test, a reliability coefficient of 0.86 was arrived at. This result showed the instrument is reliable and internally consistent, The researcher with the help of a research assistant and heads of units and departments helped to administer the research instrument to the respondents. Quantitative data was coded in the SPSS version 21 and analyzed with Pearson Product Moment Correlation Coefficient, One Way Analysis of Varian (ANOVA) and Linear Regression analytical tools at 0.05 level of significance while qualitative data was transcribed and analyzed for better triangulation and backing of the quantitative data.
Results

Hypothesis one
Social environment does not have a significant influence on drug addiction in Calabar Metropolis of Cross River State, Nigeria. In this hypothesis, the Independent variable is social environment while the dependent variable is drug addiction in Calabar Metropolis of Cross River State, Nigeria. To test the hypothesis, the linear regression model statistics was employed to test the relationship between social environment and drug addiction in in Calabar Metropolis of Cross River State, Nigeria as shown in Table 1 a, b and c from the first model summary result, it is statistical that there is a strong influence \( (R = .483^a) \) between social environment and drug addiction in Calabar Metropolis of Cross River State, Nigeria. The adjusted R square \( (R^2 = .225) \) also showed social environment and drug addiction in Calabar Metropolis of Cross River State, Nigeria (Adjusted \( R^2 = .225 \)) of the total variation of the disaggregated independent variable (, riverine environment, Calabar south environment, environment that produces drugs, carnival festival) as predictor indices of drug addiction. A similar significant result difference was obtained in the ANOVA model which also showed a significant F-ratio of 28.606, which was calculated against the critical F-ratio of 3.053 at 0.05 levels of significances and 3 degree of freedom.

The last tables of result from the coefficient regression analysis further revealed that there is significant relationship between social environment and drug addiction in Calabar Metropolis of Cross River State, Nigeria. In Table 4.12c showed that a strong relationship exists between social environment and drug addiction in Calabar Metropolis of Cross River State, Nigeria \( (\beta = .8.553 \ t = 381, P<.05) \). Thus, we reject \( H_0 \) and accept the \( H_1 \). This implies that there is a significant relationship between social environment and drug addiction in Calabar Metropolis of Cross River State, Nigeria. From the result and predictor variables, finding revealed that, drug addiction is most common among the riverine dwellers in the study area than other locations.

Table 1 Regression analysis for social environment and drug addiction in Calabar Metropolis (N=381).

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.483(^a)</td>
<td>.233</td>
<td>.225</td>
<td>.24791</td>
</tr>
</tbody>
</table>

\(^a\) Predictors: (Constant), riverine environment, Calabar south environment, environment that produces drugs, carnival festival

ANOVA\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>7.032</td>
<td>4</td>
<td>1.758</td>
<td>28.606</td>
<td>.000(^b)</td>
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<tr>
<td>Residual</td>
<td>23.109</td>
<td>376</td>
<td>.061</td>
<td>.061</td>
<td>.061</td>
</tr>
<tr>
<td>Total</td>
<td>30.142</td>
<td>380</td>
<td>.061</td>
<td>.061</td>
<td>.061</td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: Drug addiction
\(^b\) Predictors: (Constant), riverine environment, calabar south environment, environment that produces drugs, carnival festival
<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
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<th>Sig.</th>
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<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>.710</td>
<td>.083</td>
<td>8.553</td>
</tr>
<tr>
<td></td>
<td>carnival festival</td>
<td>.083</td>
<td>.036</td>
<td>.143</td>
</tr>
<tr>
<td>1</td>
<td>environment that produces drugs</td>
<td>-.022</td>
<td>.035</td>
<td>-.030</td>
</tr>
<tr>
<td></td>
<td>calabar south</td>
<td>-.012</td>
<td>.032</td>
<td>-.018</td>
</tr>
<tr>
<td>1</td>
<td>riverine environment</td>
<td>.249</td>
<td>.043</td>
<td>.366</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Drug addiction

Source: Field Survey, 2020/SPSS (Version 21.0 for Windows Output)

Hypothesis two

Educational level of individual does not have a significant influence on drug addiction in Calabar Metropolis of Cross River State, Nigeria as shown in Table 2. Data for testing hypothesis two were derived from response from respondents of the instrument and analyzed using the One Way Analysis of Variance (ANOVA) as presented in table 2. From the result as presented in the table 2, the independent variable is educational level while the dependent variable is drug addiction. To test the hypothesis, One Way Analysis of Variance was used to determine the significant influence of individual educational level and drug addiction. The dependent variable - individual educational level was disaggregated into three level of measurement (highly educated, fairly educated and not educated). The result in the table 3 revealed that, there are three groups the calculated $F$ ratio of 110.225 is statistically significant when compared with the critical $F$-ratio of 3.040 at 2, 381 degree of freedom. This means that the null hypothesis which states that, There is no significant influence of an individual educational level on drug addiction in Calabar Metropolis of Cross River State, Nigeria was rejected following decision rule which states that, accept the null hypothesis if the calculated $F$-value if greater than the tabulated $F$-value. Finally, since the calculated $F$-value of 110.225 was found greater that the tabulated or critical table value of 3.040, the null hypothesis was however rejected while the alternate was accepted. This implies that there is no significant influence of an individual educational level on drug addiction in Calabar Metropolis of Cross River State, Nigeria.
Table 2 ANOVA descriptive analysis for the influence of individual educational level of knowledge and drug addiction

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
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<tr>
<td>highly educated</td>
<td>98</td>
<td>1.000</td>
<td>.00000</td>
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<tr>
<td>fairly educated</td>
<td>205</td>
<td>1.000</td>
<td>.00000</td>
</tr>
<tr>
<td>not educated</td>
<td>78</td>
<td>1.423</td>
<td>.49725</td>
</tr>
<tr>
<td>Total</td>
<td>381</td>
<td>1.086</td>
<td>.28164</td>
</tr>
</tbody>
</table>

ANOVA
drug addiction

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>11.103</td>
<td>2</td>
<td>5.552</td>
<td>110.225</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>19.038</td>
<td>378</td>
<td>.050</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30.142</td>
<td>380</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Means Plots

Hypothesis three

Ho There is no significant impact social network on drug addiction in Calabar Metropolis of Cross River State, Nigeria
Hi There is a significant impact social network on drug addiction in Calabar Metropolis of Cross River State, Nigeria

Decision Rule
Accept Ho if calculated r value of $\leq 0.086$ 0.146 at 2 degrees of freedom (df) and 0.05 level of significance. Otherwise, reject the Ho and accept the Hi. To test hypothesis one, Pearson Product Moment Correlation Analysis was used. From the analysis, the calculated r value of $0.146^*$ was greater than 0.086 critical value at 0.05 level of significance. Since the calculated r of $0.146^*$ is greater than the critical r-value of 0.086 at .05 level of significance with 2 degree of freedom with this result, the null hypothesis which states that, there is no significant effect of social network on drug addiction in Calabar Metropolis of Cross River
State, Nigeria was rejected while the alternate was accepted, this implies that, there is no significant impact of social network on drug addiction in Calabar Metropolis of Cross River State, Nigeria

Table 3
Pearson product moment correlation coefficient analysis for impact social network on drug addiction in Calabar Metropolis of Cross River State, Nigeria (N=381).

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>(\sum x)</th>
<th>(\sum x^2)</th>
<th>(\sum xy)</th>
<th>r-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social network</td>
<td>12.17</td>
<td>2.56</td>
<td>5421</td>
<td>76612</td>
<td></td>
<td>0.146*</td>
<td>0.00</td>
</tr>
<tr>
<td>drug addiction</td>
<td>11.45</td>
<td>2.42</td>
<td>5130</td>
<td>71638</td>
<td>74175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**significant at 0.05 level, df = 1191, critical r 0.086

Source: Field Survey, 2020/SPSS (Version 21.0 for Windows Output)

Decision

From the result as presented in the table 4.9 and 10 on correlation analyses for the significant impact of social network on drug addiction in Calabar Metropolis of Cross River State, Nigeria. Since the calculated constancy r value of 0.146* is greater than 0.086 which is the rcritical table value of significance at 0.05 level of significant, we rejected the Ho: which states that there is no significant impact of social network on drug addiction in Calabar Metropolis of Cross River State, Nigeria; was rejected while the alternate which state that there is significant impact of social network on drug addiction in Calabar Metropolis of Cross River State, Nigeria

Discussion of findings

The findings from the analysis reveal that, social environment, level of education and social network influences drug addiction in Calabar Metropolis of Cross River State, Nigeria. These findings corroborate with the study of Benavides & Bibb (2004) who noted the social environment where people live could be a stimulant to drug use and addiction. Individual who reside in an environment where hard nicotine or other substances are produced are likely to become addicts. That is, the uses of these substances in those environments or societies are not only a historic process, social or biological but it may be environmental in nature. Environmental issues are increasingly becoming a focus of many communities’ lifestyle choices. Greener living is also a policy of governments, communities, law enforcement that promotes more environmentally social decisions and condemns destruction and pollution (Benavides & Bibb, 2004). The connection or correlation between drug addiction or use and environmental destruction is rarely made. People who may live an otherwise sustainable and green-focus life may indulge in drug use without consideration for the immense damage this may contribute to pollution, erosion, destruction of farm lands and other sensation forests areas (Gossop, 2001).
Findings of the second hypothesis agrees with Okoza et al., (2009), Chikere, and Mayowa, (2011), Owoaje, and Bello (2010) Augustine, and Godiya, (2014) who observed that, level of education, most especially tertiary level has been proven to be a consistent predictor to substance abuse (National Survey on Drug Use and Health, 2011). Perhaps, the university is serving as an enabling vehicle for the utilization of independence from homes and guidance by the students. At the same time, education is one of the principal means of preventing drug abuse. It should be appreciated, however, that preventive education is a process which will produce results only in the long term, in particular with the close cooperation of parents.

Oshodi, Aina and Onajole (2010) reported that, despite worldwide concern and education about psychoactive substances, many adolescents have limited awareness of their adverse consequences. They further explained that curiosity, social pressure and peer group influence are noted to be primary reasons for substance misuse. Makanjuola, Daramola and Obembe (2007), Aina and Olorunsola (2008), and Buddy (2009) lamented that a substantial percentage of the national budgetary allocation is utilized for treatment and rehabilitation of people with substance use problems in Nigeria. Unfortunately, scientifically validated information on the overall effectiveness, and cost-effectiveness of various approaches, is not usually available.

The last hypothesis findings also support Schinke, Botvin and Orland (2014) who observed that poor social, economic circumstances and association affects the health of individual throughout life. People down the social ladder usually indulge in drug use due to the nature of interaction and association the come across in life. Due to this, they run at least twice the risk of serious illness and premature death of those near the top. Ilhan, Yildirim, Demirbasand Doğan (2009) in a study of substance use, social networks, and the geography of urban adolescents in Washington, USA, reported a prevalence of psychoactive substance use among the respondents as 65%. The authors reported that most popular psychoactive substances used such alcohol, cannabis and cocaine were supplied by their associate or work partners. Substance Abuse and Mental Health Services Administration (SAMHSA), reported a high prevalence of cannabis use (12.8%) among young adults aged 18 to 25 years (Jeynes, 2009). In Tanzania, Kalula, in a qualitative study of cannabis use among young people, reported an increasing trend of cannabis use among youths aged 15 to 25 years with a prevalence rate of 5% (Lubman, Yucel&Pantelis, 2004). Adeyi, Babalola, Adesola&Eme, (2010), in a study of tobacco use among individual from 18 to 35 years in Ibadan, Southwestern Nigeria, reported a prevalence of tobacco use as 20.5% (Aina&Olorunsola, 2008).

During the qualitative session (and one-on-one) interview with addicts or participants which majorly constitute inpatient addicts in in Calabar Metropolis of Cross River State, Nigeria, they agreed that, the social environment, level of an individual education and social network system of addict have a significant influence on the prevalence of drug addiction in the society. Interview with individual participant revealed that, addiction is mostly common where you find addiction. They added that, where you find addict is where they live and cultivated their substance. The study participants revealed that, though individual level of education or awareness plays a vital role in
knowing what to take, when and how?, but in drug addiction cases, individual level of education dose not holds way. However, from the interview, participants aver that, even most educated person is also addicts. They explain that, addiction is beyond the individual level of education, but the level of awareness on the dangers of abusing this substance to their health is rather most important. According to the practitioners in the Colleges of psychiatric, there is an urgent need for health seminars on the dangers of substance use on the individual and the society. According to them during the interview, hard substance use reduces one’s life-span and causes significant current chronic diseases conditions the society faces in recent times. They belief that when individual have good knowledge and are aware of the dangers of substance use without the prescription of a medical experts, they can desist from such drug intake

**Recommendations**

From the findings of this study, the following recommendations were made:

1. Since major causes of addiction are social in nature, governments should help reduce poverty and unemployment; provide good-quality health care; ensure effective child maintenance as these are some of the causes of drug addiction
2. Parents and adults should expurgate the kind of social network and association they keep to, since it was found out the many addiction cases were cause by association with bad company
3. From the study’s finding, it was found that individual level of education could be a direct cause of addiction, government and health care provider should help organized community town hall seminars on the effect of substance use on the health of addicts.
4. To deal with the dichotomy between social environment and drug addition, government through its agency, the National Drug Law Enforcement Agency should set up community task force in rural communities to check activities of addict in rural communities mostly in areas where they cultivating these hard substance, so that, such could be controlled.

**Conclusion**

From the findings of this study, it could be seen that previous research only highlighted the strong association between social and psychological health impact of substance addiction. Over the years, these findings suggest that it is likely that marijuana use and other nicotine impairs an individual sense of reasoning and action without looking at the major causes at the micro-and macro level of individual analysis. This study has extensively evaluated and discussed exhaustively the social factors responsible for drug addiction.

The results regarding the effect of marijuana use and other nicotine showed that, they have a significant effect on the health of abusers and these outcomes are consistent in sign with the two previous studies on topic in the health economics literature. Finding of this study has also revealed that socio-economic factors at multiple levels have an
association with the aetiology of drug use and exacerbation of problems among drug users. Findings from this study in drug-treatment facilities as well as the qualitative study carried out in health facilities highlight the extent of this relationship, with low levels of education and high levels of unemployment as well as general poverty have direct consequence to individual indulgence in drug taken. As discussed during the interview session, a significant number of addicts who are chronic drug-dependent people suffer the double stigma and marginalization of low socioeconomic status and drug dependency. In the study area, the social and psychological effect of drug addiction is severe and growing with high proportion. It could be deduced that, a society plagued by high addiction is vulnerable to crime. This is because, from the interview and pre survey, most of the crime committed is done under the influence of drugs, there by establishing the relationship between drug addiction and high level of crime in the study area.

**References**


